

Institution: University of Kent
Unit of Assessment: 16 Economics and Econometrics
<p>1. Unit context and structure, research and impact strategy</p> <p>a. Context and structure</p> <p>Economics and Econometrics research at the University of Kent is located in the School of Economics, which, since November 2020, forms part of the Division of Human and Social Sciences. The School has undergone a profound transformation since REF2014, driven by the ambition to produce cutting-edge research, and significantly to influence policy and public debate. To do so, its core principle is 'to provide a supportive, inclusive, and collaborative research environment to improve our reputation as a research hub and to attract and produce future talent' (School Research Strategy). Capacity building has focused on strengthening core research areas around our four research centres (see below), in the fields of macroeconomics, development economics, agri-environmental economics, and applied microeconomics. The School's distinctive approach of including end users and practitioners at all stages of research has enabled it to build up high levels of external engagement and impact.</p> <p>The School is submitting 27.9 FTE Category A staff members to REF2021. It has produced outstanding research (evidenced by the number of outputs in top-quality journals), which is also policy relevant (as evidenced by our impact case studies and collaborations with policy institutions). The School has experienced a significant change since 2014, with 15 new members, including both senior staff and ECRs, which, with retirements and turnover, has led to an increase of almost 30% in the size of our submission since the last REF. Promotion data (below) confirms that our research strategy has successfully nurtured academic progress. The School has also seen significant investment in infrastructure, with our move to the new Kennedy Building (an £18.8m investment), hosting exclusively the School of Economics. Driven by these developments, as well as changes to our PhD programme, the number of PhD graduates has also grown significantly, and their placement in prestigious institutions has improved. External research income from competitive funding bodies has doubled over that reported in REF2014.</p> <p>Our research is organised around four centres/groups, of which three were formalised during the assessment period to help the individual and collective profile of our core research themes. Several staff belong to more than one of these four groups, creating research synergies at the intersections of different sub-areas in economics and with other disciplines.</p> <p>Centre for European Agri-Environmental Studies (CEAS). Based in the School of Economics, CEAS conducts research in the economics of agriculture and the environment. Comprised of five Kent members and seven external fellows, it is an important driver for research funding (e.g. EU FP7, H2020), and is a key generator of policy impact, given its policy focus.</p> <p>Development Economics Research Centre. This University research centre brings together researchers working on a range of topics (political economy, informal institutions, gender, human capital, labour markets) related to the study of economic development. Its emphasis on both theoretical and empirical work makes it distinctive among Development research groupings in the UK. It has nine Kent members, and is an important source of funding (AusAid, GCRF, British Academy, Defra, DfID, Leverhulme), high-quality publications (e.g. JPE, JEEA, AEJ: Policy, AEJ: Applied, REStats, EJ), and impact.</p> <p>Macroeconomics, Growth and History Centre (MaGHIC). Based in the School of Economics, this research centre spans research in economic growth and distribution, business cycles, quantitative macroeconomic theory, and economic history. There are 16 Kent members in this group, making it one of the largest Macroeconomics research groups in the UK. It is an important driver of PhD recruitment and training (40% of PhD completions), research funding (e.g. ESRC,</p>

Leverhulme, British Academy, SSHRC), and high-quality outputs (e.g. REStud, AEJ: Macro, JEEA, TE, JET, IER, JOLE).

Microeconomics Research Group. This group conducts research in the areas of economic theory, networks, applied theory, labour economics, and micro-econometrics. It aims to develop research at the intersection of theory and econometrics across microeconomics. Its 10 Kent members are a key driver of PhD recruitment and publications (e.g. JPE, ET, EJ, JET, GEB, IER, JoLE, JoEcms, JBES).

b. Research strategy

The Research and Impact strategy implemented by the School within this REF period comprised two stages. Both reflect the strategic commitment of the University to the discipline. The first stage was defined by a set of recommendations from an external review carried out by the University in 2014 to support the research outcomes of the School following the REF2014 exercise. Following the full implementation of those recommendations by 2017, the second stage of the strategy was formulated: the Research Strategy and Implementation (RSI) policy. This School-drafted RSI is a forward-looking set of medium-term objectives that define implementation and resourcing plans. Importantly, these two stages ensured that the School delivered significant research improvement, and achieved the future plans stated in the REF2014 environment document, namely:

- a) To consolidate and expand further the quality and quantity of research outputs, prioritising growth areas displaying successful outcomes with a focus on expanding publications in top-quality journals, wider community impact, collaborative research activities, and external funding.
- b) To consolidate and support the expansion of the PGR programme through the creation of a doctoral programme with a structured taught component.

The first objective has been achieved with a large increase in the proportion of high quality journal publications (i.e. JPE, REStud, JEEA, AEJ: Macro/Applied/Policy, ReStats, JoEcom, EJ, JET, TE, etc.), a 100% increase in external research funding (AusAid, EC, ESRC, EPSRC, etc.), increased levels of engagement with policy-makers and think tanks, and a large increase in international collaborative and interdisciplinary research. The School has also hosted more than 20 workshops and conferences during the assessment period, and more than 225 external seminars in our School and Research seminar series. Importantly, given the healthy financial state of the School, and the growth in both senior and early career researchers, we envisage this trajectory being sustained over the next five years. The second objective has also been achieved with the establishment of a formal and assessed coursework component in PhD training, a change to a four-year PhD structure, and improved availability of PhD funding (see below under 'People'). This has led to a dramatic 250% increase in the number of PhDs awarded since REF2014, and an excellent record of PhD placements.

The RSI serves as a set of individual guidelines to achieve collective goals. The specific objectives during this period have been to increase the proportion of world-leading and internationally excellent research outputs, achieve high levels of social impact, and increase the proportion of research that is externally funded. The RSI works with individual staff incentives, using a set of support and reward measures to achieve its goals. The RSI has also been the key driver in the consolidation of the role played by the four research centres around which the School organises its research activities.

The School's research management is led by our Research Committee, which is charged with the implementation of the RSI. The Research Committee is led by the Director of Research (DoR) and includes the Head and Deputy Head of School, an Impact Manager, the Director of Research Funding (DoRF), and the REF Coordinator. Each member has a specific portfolio and job description that directly connects with key aspects of the School's RSI. The DoR also sits on the Faculty (now Divisional) and University Research Committees that oversee the implementation of the University's research strategy. Research management related to PGRs is coordinated by the

Director of Graduate Studies (Research), aided by two PhD job market placement coordinators. PhD studies matters relating to training, programme structure, progression, destinations, and support are discussed at the Graduate Studies Board (Research).

Open research environment. The School adheres to sector-wide and University policies regarding Open Access. Beyond these policies, Economics is a subject that has been at the forefront of replicability. The majority of journals now require authors to deposit their data and codes for replicability. The School's policy is that colleagues are required to provide them upon request, when the data can be made publicly available even if a journal does not request codes and data. If the data is proprietary or cannot be made fully available due to access restrictions, colleagues should be able to provide a 'readme-style' instructions document to other researchers, detailing sources and access methods. The School also expects registration of all RCTs at the AEA's RCT Registry.

Research ethics and integrity. Research integrity is a priority for the School. We observe the University's Code of Ethical Practice, and Kent is compliant with the Concordat to Support Research Integrity. At School level, all research projects with any ethical implications are reviewed by the Research Committee and then by the Faculty (now Divisional) Ethics Committee, which is itself overseen by the University's Research Ethics and Governance Committee.

Support for interdisciplinary research. We actively encourage researchers to engage in interdisciplinary research within the University and beyond. We recognise the importance of collaboration for the exchange of ideas and methodological approaches, as well as for funding and for impact. The School can point to several successful interdisciplinary research awards (see below) that have promoted fruitful and ongoing collaborations. The Director of Research works in close contact with other schools across the University, and engages with colleagues who can contribute to key initiatives that transcend one particular subject. During the REF period, the Faculty of Social Sciences offered competitive funding for interdisciplinary research initiatives. We offer interdisciplinary research the same level of support as discipline-based research. This has been translated during this period into a strong presence of Economics in the University's interdisciplinary Signature Research Themes (SRTs). Specifically, Economics has been fully involved in the Environment, Food Systems, and Natural Resources SRT, which was approved at University level in autumn 2020.

During the assessment period, there has been a large increase in the number of interdisciplinary research projects in the School. Many of these collaborations have arisen as a response to changes in research priorities in the subject and in the world, including health and development, rural poverty, ageing societies, Brexit, and environmental degradation. Examples of these are:

1) Malde a) collaborates with the Mai Mwana Project (Malawi) and the Institute for Global Health (UCL) on infant health; b) with the French Institute of Pondicherry to use qualitative and quantitative data on sanitation in India; c) with LSHTM, Women and Children First, Pratham (Indian NGO) to develop a digital child development intervention; d) gained a Global Challenges Doctoral Centre (GCRF-funded) PhD studentship on determinants of diarrhoea prevalence in Bangladesh (with the School of Biosciences).

2) Klein is part of an interdisciplinary project with historians at King's College London on 'Trade Creation and Free Trade Areas: Lessons from Hanseatic League'.

3) Bailey and Davidova are part of a H2020 interdisciplinary project on low-input farming territories.

4) León-Ledesma is part of a research project with Actuarial Scientists, funded by Canada's SSHRC, on the effect of population ageing on asset values and pension systems.

5) Lopez de Leon was PI on a British Academy-funded joint project with the School of Psychology, analysing social attitudes after the Brexit referendum.

6) Fraser is a member of Kent's Durrell Institute for Conservation and Ecology (DICE), where he is involved in several research projects.

c. Impact strategy and management

The School places special emphasis on impact activities, and actively supports engagement in research projects with impact potential. Consistent with our research strengths, the School has very strong links with research users and stakeholders comprising national and international NGOs, international organisations (e.g. FAO, ADB, WB), national policy bodies (DEFRA, DfID, CMA), think tanks (NIESR, OECD), and central banks (BoE, ECB). Engagement with these stakeholders has led to a variety of impacts, of which three were selected as our impact case studies. These have led to changes in policies to address child marriage in Bangladesh; new agricultural and rural policies in Kosovo, and the development of a digital knowledge platform by FAO; and changes in DEFRA's toolkit for responding to disease outbreaks.

During the assessment period, the School has developed, in collaboration with the University's Research and Innovation Services team and the Faculty of Social Sciences, a comprehensive strategy for widening the scope of non-academic impact from research carried out by staff members, based on the following principles:

- (a) Engagement with stakeholders over the course of the research project to ensure that the research is informed by stakeholder needs, and maximise the possibility that research outputs reach and benefit potential end users;
- (b) Regular exchange with research peers both within and across disciplines to explore strategies for identifying and engaging with stakeholders and end users beyond academia, and sharing best practice for stakeholder engagement;
- (c) Support for staff members, in the form of time release and funding, specifically for conducting activities related to research impact (e.g. workshops with policy-makers, meetings with stakeholders, public engagement work).

Since 2015, the School has benefited from two academic staff members serving as Impact Officers, who advise and support colleagues on developing strategies for stakeholder engagement for new and ongoing research. Academic mentors within the School complement the work of the Impact Officers by helping colleagues, especially ECRs, identify projects with impact potential and take advantage of the School's existing contacts with stakeholders. In 2018, the School's Impact Officers developed and organised, together with the University's Research and Innovation Services team, a series of interdisciplinary peer-review workshops that brought researchers together to reflect, discuss, and review their research impact plans. This peer-review model has since been adopted by the University as a key part of its strategy for generating impactful research and sharing best practice.

To help implement the principles above and make impact activities sustainable in the future, the School introduced in 2017 a new impact resourcing system. This allows staff to make applications with specific requests for time release and funds from the School for activities aimed at improving the scope of impact from ongoing research. Impact-related activities are reflected in the School's Work Allocation Model. The School has since approved funding of £14,270 for impact-related work on six research projects, with activities ranging from workshops with policy-makers, meetings with stakeholders, and the hiring of research assistants to prepare policy briefs on research outputs. In 2018, the University initiated a complementary system to support with funding for impact-related activities, and has since approved funding of £7,880 for projects in Economics.

To provide wider dissemination of research, the School's Marketing and Media Officer maintains a research blog, and disseminates research news through social media and digital communities. The School works closely with the University's Office for Scholarly Communication (OSC) and the Corporate Communications Office, which provides further support and advice to researchers on media engagement. As a result, the School has a vibrant culture of writing non-technical articles on research for a wider audience, with regular contributions to online outlets such as VoxEU,

VoxDev, Bank Underground, the Conversation, Project Syndicate, and the Economics Observatory.

For our REF2021 submission, we selected impact case studies that exemplify the type of impact work carried out within the School. These relate primarily to:

- Impacts on understanding, learning, and participation (Wahhaj's research on female early marriage in developing countries);
- Impacts on public policy, law, and services (Bailey and Davidova's research on low-input farming);
- Impacts on commerce and the economy (R. Fraser's research on disease outbreaks for DEFRA).

Beyond these case studies, School members engaged in impactful research in diverse areas such as: the impact of food labelling on food choices (I. Fraser); supply-side estimation of macroeconomic models for the European Central Bank (León-Ledesma); export controls on arms trade for the European Commission (García-Alonso); the development of migration policies in Central Asia for DfID (Piracha); resource misallocation in Asia for the Asian Development Bank (León-Ledesma); safe sanitation in developing countries for the World Bank (Malde); and trends in market concentration in the UK economy with the Competition and Markets Authority and the Bank of England (Savagar).

d. Future plans and objectives over the next five years

Over the next five years, the objective of the School will be to establish itself among the best UK departments of Economics, enhancing its international reputation, participating in major debates in Economics, and having a measurable impact on the economy and society. It will do so by continuing investment in its internationally recognised areas of strength to consolidate a sustainable and inclusive research environment. With this in mind, the School will focus on five strategic areas:

1. *Recruitment and retention.* Although the School is proud of the excellent calibre of its recent hires, it must continue to attract the best talent at the ECR and more senior levels. We must consolidate our presence in international job markets, offer competitive packages, and retain our best talent.

2. *Doctoral training.* The School will exploit the restructured PhD programme to improve recruitment of highly qualified PhD students. Further refinement of the training portfolio to take advantage of synergies with our international partners will also be pursued. The School will seek to enhance progression within the programme and improve placement outcomes yet further.

3. *Research funding.* The School will seek to double again its external research income. This will involve a more pro-active and forward-looking approach led by the DoRF, aided by a dedicated grant officer. The objectives are twofold: to reduce the reliance on self-funded research, and to increase the visibility and relevance of our research.

4. *Impact and engagement.* The School will strengthen its strategic resourcing of impact-related activities. These activities will not only consist of encouraging impact creation. This strategy will also value both the REF-defined impact and other forms of policy engagement, including joint initiatives with think tanks and policy institutions to disseminate our research. The School will aim to strengthen its already strong collaborative links with these groups in order to engage them directly in impactful activities stemming from our research.

5. *Interdisciplinary research:* we will encourage more active participation in interdisciplinary networks that respond to national and international research priorities including GCRF, climate change, pandemics, understanding the macroeconomy, productivity, and ageing societies.

The implementation of these strategic areas will be articulated through the four research centres, each of which will develop a plan around areas 2-5 that will determine future investment. We envisage that, as we monitor progress on these areas, we will need to draft a new, bottom-up, RSI consistent with the School's ambitions.

2. People

a. Staffing strategy

A key aspect of the strategic development of the School is to recruit and nurture world-leading talent at all levels. The School places a special emphasis in the recruitment and development of ECR staff, while providing appropriate levels of senior mentorship to achieve this. A key measure during the assessment period has been the appointment of a combination of experienced and early career researchers who have dramatically changed the composition and research potential of the School, and enabled an expansion of our research power. These appointments have been pursued strategically to develop areas where leadership and seniority were required in areas of existing strength, and for the enhancement of outputs, research funding, and impactful activities. The new senior appointments have facilitated succession planning for key office holders at the School level. Economics has only appointed regular academic staff on long-term contracts during this assessment period (subject to probation requirements for ECRs).

For ECR recruitment, the School has attended RES and SAE job market meetings, and, with the development of the European Job Market, it has attended this market since 2019. The School has a Job Market Officer who coordinates recruitment and attends the job market with a variety of colleagues from different specialism areas. First scrutiny of applications, however, involves all research-active members of staff who generate an initial shortlist. This is a significant involvement of resources, which we believe generates a high return for the School. For instance, our last opening attracted more than 650 applications.

Senior hiring is coordinated by the Head or Deputy Head of School aided by colleagues at all levels of seniority. The School aims to hire world leaders in their respective areas. These appointments are announced through open calls in standard job market websites, but senior colleagues are encouraged to use their network of contacts and identify specific candidates to target. Where the market is thin, the School can employ single-person appointment processes, with help from HR colleagues, whereby posts remain open until a suitable candidate is found. Importantly, the School takes the view that, should no suitable candidate be found, it is best to leave the post vacant for future rounds. Senior appointments are used strategically with the aim of strengthening particular sub-disciplines or to provide leadership in areas of need. This has characterised senior hiring steered by the 2014 external review panel and the School's Research Strategy. Specifically, one professor was appointed in the area of Development (Clots-Figueras), one in Econometrics (Guerre), and two in economic theory (Allouch and Makris).

All our hiring procedures comply in full with the University of Kent's Equal Opportunity and EDI policies, and we strive to generate an attractive collegiate, friendly, and inclusive working environment (see below under section 2.d.).

The School of Economics has had five full-time and 10 hourly-paid postdoctoral researchers during the assessment period attached to funded research projects (i.e. ESCR and EPSRC). Recruitment of full-time postdoctoral researchers follows the same careful and compliant procedures as used in the appointment to permanent academic positions. All of our postdoctoral researchers are provided with desk space and access to IT facilities in the Kennedy Building, and the School ensures they are well integrated in the School's research culture. They are attached to one of the four research centres, and participate in all their activities, including seminars, workshops, organising events with doctoral students, and training events. They are mentored by the grant holder(s), and have access to the same research training as ECR staff. The School places a special emphasis on their employability, and they are fully integrated in the job market training activities offered to PhD students.

During the assessment period, the School has appointed four new professors: Allouch (from QMUL), Clots-Figueras (from UC3M), Guerre (from QMUL), and Makris (from Southampton). It has also appointed 11 lecturers, including seven ECRs: Amirapu (PhD Boston U), Duncan (PhD Glasgow), Guner (PhD Virginia), Hamidi-Sahneh (PhD UC3M), Launov (PhD Munich), Lopez de Leon (PhD Cornell), Malde (PhD UCL), Mitra (PhD NYU), Savagar (PhD Cardiff), Siegel (PhD LSE), Tchuente (PhD Montreal). There have been a number of departures to other institutions: Cartwright (de Monfort), Chadha (Director of NIESR), Grassi (Tor Vergata), Guerre (QMUL), Otsu (Keio), Silva (UoGirona), Stepanova (Coventry), Toledo (CAF Development Bank), Zhu (Dundee). There have also been five retirements: Carruth, R. Fraser, Heady, Peirson, Vickerman.

The combination of appointments and departures has contributed to high levels of dynamism within the School, and has resulted in a 30% net increase in the number of category A staff relative to REF2014. Among staff on Education and Research contracts, the School has currently nine Professors, one Reader, 13 Senior Lecturers, and five Lecturers.

b. Staff development and career progression

All of our ECRs receive rigorous training in teaching and other aspects of academic life through the two-year Postgraduate Certificate in Higher Education (PGCHE). Each of them is allocated a probationary supervisor and a teaching mentor. New appointees are provided with a detailed handbook to facilitate a smooth landing and an understanding of processes. They are also allocated to one or more of the research groups/centres to ensure that they have the opportunity to participate fully in the School's research initiatives and events. Through its Graduate and Researcher College, the University also offers a series of workshops specifically oriented to research funding and planning an academic career, and runs an ECR network.

All member of staff undertake a formal process of annual appraisal. The appraisal system takes the form of a Reflect, Plan, and Develop (RPD) process and a meeting with a senior colleague. Each case is subsequently discussed at the School Promotions Panel (attended by the EDI officer) to support specific staff members and to identify possible policy changes at the School level, all with an eye on nurturing staff progression. All colleagues are also offered mentorship outside this annual cycle of appraisal. The increase in the number of senior colleagues has enabled us to operate an enhanced personalised mentoring system for early and mid-career staff. The mentoring system is designed to offer specific research and career development advice and support, when needed. Together with annual Individual Research Plan (IRP) meetings, which collect information on publications, impact activities, and funding bids, the RPD and mentoring processes ensure that the School is well informed, and that no one is left behind in the career development process.

The School employs a range of incentive measures to support our researchers, including: a) additional research funding for every output deemed to be internationally excellent (up to £1,000); b) additional research resource and work-time release for externally funded projects; c) work-time release for work on impact-generating activities (100 hours per year); d) financial support for the development of impact-related research and for the organisation of workshops and conferences; and e) seed funding for large funding applications. Staff also have individual research accounts of £1.5k per annum for small research expenses such as conference attendance. Beyond these sources, further funding from the School can be gained by application to a top-up fund administered by the Research Committee.

Career development. Continued training and career development is a priority for the School, and appraisal, mentoring, probation, study leave, and promotions are managed in line with Kent's EDI policy and Academic Career Map, recognising and rewarding talent at all levels. In line with the University's commitment as a signatory, Economics supports and actively engages with the principles of the Concordat to Support the Career Development of Researchers. The University offers an extensive range of training through its Learning and Development programme, Unit for the Enhancement of Learning and Teaching, Graduate and Researcher College (Researcher

Development Programme for PGRs and postdoctoral researchers), Grants Factory, ECR Network, and Peer Review College. We also offer in-house training on research funding opportunities, media training, and impact development.

All academic staff are entitled to apply for one term's study leave in seven (as per University policy). A majority of colleagues who had study leave allowance took it during this period. The School operates a Work Allocation Model (WAM) encompassing teaching, administration, and research activities. All Category A staff gain a minimum research time allocation, further WAM credit is awarded for outputs, impact activities, and live externally funded grants. The WAM points are then weighted by seniority (a higher WAM is expected from senior members), and adjusted by other allowances such as probation and leave.

The School actively encourages its members to take secondment or part-time roles in the third sector or policy institutions. Whilst the latter can be accommodated through flexible timetabling (e.g. Malde/IFS), the former requires a formal process of unpaid leave of absence. This was the case for Chadha, who went on to become Director of NIESR. This has enabled the School to establish closer links with this important research-based non-profit organisation.

Probation. All ECRs undertake Probation, normally for three years. Probation assesses published output, research funding, and teaching against mutually agreed targets. Decisions on progress and completion are made at a University level, with School input on subject-level expectations. Probation can be extended if the University Probation Committee considers that further time would help meet the necessary criteria. Progress towards completion is assessed at several points. First, through the mentoring system, which feeds back into the School Promotions Panel, where all individual cases are discussed. Second, through the annual appraisal system. The University Probation Committee then assesses progress towards individual targets annually, and provides written feedback to each probationer. ECRs benefit from teaching load reductions of 50%, 33%, and 25% in each probationary year.

Promotions. Our promotion procedures adhere strictly to Kent's policy, and are compliant with equal opportunity policies. Over the REF period, Kent operated a system where Schools had a consultative role, making recommendations to the Faculty Promotions Committee (FPC) which, in turn, made recommendations to the University Promotions Committee (UPC). As of 2019, the University introduced an Academic Career Map to aid candidates in the process of promotion and shifted Senior Lecturer decisions to the FPC. The School Promotions Panel (SPP) meets twice a year to discuss each individual case, allocate supporting activity where necessary, and writes a report for FPP. The School EDI officer attends SPP to advice on inclusivity issues. We set high standards for research outputs, funding, and impact, emphasising the importance of quality over quantity. During the assessment period, for those included in this submission, the School had one promotion to Professor, one promotion to Reader, and 11 promotions to Senior Lecturer.

c. Research students

Research students form a fundamental part of the research culture of the School, and are integral to the development of our vital research environment. The School aims to train economists to produce research of the highest standards. The School has in the region of 40 PhD students across all stages, and welcomes between six and 10 new students each year. A total of 58 PhDs were awarded during this assessment period, an increase of more than 250% over REF2014 and almost 350% over RAE2008. During this period, the PhD programme was completely redesigned, and funding increased to extend to four years. This was one of the future development areas highlighted in the REF2014 statement.

Funding and admissions. The School operates a rigorous admissions system. It admits students with training equivalent to a UK MSc that have demonstrated a high level of performance in established programmes. We receive an average of 125 applications per year. Shortlisted candidates are interviewed by a panel before decisions are made. Candidates with protected characteristics are given equal treatment and, if requested, are informed of any support

mechanism available at the School and University levels. The School/University normally offers six full scholarships annually, covering tuition fees and maintenance at ESRC rates. Some studentships are funded directly through research funding projects such as the European Commission. Others are admitted with funding from their home institutions. Students receiving a scholarship have Teaching Assistant duties on our UG programmes after their first year of coursework.

Training structure. The PhD programme changed from a traditional UK three-year PhD to a more formalised four-year PhD programme in recognition of the increased training demands in the discipline. The taught component occupies year 1. Here, students take four compulsory modules on Computational Methods, Macroeconomics, Microeconomics, and Econometrics, plus two optional modules that depend on their chosen area of specialisation. Modules are formally assessed through a combination of coursework and exams, and progress to the research stage is conditional on passing the taught component. At the end of the training courses, students present a research proposal in consultation with academic staff, and are allocated a team of supervisors: a main and a secondary supervisor. Students also take teacher-training courses and only start teaching in the second year of the PhD. The University's Graduate and Researcher College offers a Researcher Development Programme with compulsory elements and a range of other skills and specialist methods training courses. All PGR students, therefore, develop generic skills such as academic writing, presentation, and career planning. We monitor students through a monthly record of meetings and annual PhD panel meetings, consisting of the DoRS and the supervisors. Students present their work a minimum of once a year in the various workshops offered by the school (annually) and research centres (bi-annually).

Space and resources. All students have personal desk space and a PC/laptop in the shared PhD areas at the Kennedy Building. PhD students also have a dedicated meeting room and a GTA room to arrange meetings with UG students. Students have access to an annual budget of £300 for conferences and training, and this is increased to £600 in their job market year. They can also apply for top-up funds to attend prestigious conferences.

Placements and achievements. The School has two Placement Officers who advise students in the final stages of their PhD regarding job market options, CV writing, presentation skills, and the workings of the economics job markets. They are also offered mock interview sessions. During the assessment period, PhD placements have improved substantially. The School has placed students in many academic institutions: Lancaster, London School of Hygiene and Tropical Medicine, Oxford (Blavatnick School and Pembroke College), University of Utah, University of Barcelona, Università Ca' Foscari Venezia, University of Nottingham Business School, amongst others. In prestigious policy institutions: IMF, World Bank (x3), Bank of England (x2), Deutsche Bundesbank, Central Bank of Denmark, Bank of Korea (x3), Competition and Markets Authority, NIESR (x2). Economics PhDs awarded at Kent during the assessment period have also published papers in prestigious outlets such as: *Review of Economic Dynamics*; *Journal of Money, Credit, and Banking*; *Oxford Economic Papers*; *Journal of Comparative Economics*; *Journal of Economic Behavior and Organisation*; and *Journal of Economic Dynamics and Control*.

International Collaboration. The School encourages students to spend visiting periods abroad to enhance their training, and to be exposed to different research cultures. The School has PhD exchange agreements with the Université Catholique de Louvain, Aix-Marseilles School of Economics, Keio University, and the University of São Paulo.

d. Equality and diversity

The School is fully committed to equal opportunity, and to addressing diversity imbalances in the discipline. The School actively adheres to the University's equality, diversity, and inclusivity (EDI) policies, and aims to operate an open, inclusive, fair, democratic workplace. Our commitment is not limited to the workplace. Indeed, one of the key specialisms of research in the School is gender discrimination, with a group of researchers, including Clots-Figueras, Malde, and Wahhaj, actively developing an agenda related to discrimination and participation policies.

The WAM rewards participation in leadership roles from colleagues at all career stages, regardless of gender, ethnicity, or other protected characteristics. We have an academic EDI Officer and a formal Athena SWAN Self-Assessment Team (SAT) to address staffing issues related to EDI and to propose changes to current policies. This team engaged in the design phase of the Kennedy Building, focusing on facilities for childcare, LGBT communities, and people with disabilities. They effected changes to provide unisex toilets and baby-changing facilities, lift access, automatic doors, and step-free entrances. In 2018, the SAT engaged in a fact-finding exercise that included our own Staff Satisfaction Survey in order to establish future action priorities. A similar survey is planned for 2021 as part of our planned Athena SWAN Bronze submission.

The School also facilitates return from maternity/paternity and sick leave by enabling colleagues to adopt flexible working patterns. These include switching taught modules between terms, imposing constraints on the timetable, and offering extra TA allocation. We have also made sure that all School research event occurs only during core hours to enable the participation of staff and students with caring responsibilities. Maternity/paternity and sickness leave count as qualifying service when calculating study leave entitlement. We do not operate a culture of 'presentism', so that research-active colleagues and those with caring responsibilities and health issues are able to work remotely as far as we can accommodate within University constraints. The School has also agreed to requests for switches to (and from) part-time contracts/scholarships to accommodate changing circumstances. During the assessment period, the School has accommodated all flexible working requests.

The School makes no distinction in terms any type of protected characteristics with regards to access to support for funding applications, conference attendance, internal funds, promotions, and selection to leadership roles. However, we recognise that staff and student circumstances may affect the demand for these aspects of academic life. In these cases, we offer support through the mentoring system and will seek out those whose personal circumstances may have affected their willingness to ask for support. The School engages pro-actively with these colleagues to ensure that they have the same opportunities. In the case of promotions, the University has developed new procedures to ensure the fair treatment of colleagues with mitigating circumstances. Furthermore, the School has offered externally procured personal coaching and training support to colleagues with protected characteristics who were identified to have been disadvantaged in the past.

Gender and ethnicity. Women comprise 24% of our staff base (2% increase over 2014), 22% of professors (10% increase over 2014), 30% of Senior Lecturers/Readers (almost doubling over 2014). Importantly, 40% of the current cohort of PhD students are women. Using as a benchmark the 2016 RES Report on 'The Gender Balance in UK Economics', our proportion of women is similar to the national average. This proportion, however, is higher at Kent for Professors and Senior Lecturer/Readers. The School fully recognises the challenges in the profession to achieve a more balanced gender representation. We actively engage in outreach events to encourage female applications, and highlight the fact that the return of an Economics degree for females is the highest in any discipline. The School also works with the Government Economic Service on an apprenticeship designed to increase the gender and ethnic representation on the service. The School is itself ethnically diverse, with 48% identified as BAME. Of the staff submitted, there are 22 different nationalities from all inhabited continents.

Women in Leadership. Two of the four research centres leads are women (Davidova, Clots-Figueras), and three of the eight members of the School Strategic Management Group are women. Women have held strategic leadership roles in the School, including Director of Education, Director of Research, Director of Research Funding, Impact Lead, and Job Market Placement Officer. Four of the five women who applied for promotion were successful during the assessment period, and 50% of those who could apply did. For comparison, 9/10 men were successful and 60% of those able applied. The School Promotion Panel actively encourages colleagues to apply for promotion as soon as they believe a case can be made that will convince either FPC or UPC, and works with colleagues to build that case.

Only two staff members are on a fractional contract, of which one is female. Both are partially retired, and continue to engage on a fractional basis. None of the submitted staff is on a fixed-term contract.

Religion. The School recognises religious diversity, and aims to ensure that any School-level activity does not clash or causes offence with religious views. It also ensures that colleagues are able to block certain times for religious reasons through flexible working practices.

Equality training. All mentors, School Promotions Panel members, and colleagues in leadership positions are required to undertake training on University EDI policies and Unconscious Bias. EDI is fully embedded in the PGCHE training for ECRs, and all staff members take the Valuing Everyone training programme offered by the University. As part of the New Senior Leaders Programme, the Head of School has had dedicated mental health training by the mental health charity, Mind.

Disabilities and occupational health. We comply strictly with the University's policies towards colleagues with disabilities. The School also has a supportive approach to accommodating colleagues with mental health issues. We have procedures to ensure that there is no discrimination in access to research funding and facilities. The University has an excellent Occupational Health Unit, which assists colleagues with diverse disability issues. The University also offers an externally provided wellbeing service through its Employee Assistance Programme.

Our preparations for REF2021 have been open and inclusive, and we observed the University's Code of Practice at all times. Staff have been informed about the rules for output selection. Staff were individually consulted and informed about REF selection during the individual RPD meetings, relying on information provided through research monitoring. The selection of outputs for submission was based on: assessment by external reviewers, consultation with individuals involved, impact, citations, and, in marginal cases, internal reading of outputs by specialists in their area. This has ensured that there has been no single case of disagreement in terms of the selection of outputs and impact cases between the School and individuals. Output selection is the responsibility not of a particular individual, but of a REF working group, all of whom received EDI training. Our goal throughout the REF preparation process was to create a transparent and fair process based on merit.

3. Income, infrastructure and facilities

a. Income

During the assessment period, the School raised close to £1.1m in external competitive research funding bids. This represents an increase of 100% over REF2014. The School also raised almost £200k in innovation and enterprise income. Competitive funding has come from sources such as: European Commission (Bailey, Davidova, Cartwright); ESRC (Heady, Savagar, Leon-Ledesma, Malde); EPSRC (Cartwright, Stepanova); British Academy (Siegel, Klein, Lopez de Leon, Fraser, Mitra); AusAid (Wahhaj); Social Sciences and Humanities Research Council Canada (Leon-Ledesma); Murata Foudation (Shibayama); Leverhulme Trust (Lopez de Leon); and DfID (Amirapu, Wahhaj). 50% of the Category A staff submitted have obtained external research grant income, and 85% have applied for external grant income. The majority of those who have not are recent hires.

Among these grants, the larger ones are: AusAid on schooling and gender norms in Bangladesh (Wahhaj, £372k); European Commission on low-input farming (Bailey and Davidova, £213k); and ESRC on firm dynamics and market power in the UK (Savagar, £156k). There are many examples of how grants led to high-quality outputs during the REF period. For instance, Lopez de Leon's Leverhulme grant on the impact of conferences in academic research led to papers in the *Economic Journal* and the *Journal of Human Resources*. Likewise, Wahhaj's AusAid grant led to publications in *JEB* and *Economica*. Shibayama and Fraser's Daiwa Foundation grant on growth and sustainability led to an output in the *International Economic Review*.

Strategy. During the REF period, the School appointed a Director of Research Funding (DRF), and conducted a survey on barriers to research funding activity. The survey found that time constraints and a lack collaborative funding opportunities were the main barriers. This has led to a reformulation of funding application priorities led by research centres and in larger collaborative groups. As examples, the Development Economics Research Centre is now leading a GCRF network on the impact of Covid-19 in South Asia, and MaGHIC is actively engaging with the ESRC-funded Productivity Network and a recently created Centre for Productivity and Workplace Performance together with Kent Business School. These larger group-based thematic bids have started to bear fruits during this REF cycle, but, importantly, it is showing signs of achieving sustainability in the future. Funding applications reached £4.1 million in the 2019/20 academic year, with more than £1.5 million in successful awards. Several of these respond to the macro- and micro-economic challenges of the Covid-19 pandemic.

The DRF offers support and advice on funding bids, monitors funding data, and allocates internal reviewers for applications. Funding is a key aspect of the mentoring scheme, annual RPDs, and promotions criteria. There is also provision of internal research funds. These are limited in scope to encourage colleagues to seek external sources. The School has annual calls for funding to help support larger funding bids, impact generation, and the organisation of workshops. Funding also carries an important weight in terms of WAM points, depending on the size of grants held.

b. Infrastructure and facilities

The University has provided the School of Economics with world-class infrastructure. Our new building, the Kennedy Building, exclusively hosts Economics in its entirety, alongside dedicated and shared teaching space. This £18.8 million investment in new space and superb facilities enhances staff, research student, and visitors' day-to-day interaction in a modern and spacious environment. It includes 4,000sqm of teaching space, IT suites, meeting rooms, and social spaces. It also hosts a large dedicated room for postgraduate teaching and research seminars, as well as several breakout areas. The building is equipped with state-of-the-art computer network facilities. This investment has led to a radical improvement in interaction between colleagues, PhD training activities, and attracting external events. It provides dedicated space for PDRAs and research visitors, and improves the School's identity by offering a single location while reducing constraints for future research developments that require space resources.

All staff have individual offices equipped with state-of-the-art PCs, and have access to specialist research software packages. The School has a dedicated server room within the Kennedy Building, containing two high-powered computers and a 32-core server, enabling users to run heavy computations along with other facilities. The server room is managed by two specialist IT administrators who are employed to facilitate excellent computing support for both research and teaching. We offer up to 5TB of central networked storage space for large databases. The School offers access to macroeconomic, financial, and firm data through Quandl, and to non-open-source specialist software such as Matlab, Maple, Eviews, and Stata. For sensitive data, the School makes available secure lab terminals in the Secure Data Room. Research students have a dedicated desk in one of the two spacious and attractive shared spaces in the Kennedy Building, and they also have access to the same computing facilities as staff.

The School has invested substantially in an excellent support staff team, which has helped academics free up time for research and core teaching activities. Since REF2014, the professional services staff has grown from 6.5 to 12 FTEs. This includes a Finance Officer in charge of travelling, expenses, research support, and financial support for external grant holders, and an extra IT Support Officer.

4. Collaboration and contribution to the research base, economy and society

a. Collaboration

Our staff actively collaborate with prestigious institutions across the world, and many of them participate in interdisciplinary research networks spanning both higher education and policy institutions. The School facilitates mobility and exchange through flexible teaching arrangements and study leave periods. Consequently, the School is very well connected with the international research community in Economics.

Kent members have co-authors and project partners in a large number of international institutions. Examples of these are: NYU, Penn State, Virginia, Northwestern, Georgetown, BU, in the US; PSE, Sciences Po, AMSE, UC Louvain, Mannheim, Tor Vergata, ULB, in Europe; Monash, Deakin in Australia; USP, UCB, Insper in Latin America; Keio, GRIPS, Kansai, Xiamen, Wuhan, in Asia, among many others. The School has a visitor programme to regularly welcome junior and senior colleagues from these and other institutions to support their joint work. The success of this strategy is evidenced by the large share of our outputs co-authored with staff in these international partners.

Our staff have also engaged closely with key research users such as policy institutions and think tanks. This has been an important part of our impact strategy, with tangible results as presented in section 1.c. The School engages with end users from early on in project proposals and throughout the delivery of research outcomes and their dissemination. Some of these research users are: Bank of England (León-Ledesma and Savagar); Defra (Fraser, Davidova); DfID (Amirapu and Wahhaj); NIESR (Tchunte, Savagar, León-Ledesma); IFS (Malde); European Central Bank (León-Ledesma); World Bank (Malde); European Commission (Bailey, Davidova, García-Alonso); Asian Development Bank (León-Ledesma and Shibayama); FAO (Bailey and Davidova); and European Parliament (Bailey and Davidova). These interactions come in a variety of forms, ranging from consultancy work, through to fellowships, research visits, and the organisation of joint events. As mentioned above, one of our colleagues (Chadha) became Director of NIESR in 2015-16, which has opened up opportunities for cross-collaboration in policy-focused research.

The School has also developed a strategy to integrate social media, research dissemination, and research students' experience in partnership with the University's Media Office. This has led to numerous mentions and highlighting of our research in important outlets such as the BBC, the *Economist*, *New York Times*, *Telegraph*, and *Financial Times*. This has been the consequence of a deliberate policy to increase our exposure and the appointment of a marketing and media officer. This is enhancing our external profile and opens up further opportunities for collaboration with the wider community.

Of special mention during this REF period is the association of the Global Labor Organization (GLO) with the School of Economics at Kent. The GLO functions as an international network and virtual platform for researchers, policy-makers, practitioners, and the general public interested in scientific research and its policy and societal implications on global labour markets. With more than 1,500 Fellows and Affiliates, GLO takes its virtual base at Kent with Dr Matloob Piracha as President. Seven of the School's members are also Fellows (Amirapu, Clots-Figueras, Launov, León-Ledesma, Siegel, Tchunte, Wahhaj).

b. Contribution to the research base, economy and society

Editorships. Members of the School have served many editorial roles during the assessment period. Fraser was Editor (2012-15) and Editor-in-Chief (2015-17) of the *European Review of Agricultural Economics*, and is Editor-in-Chief of *Q Open*; Guerre is on the Editorial Board of the *Journal of Econometrics*, *Econometric Theory*, *Econometrics Journal*, and *Annales d'Economie et Statistique*; Allouch is Associate Editor of *Journal of Public Economic Theory* and *Economics Bulletin*; Clots-Figueras is Associate Editor of *SERIES (Journal of the Spanish Economic Association)*; León-Ledesma was Associate Editor of *International Economics* and is Managing

Editor of *Economía* (the Journal of the Brazilian Economic Association) and the *National Institute Economic Review*.

Learned societies. Members of the School are actively engaged in important learned societies. Davidova is a panel member of the International Agricultural Economic Society. Gschwandtner is Executive Member and President of the Agricultural Economic Society Company. Allouch is on the Advisory Board of the Centre for Mathematical Research in Economics. León-Ledesma is a Board Member of the Money, Macro and Finance Society and Advisory Board Member of INFER. Clots-Figueras is Board Member and Chair (from 2020) of COSME (the Gender Committee of Spanish Economic Association).

Grant-giving bodies. A large number of our staff have acted as reviewers for grant-giving bodies, including the ESRC, British Academy, Leverhulme, ERC/Horizon2020, NSF (US), NOW (Netherlands), MEH (Spain), and a large number of University and charity funding calls. Several School colleagues are also members of selection panels (ESRC, Generalitat, British Council, CEDIL), and members of the ESRC peer review college.

Fellowships. Several members of the School have held prestigious Fellowships at learned societies. León-Ledesma and Klein are Research Fellows of CEPR. Siegel is Research Associate of CEPR. Clots-Figueras and Piracha are Research Fellows at IZA. Davidova is Fellow of the Association of Agricultural Economists. Siegel is Fellow of the Research Centre for Education and the Labour Market (ROA). León-Ledesma and Tchuente are Research Fellows at NIESR. Savagar is a Fellow of the Center for Macroeconomics. Malde is Research Associate at IFS. Wahhaj was a Visiting Fellow at STICERD (LSE) and is a Research Associate of the Centre for the Study of African Economies (Oxford).

Advisory panels and roles. Several members of the School have been involved in advisory work for policy institutions as part of the School's wider policy and social engagement activities. Fraser is a Member of the Economic Advisory Panel for Defra. Davidova has been approved as an Expert by the European Parliament to assist the Parliament's Committee on Agriculture and Rural Development. Garcia-Alonso was appointed as an Expert for the European Commission Strategic Trade Control Group. Wahhaj is Scientific Advisor on the Grand Challenges Canada and Scientific Committee Member, UNU-WIDER Gender and Development Project. Amirapu was Consultant to the Chief Economic Advisor of the Indian Government. Klein is a member of the Advisory Board for Science for the Government of the Czech Republic.

Conferences. During the assessment period, Economics at Kent has hosted more than 20 conferences and workshops. Examples of these are: 'Labour markets, public policy and business cycles' (2014); 'Macroeconomic Challenges of the International Economy' (2015); 'Economic and psychological approaches to social issues' (2016); 'RES Workshop on Structural Transformation' (2016); 'Rural Jobs and the CAP' (2017); 'Microeconomic approach to development economics' (2017); 1st to 4th Kent Workshops in Economic Networks (2017-20); 5th MMF PhD Conference (2018); 'Development Economics: organisations, institutions, and the mind' (2019). The School hosts the Annual MaGHIC Lectures delivered by high-profile macroeconomists (Rios-Rull, Caselli, Reis, Kiyotaki, Storesletten, Bloom). It also hosts regular internal PhD and Faculty workshops by area. Several members of the School have served on scientific committees for high-profile conferences, e.g. European Meeting of the Econometric Society (Allouch, Clots-Figueras, Leon-Ledesma); European Workshop in Economic Theory (Allouch); Money Macro and Finance Conference (León-Ledesma); European Economic Association (León-Ledesma); International Association for Agricultural Economics (Davidova); Spanish Economic Association (Clots-Figueras); Public Economic Theory Conference (Allouch).

Other contributions and honours. Several members of the School have delivered prestigious keynote speeches during the REF period (Clots-Figueras, Guerre, León-Ledesma). Three best-paper awards: Fraser, León-Ledesma (x 2). Papers by Siegel and León-Ledesma in AEJ: Macro have featured as 'Research Highlight of the Month' at the American Economic Association. Clots-

Figueras was awarded the XVIII Fundación Banco Sabadell Prize for Economic Research, given to the best young Spanish economist in 2019.