Institution: University of Bradford

Unit of Assessment: C17 Business and Management Studies

1. Unit context and structure, research and impact strategy

The academic staff submitted in the Unit of Assessment (UoA) are based in the triple-crown accredited (AMBA, EQUIS, AACSB) School of Management (SoM). Established in 1963, it is the largest of three schools in the Faculty of Management, Law & Social Sciences (FoMLSS).

Since our last submission in REF2014, the SoM has moved to a brand-new facility on the city campus, hired key researchers with excellent research track records/trajectories to strengthen key disciplinary areas and develop new areas of expertise, attracted major research grants from various funding bodies, and showed strength in making real impact on people and businesses through our research (see our impact case studies below). Our 2021 submission comprises 34.6 FTE (compared to 19.2 FTE in REF2014).

Nine new professorial appointments were made (see Section 2) in areas of organization studies, finance, sustainability, digital innovation, and green technologies, significantly extending our range and depth of disciplines. The UoA's particular research strengths, as demonstrated by publications and external funding, are: organization studies, industrial relations, small business and entrepreneurship, international business (IB), finance, marketing, governance, information systems and technology, circular economy, supply chains, big data, business analytics and artificial intelligence (AI), public sector transformation and digital government.

In 2017-18, four new Research Centres (RCs) were established in the UoA to align closely with the University's strategic theme of Sustainable Society and growth areas of digital innovation and green technologies. This recalibration exercise helped to ensure that the strengths of the UoA were recognised to meet future challenges. Each RC is designed on cognate disciplines and a core of research-led activities to enable shared learning amongst members and nourish a viable and vibrant research environment. The four RCs are:

– *Accounting, Finance and Economics (AFE)*

– *Business Analytics, Circular Economy and Supply Chain (BACES),*

– *International Business, Marketing and Branding (IBMB), and*

– *People, Organizations and Entrepreneurship (POE).*

Research Centres

AFE: The RC's principal focus is corporate performance and market behaviour. Staff study the role of accounting information, regulatory environment, governance mechanisms, corporate and country characteristics, asset price dynamics and market behaviour in influencing the positive potential for sustainability. Other research covers socio/economic sustainability issues on the well-being of immigrant labour, workplace flexibility practices, real exchange rate behaviours, and tourist expenditure variation. (Akbar (Lead), Baimbridge, Fry, Grillini, Hearn, Li, Lu, Waqas, Wu).

BACES: This RC operates in the fields of circular economy and big data, food security, supply chain, information technology, digital innovation and governance, and corporate performance and effectiveness. (Irani, Mahroof, Maruyama, Sharif, Sivarajah (Lead), Vincent, Weerakkody).

IBMB: Here, the focus is on the impact of external factors, government involvement and rivalry, knowledge sharing opportunities, joint venture and entrepreneurship characteristics, innovation, and ethical and sustainable management; in marketing the focuses include digital marketing and

innovation, acculturation, consumer behaviour and technology, and value-creation. (Adomako, Chu, Ismagilova, Kizgin, Rana (Lead), Tamilmani, Trivedi, Trouille, Wang, Waseem).

POE: Within this RC, the focus is on sustainable human resource management (HRM), digital and internet-based recruitment procedures, applicant perspectives, innovation and creativity within the workplace, employee relations and work-life balance, organizational change, entrepreneurial ventures, and social enterprises (Anderson (Lead), Costa, Danquah, Omar, Smith, Wallace).

Sustainability is studied across all RCs within a prescriptive decision-making framework with real options, equity release, and data envelope analysis (Adkins, Fry, Mousavi, Vincent). The UoA saw growth in two emerging areas of research which are relevant in all RCs: digital innovation and green technologies. Growth areas in digital innovation research include social media use for optimising emergency evacuations (Fry), discerning public responses to governance policy changes (Rana, Weerakkody), customers' acculturation (Kizgin), differentiating buyer intentions (Ismagilova), digital selection and assessment (Anderson, Costa), knowledge sharing in product design (Sharif), consumer e-business adoption (Sivarajah, Weerakkody), and digital government implementation (Maruyama, Sivarajah, Weerakkody). In green technologies we are working on lean-green sustainability strategy (Adomako), green purchasing (Trivedi), and green supply chain management (Sivarajah).

Research and Impact Strategy

The UoA's research mission is to conduct fundamental, applied and market-driven research having beneficial impact on academia, government, industry and society in the UK and internationally. We promote a collegial research culture that is:

- intrinsically developmental through recruiting expertise in the burgeoning knowledge areas;

- inclusive by nurturing staff at all stages of their career development;

- interdisciplinary by encouraging collaborative research across the three Schools in FoMLSS and with other Faculties; and

- international in the breadth of inter-country collaborations which currently span the United States, Europe (e.g. Netherlands, France, Spain), the Middle East (e.g. Turkey, Saudi-Arabia, Qatar, Bahrain, Kuwait, Oman), Asia (e.g. Bangladesh, India, Malaysia, Pakistan, China, Taiwan); and Africa (e.g. Ghana, Tanzania, Kenya). These collaborations include excellent interdisciplinary research linkages on themes of sustainability, governance, and structured and innovative financing between the UoA and Peace Studies & International Development (PSID, in Social Sciences – SoSS), particularly the John and Elnora Ferguson Centre for African Studies (JEFCAS) in PSID.

Staff are provided with significant research support (see Section 2) to develop as independent researchers and to empower them to contribute to our vibrant research culture and community through full participation, where both early career (ECR) and established researchers can flourish together.

Professor Vishanth Weerakoddy (Dean, FoMLSS), supported by Professor Sankar Sivarajah (Head of School, HoS), provides leadership to the SoM. Effective RC leadership is provided by Research Centre Heads (RCHs). RCHs have overall responsibility for RCs managing research activities; monitoring research quality and impact; providing on-going support for staff, managing staff retention, recruitment, mentoring and appraisal; coordinating and enacting research policy formation and joint endeavours across the SoM; teaching portfolio and associated administrative duties. The RCHs report to the HoS and are supported by other leading researchers in each Centre, and they represent their respective centres in the Faculty's Research and Knowledge Transfer (RKT) Strategy Committee (FRKTSC).

Strategic objectives

In line with REF2014 research strategy, our aim continues to be to create high-quality, innovative, relevant, impactful RKT that is capable of forging sustainable outcomes and bringing differential and tangible benefits to our stakeholders, and has international reach, to fulfil UoB's broader theme of "shaping future societies".

The underpinning objectives of our research strategy are to:

− To develop research excellence as manifested by our output publication and dissemination. This will be achieved through supporting our staff in their research careers (see Section 2);

− To establish engagement and research impact through forging closer ties with our stakeholders (see below);

− To develop the research income base (see Section 3); and

− To foster interdisciplinary research efforts (see below).

Impact strategy – establishing engagement and impact

Staff members are encouraged to generate impact in society outside academia through engagement with partners, knowledge transfer and co-creation. The following mechanisms are in place supporting impact and engagement:

1. SoM has an International Advisory Board with 24 prominent leaders from a broad range of public (e.g. UK Ministry of Defence) and private (e.g. BBC, BMW, Coca Cola, Emerald Publishing, Google, Harvard Business School, SAP) organizations, and an MBA Industry Advisory Board with 21 members (Bank of America, Merrill Lynch, WWF, Santander, Bradford Teaching Hospitals NHS Foundation Trust: BTHFT). Both provide researchers with routes into industry and policymaking circles, creating opportunities for co-creation and routes to impactful innovation, and providing a sounding board on research relevance and impact;

2. Our Impact Champion (Li) supports impact generation endeavours and actively promotes and encourages staff to engage with impact generating activities and related training offered by UoB's Research & Innovation Services (RaIS) team, external providers (e.g. Fast Track Impact), and funders (e.g. EPSRC);

3. staff training on approaches to dissemination (e.g. the use of social media and publishing for non-academic audiences);

4. use of Performance Development Review (PDR) for identifying 'pathways to impact' connected to output planning;

5. Impact Officer from RaIS advises on recording impact activities and provides support to staff on impact;

6. infrastructure available for impact recording;

7. Business and Community Engagement (BCE) strategy and dedicated team comprising an Administrative Manager and an Academic Director (Spicer).

The UoA builds on strong track record of working in partnership and actively seeking links with commercial enterprises, both 'blue-chip' (ATOS, Gfi World, Harman International, Knauf Interfere SE, Microsoft Africa, Nexans, Perfetti Van Melle, Qatar National Bank, Shell Petroluem Nigeria, TELUS Corporation, Vodafone, Wema Bank) and SMEs/start-ups (AVIE Ltd, Finely Fettled, TF Automation); not-for-profit (UNDP in Africa, WWF in Central and Eastern Europe – WWF-CEE,

Yorkshire Asian Business Association); public sector and governmental organizations (Bradford, Leeds and Hounslow Borough Councils; Chambers of Commerce; Ministry of Petroleum Resources, Nigeria; NASA Johnson Space Centre; UAE Civil Defence; West Yorkshire Police); and health organizations (NHS, Bradford Institute for Health Research (BIHR), BUPA). Joint collaborations with these partners are sought for external grant applications, either directly or in partnership with MBA/DBA/PhD students, which provide opportunities to engage with real organizational issues. SoM's corporate relationship with the Ellen MacArthur Foundation has attracted delegates from global organizations such as Coca-Cola, Cisco, BT, Renault, Unilever and IKEA.

The strategy is also realized through the Knowledge Transfer Network (KTN), a mutually supportive community of SMEs working in collaboration with the School and the University. Over a decade the network has impacted on more than 5,000 SMEs and it has a current membership of over 1,500 firms, mainly local SMEs from Bradford. The UoA also engages with large organizations within the Bradford district (Barclays, NHS and Yorkshire Police). It demonstrates our commitment to the City and its environment which is home to a significant ethnic minority population and has one of the highest rates of business start-ups (UK's 2nd most Entrepreneurial City), and some of the largest businesses in the north including FTSE 250 companies (e.g. Morrison's, Provident Financial). This provides a dynamic environment for the KTN and business engagement activities, and has led to over 50 consultancy, research and workshop opportunities as well as forging an enduring link with city and business bodies. Our excellence and expertise in supporting small businesses and our engagement in and commitment to our local economy are recognized through SoM's recent Small Business Charter award.

Our Impact Case Studies (ICSs) evidence the relevance and engagement achieved by our impact strategy. The ICS (C17-2) on Forgotten Workers investigated the work-life balance complexities of low-paid workers sustained only by having more than one job and uncovered their experiences of in-work poverty, precarious employment conditions and limited opportunities (Smith). The research resulted in citations by the Houses of Commons and Lords in relation to the employment prospects of young people and in the 2018 Budget Debate on the effect of austerity on precariously employed workers. Policy changes have been enacted by local authorities (Kirklees and Leeds City councils) governing their treatment of low paid workers, and practices and campaigns developed by the Trades Union Congress and Union of Shop, Distributive and Allied Workers (USDAW).

The ICS (C17-1) on increasing citizens' participation through ICT adaptation (EMPATIA) (Sivarajah, Weerakkody, Irani, Omar), was an EU H2020-funded project involving academic partners, the Universities of Coimbra (Portugal) and Milano (Italy), and non-academic partners, Democracy 2.1 (Czech Republic), OneSource, ZebraLog (Germany). The development and implementation in four local authorities in Portugal, Germany, Italy and Czech Republic of a versatile digital platform for supporting user-involved participatory budgeting processes has resulted in transparency and greater accountability, enhanced civic engagement, and led to project co-design based on local needs.

The digital-led transformation in public administration ICS (C17-3) addressed the problems of implementing digital systems to enact government policies. It resulted in representations to the Science & Technology Parliamentary Select Committee and to local and central government bodies on the intrinsic flaws of e-government initiatives and the realized socio-economic welfare gains resulting by adopting a holistic worldview and context sensitive methodology (Weerakkody, Irani, Omar).

SoM has also been quick to respond to the Covid-19 pandemic with e.g. a UKRI funded project on mental health consequences (Waqas); a joint project with the University of Hamburg on hygienic products during Covid-19 (Trivedi); and eight projects funded by UoB's Covid-19 Response Fund to help with business recovery (research topics on panic buying, food waste

generation, consumer confidence, agile and resilience capabilities of SMEs and post Covid-19 business recovery plan, and impact of pandemics on Financial Markets).

Support for interdisciplinary research

The UoA has actively encouraged interdisciplinary research, allowing researchers to combine their expertise and join forces, as many of the major problems facing society cut across traditional academic boundaries. One burgeoning initiative at FoMLSS has been the establishment of quarterly cross-faculty research summits to identify cognate research threads amongst the Faculty's three schools (SoM, SoSS, School of Law – SoL) and tap into the variety of available expertise for development of novel interdisciplinary research ideas. It is also intended that these deliberations will create exciting opportunities to enhance rigour through involving a more diverse participation across expertise and experience, produce outputs of greater relevance, and submit more successful grant applications.

FoMLSS has come together around key interdisciplinary themes that cut across the three Schools, i.e. sustainability; innovation in health; global governance; organizational and societal studies; equality, diversity, ethics and responsibility; international and financial development and stability; cryptocurrency and blockchain; digital age; and study of/in Africa. The SoM is a pivotal part of all the research clusters formed.

The Wolfson Institute for Applied Health Research (Wolfson) and Digital Health Enterprise Zone (DHEZ) also promote opportunities for interdisciplinary collaborations (see the ILES for details). Mahroof (BACES) is the Wolfson academic champion at FoMLSS who advocates applied health research and draws attention to joint working opportunities.

We have seen increased interdisciplinary research over the current REF period. Examples include a digital health and circular economy (DICE) PhD project (jointly supervised by Sharif, Sivarajah, and the Faculties of Engineering & Informatics (FoEI) and Health Studies (FoHS)). On the borderline between health and education is the co-design of a sustainable implementation intervention in school food systems (Sharif). Joint doctoral supervisions across Schools and Faculties are encouraged, which extends our research portfolio and creates opportunities for cross-fertilisation of ideas. Other examples include Sivarajah and Thakker (FoEI) – privacy of users of Internet of Things (IoT); Sharif and Anand (SoSS) – Community Based Water Management Institutions for Delivering Water & Health; Danquah and Jalilian (SoSS) – Implementing total quality management (TQM) philosophy in Bangladesh (see Section 4); Irani and Kapsis (SoL) – effect of victim's consent on civil liability.

Future strategy

Our research capabilities have been invigorated through the recruitment of additional key researchers (e.g. Adomako, Fry, Trivedi, Vincent, Wu) in addition to the new professorial appointments, which has resulted in improved research activities. We are resolved to build on these gains in a deepening of our four research objectives, continued adherence to the sustainable societies theme, and pursuing other growth areas. We will continue to attract and retain high-calibre research-productive staff to further strengthen our research capacity in areas of focus and strength, supported by mechanisms and initiatives outlined in Section 2. Research excellence and knowledge sharing will be accentuated through deepening of the collegial research environment and contributing to external activities such as staff holding positions of responsibility in editorial boards and learned societies as presented in Section 4.

Progress on collaborative and applied research has been facilitated and supported by ramping up our BCE Programme. This will continue to be the showcase for our research achievements to regional public and private sectors, and to facilitate opportunities for research collaborations. The leadership team will continue to actively support staff particularly early career researchers in building partnerships with research institutions in the UK and internationally.

Open research and research integrity

As a signatory to the UUK concordat on Research Integrity, UoB has an ethics policy and is committed to support research integrity. UoB conducts an annual review of research integrity, and produces an annual public report detailing current and future activities to demonstrate compliance with the concordat. Training from the University on research integrity including research ethics is available to all staff in the UoA.

Our staff and students follow the ethical standards set by the University when conducting research, and all our projects must secure ethics approval from the University Ethics Committee before fieldwork commences. The Dean sits on the University Ethics Committee and eight SoM staff members are members of the relevant University Research Ethics Panels.

We engender the highest standards of integrity and rigour in our research informed by University policies and procedures ensuring compliance with the Research Concordat and Open Access (OA) requirements for outputs, data, computational codes resulting from publicly funded research. UoB has implemented an OA and Publications Policy which is widely communicated through periodic emails and Open Research Week for staff and postgraduate (PGR) students. All staff are reminded to make full text of their papers available in UoB's OA repository. There are also opportunities for Gold OA publishing via UoB's arrangement with selected publishers. Staff are also encouraged to disseminate their research and findings via open media channels to increase visibility and impact.

2. People

Staffing strategy, development and support

The University and School continue to invest in staff, and our People Organization Development (POD) Strategy is designed to build a balanced portfolio of researchers at all levels with cognate or overlapping research interests, expertise and experience that match our needs, and to build our capability and capacity.

Our recruitment policy supports our strategy, where we appoint established/experienced active researchers and ECRs with prospects, whose interests are aligned to the specifics of the pertinent RC and UoB's theme of sustainable societies and the growth areas of digital innovation and green technologies. We follow processes that are open and transparent, and all academics are appointed on permanent contracts with a nine-month probation period. We also ensure opportunities are adequately resourced and staff are empowered to excel. At the heart of our policy is the nurturing of ECRs and junior staff to foster their growth to fully-fledged researchers, which is reinforced through a dedicated system of rewards and promotion.

In implementing our research strategy, we retain senior staff and place emphasis on attracting key staff to provide research leadership. Since refocusing, apart from recruiting nine professors (AFE: Akbar, Hearn; POE: Anderson, Costa; BACES: Irani, Sharif, Sivarajah, Weerakkody; IBMB: Rana), across the four RCs, we have recruited eight ECRs and six other junior staff (AFE: five, BACES: four, IBMB: four, POE: one). Currently, the balance of experience and expertise is also reflected in the distribution of REF submitted staff with two senior professors with leadership roles at the School/University, nine Professors, nine Associate Professors (including Readers), and 15 Assistant Professors and Lecturers.

The University is a signatory of the UUK Research Concordat to Support the Career Development of Researchers and has developed a framework "Bradford Academic Career" for career progression with clear expectations of staff at all stages of their careers (see the ILES for details). Early career staff can apply for a fast-track re-grade after completing an initial nine-month probation period, under clearly published criteria, at the end of which they complete a two-year supported development from lecturer to Assistant Professor, and then to Associate Professor and Professor. ECRs are supported by protected research allowances, mentoring,

training, and flexible working patterns (see below). All staff exceeding expectations are invited to apply for UoB's annual 'Performance Recognition' scheme.

We encourage and support staff in their career progression by creating opportunities for staff to fulfil promotion criteria, e.g. open invitations to all staff research, administration/leadership initiatives as they arise. This led to internal staff career developments: Irani, Dean to DVC; Weerakkody, HoS to Dean; Sivarajah, RCH to HoS; Li, Impact Champion and ADRKT. We are also proud that some of our staff have attained external promotion: Dr Eva Alfoldi, Assistant Professor, University of Delaware; Dr Xiaoxia Ye, Senior Lecturer, University of Liverpool. Since 2014, over 25% of the 35 staff submitted have been promoted, two to Professor (Sivarajah, Wang), two to Reader (Li, Smith), one to Associate Professor (Trivedi), and four to Assistant Professor (Chu, Ismagilova, Mahroof, Omar).

Staff research allowances are assigned through UoB's normalised workload model according to responsibility, research productivity and portfolio. Staff having a significant research responsibility are assigned a minimum research allowance of 15%; those with a strong research portfolio an additional allowance (up to a total of 25%), supplemented by a 10% scholarship allowance. The additional research allowance reflects research productivity and is intended to be motivational and reward performance to encourage continued high-level research engagement through high-quality publications, grant applications and impact generation. Staff in receipt of external funding have the requisite project time added to their research time.

All staff are offered, on a competitive basis, the opportunity to seek research sabbatical leave to develop research capabilities and participate in international research networks. Flexible mini-sabbaticals of up to 6-weeks duration within term time are also available to support short-term needs, e.g. for imminent deadlines for finalising grant proposals or completing a project.

Early Career Researchers are the seed-corn sustaining our research future, and our research allowance policy for ECRs supports their transitioning to an academic career and to developing their research prowess. In addition to the research allowance stated above, ECRs also receive a 10% development allowance. FoMLSS also offers a special ECR support scheme with GBP500 seed-corn funding for 10 projects a year for training/data collection purposes. In addition to the ECRs, probationary staff are also assigned 10% development allowance.

Each ECR, both probationary and post-probationary, is assigned a research mentor, normally a professor within the respective RC/cognate discipline, to act as research guide and writing coach. Regular meetings are convened to discuss research direction, progress and potential developments; to offer advice on drafting quality articles and research bids, generating and evidencing impact from their research; and to actively integrate the mentee into research networks. In 2020, the AFE RC initiated group mentoring, where a self-selected group of junior staff in cognate areas, supported by at least one professor, meet to develop research funding proposals. ECRs with wellbeing concerns can access an informal system of peer support.

Research quality and productivity are evaluated and monitored through target-oriented performance review systems of PDR and Personal Research & Innovation Plans (PRIP). The PDR involves a two-way discussion with line-managers (typically the RCH). It is designed to review the past year's achievement and progression of each staff member; set objectives and plans for the year ahead; and identify 'pathways to impact' connected to output planning, areas of strengths and professional development needs; enabling staff to achieve their full potential. PDRs are conducted on an annual cycle, with one main meeting, followed by three quarterly meetings in each cycle. Workload, skills development, resourcing and opportunity seeking are critical elements of the PDR process. Professors, who conduct their review with HoS, with approval from the Dean, are also expected to demonstrate leadership through mentoring junior staff and teams and delivering research bids and outputs. The annual PDR process is complemented by the PRIP covering longer-term (5-year) staff research planning.

Staff are incentivized to devote time to research and research activities are materially supported in various ways, firstly by financial support for training and conference attendance (GBP100,000

available per year). Conference funding is normally granted for the first application while further applications are decided on merit and fund availability. Staff also have access to the FoMLSS research budget (GBP20,000 per year) to fund RKT activities including kick-starting research endeavours, impact generation, and journal submission fees. Staff are invited to bid for the competitive annually awarded University internal grant schemes including the Research Development Fund (GBP200,000 per year) which is distributed across PhD studentships (as staff projects), international mobility, ECR pump-priming, research concept development, a monthly publication award, and writing retreats; Collaboration, Capacity and IP Development Grants for interdisciplinary proposals that will develop impact; the International Development Fund (IDF) drawn from Global Challenges Research Fund (GCRF) to fund activities that promote economic development and welfare in developing countries eligible to receive aid, and provide opportunity for full-time funded PhD studentships; and ad-hoc pump-priming support schemes (e.g. Covid-19 Response Fund to help with business recovery post Covid-19) for kick-starting experimental ideas and early-bird research endeavours. Eight of the 22 Covid-19 projects funded are from SoM, totalling over GBP10,000.

Staff development opportunities are promoted at RC, Faculty and University levels. At RC level, RCHs have the responsibility for organizing research seminar series involving internal and external speakers. Current funding support for seminar series is GBP6,000 per year. These regular research seminars act as a forum for staff to disseminate their findings, evaluate new opportunities, and to engage in shared learning. Notable guest speakers hosted by RCs in this REF period include Professors Lambrecht (Cambridge), Stark (Alliance Manchester Business School, AMBS), Walker (AMBS), Cumming (Florida Atlantic University), Dedman (Surrey), and Mangena (Nottingham). Each RC also runs 'away-days' where research successes are showcased, ideas shared, opportunities explored, and collaborations initiated. SoM provides additional annual funding of GBP8,000 to the RCs for supporting research activities including data collection, transcription and travel. At Faculty level, the quarterly Faculty Research Summit facilitates the identification of common research themes, the scoping and formation of collaborative links across FoMLSS, and promotes joint venturing. At University level, research seminars and targeted sandpits for forthcoming/anticipated funding calls organized by RaIS, other Faculties, Wolfson, or DHEZ help to identify opportunities for cross-Faculty research collaborations.

Staff development is also underpinned by training. The UoB offers regular specialized research workshops and other training initiatives to all UoA members, including on-campus sessions and off-campus retreats. The portfolio of research focused training includes those relating to research methods, data analyses skills and software, grant writing workshops, supervision and examination of PGR students, research ethics & integrity, OA, impact, dissemination workshops (e.g. social media), management and IT skills.

PGR students

SoM has an established and well-developed doctoral programme based on PhD (full-time and part-time) and DBA (part-time) degree structures. PGR students, DBA and PhD, are crucial to our research profile and make a vital contribution to our research culture and community. Where appropriate, eligible and high-calibre doctoral candidates can be offered internally (via IDF, RDF) and externally (e.g. UK Prevention Research Partnership (UKPRP), 'ActEarly' Scheme, the Commonwealth – see Section 3) funded studentships. Staff with PGR projects on offer advertise their availability through "FindAPhD". The programmes were systematically and comprehensively reviewed in 2018-19. The benefits of the changes are currently being realized in an increasing number of completions (13.5 PGR in 2017/18, which is a 50%+ increase from 2015/16 and doubles the 2016/17 figure). Thirty-one doctoral degrees (PhD: 7, DBA: 24) were also awarded to part-time extramural students since 2014.

PGR students are normally assigned two supervisors with the appropriate skills and experience to guide them to completion. To be eligible, new staff are required to attend supervisor training provided by the University, and existing staff are required to attend refresher courses at least

every three years, all organized by UoB's POD team in HR. At least one supervisor must have established supervisory experience and a successful track record of bringing students to full completion. Typically, the second supervisor is an ECR or junior staff member who, by working alongside the senior colleague, gains hands-on experience and training, before working as a principal. More recently, there have been increasing number of cross-School and cross-Faculty joint supervisions, in line with our interdisciplinary research strategy (see Section 1).

Doctoral students are offered a variety of compulsory and optional training opportunities both general and discipline specific. During their first year, PGR students are obliged to attend research training modules, alongside other training offered by FoMLSS (e.g. Paper Development Workshop delivered by a visiting Professor with substantial journal editorial experience) and by UoB through the PGR Framework team, aligned with all 12 domains of the Vitae 'Research Development Framework'.

PGR students regularly meet with their supervisors to review progress and conduct Training Needs Analysis to identify skill/knowledge gaps and propose remedies. Generalized training opportunities include courses relating to literature review, critical thinking & problem solving, research methods, data collection and analysis methods and software, research ethics, academic writing, and wellbeing. We offer supportive 'shut up and write' sessions and training on academic transitioning (Bradford:Fellowship Graduate Pathway scheme) as the first step towards the Higher Education Academy Fellowship. Further, external training is available through White Rose Social Sciences Doctoral Training Partnerships (WRDTP) and Northern Advanced Research Training Initiatives (NARTI). WRDTP is a collective of seven Universities, including Bradford, that delivers social science PGR training.

We offer competitive scholarships including those consistent with ESRC guidelines (fees and living expenses) and others meeting UK fees to doctoral students: nine scholarships were awarded during this REF period. A competitive funding scheme to support PGR students' external training and conference attendance is also available, running twice a year. Since 2014, FoMLSS has held an Annual Faculty Doctoral Research Conference, organized by PGR student volunteers, supported by Director of PGR studies (DPGR). In 2020, due to Covid-19, it was run as a series of online research seminars and peer review workshops and attracted international researchers from e.g. France, Spain, Netherlands, Russia, Cameroon, Qatar, Bahrain, Oman and India, with keynote speakers from the UK, US (Harvard) and France streamed live on SoM's social media pages. PGR students are expected to present their research at this conference, giving them the opportunity to showcase their work, gain presentational experience and receive feedback. This experience is underpinned by the biannual PGR Peer Review Workshops for honing their skills. FoMLSS awards an annual Doctoral Prize to best PhD and DBA students recognising innovation and impact.

A crucial element of the doctoral programme is the full assimilation of PGR students within our culture. Integration is enabled by (a) assigning them to a RC, (b) regular meetings between the student and supervisors for spotting and resolving emerging critical issues, (c) an obligation to attend RC research seminar series, (d) the physical location of PGRs in close proximity to staff (Section 3), and (e) encouraging student-supervisor joint-authorship. We have an inclusive, trusting research environment based on integrity, and our PGR students benefit from having quality research discussions, exposure to a variety of disciplines and experts, and learning opportunities in research dissemination.

PGR students can access PGR Connect, UoB's peer support network. This student-led scheme helps our PGR students to adjust to and/or progress in their studies through sharing experiences and ideas, tackling common challenges, and developing a sense of community and belonging together. The scheme aims to support the wellbeing of our PGR students. For students who are struggling, there are supporting procedures in place, e.g. the unsatisfactory progress procedure (UPP) which helps to set clear and manageable objectives to help get students back on track, suspension of studies and extension of registration.

Equality, Diversity and Inclusivity (EDI)

SoM recruits staff from a wide variety of countries and diverse ethnic backgrounds: there are 10 different nationalities and ethnicities represented, a "white/non-white" ratio of 31:69, and a "female/male" ratio of 20:80, amongst staff with significant responsibility for research.

Omar is the Faculty EDI lead facilitator, supported by EDI facilitators from the three constituent schools; the SoM facilitator is Chu. The Faculty EDI facilitator is a member of the FRKTSC, responsible for facilitating a supportive research environment and promoting EDI for all staff. The FRKTSC also have ECR and PGR representations to ensure their views and voices are heard.

As a UN Principles of Responsible Management Education (PRME) signatory, principles of ethics, responsibility and sustainability govern our RKT activities. In line with PRME Principle 4, research projects focusing on EDI and Sustainability that contribute towards achieving Sustainable Development Goals (SDGs) are actively encouraged. As well as sustainability, EDI topics are reflected in our research including digital selection bias (Anderson, Costa); entrepreneurship for women in Africa (Adomako) and the Middle-East (Weerakkody, Irani, Omar); workplace flexibility practices (Baimbridge); insecurity and precarious work (Smith); heritage acculturation of immigrants (Kizgin); the socio-economic impact of increasing citizen participation in local government decision making (Sivarajah, Weerakkody, Irani, Omar); and network formation for socio-economically deprived communities to improve well-being (Weerakkody).

All staff are required to attend training on 'Equality & Diversity', GDPR, Health, Safety & Wellbeing, complemented with optional sessions on 'Personal Resilience', 'Mindfulness' 'Dignity & Respect', 'Managing Conduct in the Workplace', and 'Equality Impact Assessment'. Line managers are required to attend training on 'Managing Remote Workforce', 'Leading Others in Changing Times', and 'Recruitment & Selection'.

Staff conducting internal reviews of research outputs are required to attend training organized by RaIS. UoB is a signatory to DORA (the San Francisco Declaration on Research Assessment), endorsing and affirming our commitment to developing and promoting best practice in the assessment of researchers and scholarly research.

We are committed to ensuring researchers are not disadvantaged due to issues relating to their personal circumstances or characteristics. Research allowance systems, applications for research sabbatical leave and PDRs take full account of maternity, paternity and parental leave, and other long-term absence due to health or disability issues or caring responsibilities that might affect research performance. Staff returning from maternity leave can be assigned a female mentor to support their journey back to research activities. Staff are also supported with phased return to work after long-term absence (e.g. maternity or sick leave) through reduced workload and opportunities for remote and flexible working to facilitate caring or childcare responsibilities. An anonymous annual staff survey invites staff to suggest potential improvements, which has resulted in novel staff training developments such as mentoring for mentors and mentees.

3. Income, infrastructure and facilities

The University and School continues to invest in infrastructure and facilities to support our long-term vision for a sustainable research environment and enable world-class research. Our staff have recourse to research development and support aids, centrally facilitated by the University, on topics such as bid preparation, costing, ethical approval, knowledge transfer, auditing, impact and dissemination. Centrally offered facilities also include the provision of workshops and targeted cross-institutional sandpit events.

In the REF period, the UoB invested significantly in the Research Information System (RIS) for enabling staff to create and up-date their online profiles and the monitoring and evaluation of

publications. Importantly RIS also facilitates the preparation of and approval processes for grant applications.

Research Funding

Our research funding effort maps onto the themes of sustainability and digital innovation, and awards from funding sources are primarily from the UK Research Councils (67%), EU (15%), charity, international funding bodies and industry funding (18%). We saw a substantial increase in 2017-18 (2.4 times of 2016-17), and 56% increase in 2018-19. In 2019/20 Covid restrictions and consequent extensions and delayed starts to some grants have curtailed our spending from research grants.

An important element of our research strategy is to support and incentivise high quality funding applications. Apart from support for funding applications outlined in Sections 1 and 2, we have the following measures in place to improve the quality of applications. Staff are required to register in a timely fashion their expression of interest for any upcoming grant proposals on RIS, producing a comprehensive pipeline of future research grant and knowledge transfer applications. All research bids to external funders must undergo a mandatory internal review process by two academics not involved in the application with support from an expert RaIS officer. The RaIS team provides detailed guidance on standards, academic rigour, methodology, originality and impact, and potential partner identification across the University. The use of internal peer review of proposals has led to improved bids and helped to target submissions to appropriate agencies, while the bidding pipeline information is designed to encourage staff to track grant opportunities proactively and to allow planning and monitoring of grant application activities at UoA level.

External Funding has come from a diverse portfolio of sources. We list examples of our grants:

EU

−   European Commission (EC) (GBP222,222) (09.2016 – 12.2020) on East African Community regional integration, Jean-Monnet Network (Trouille);

−   Erasmus Plus, EU-funded, on Mediterranean and African Integration in the Global Age, AMENET, Jean-Monnet, GBP9,744 (Trouille);

−   ERDF (EU-funded) (GBP142,646) (04.2017 – 03.2020), Ad:Venture project;

−   EU Horizon 2020 (total EUR1,483,625, EUR100,000 to Bradford) (01.2016 – 03.2018) on Participatory Budgeting (EMPATIA) – Sivarajah, Weerakkody, Irani, Omar in collaboration with a multidisciplinary consortium in Portugal, Czech Republic, Italy and Germany;

−   EC (total EUR4,872,649, GBP88,056 to Bradford) (01.2014 – 12.2017) on Social Innovation – Driving Force for Social Change (SI-DRIVE) – Weerakkody, Irani. The project involves 25 partners from 16 EU member states and nine non-EU partners;

•   Marie Curie (GBP118,937) (03.2015 – 02.2016) on value-based entrepreneurship, studying the Cultural, Organizing and Leadership Dynamics of Social Ecopreneurship.

Research Councils

−   EPSRC (total GBP1,034M, GBP600,037 to Bradford) (04.2017 – 01.2021) on regenerative buildings and products for a circular economy – led by SoM, in collaboration with the School of Engineering and the University of Manchester to look at the construction industry and how high value materials can be reused in new developments (Re:Build project). The project has partners including Ellen Macarthur Foundation; professional associations including Leeds College of Building, British Constructional Steelwork Association, the Alliance for Sustainable Building Products; local councils including North Yorkshire County Council, City of Bradford

Metropolitan District Council, Leeds City Council, Manchester City Council; and corporates including BAM, BRE Trust, Eco-Res Ltd, National Federation of Demolition Contractors, Arup Group Ltd, KTN Ltd;

− MRC (total GBP149,801, GBP5,684 to Bradford) on co-design of a sustainable and acceptable implementation intervention to maximise the impact of whole school approaches to food within primary schools (Sharif, with collaborators from the Universities of Leeds, Bath, Queens Belfast and Newcastle, BIHR);

− UKRI (total GBP255,159, GBP142,849 to Bradford) on neighbourhood effect on mental health consequences of Covid-19 (Waqas, Principal Investigator, in collaboration with University of Leeds);

• Innovate UK, KnoWaste KTP project on digital tracking of waste, GBP26,498 (Sharif, Sivarajah).

UK Government

− Office of Students (OfS), Department of Culture, Media and Sport (DCMS), Office for Artificial Intelligence (OAI) (GBP700,000) (2020-2023), Irani, on Artificial Intelligence and Data Science;

− British Council on Bandar Lampung Enhance Smart-Health Services with Smart Ubiquity (BLESS U), GBP87,707 (Hou with FoEI), and funding from Harrogate Borough Council, Hounslow Borough Council;

− British Commonwealth PhD studentship for three years (GBP53,196, ends July 2022) on TQM Practices in Bangladesh (supervised by Danquah, Spicer, POE).

Other examples of funding include:

− British Academy (BA) Leverhulme on longitudinal assessment of fairness reactions in a promotion context, GBP1,750 (Anderson, Costa); and other funding from e.g. Ellen MacArthur Foundation and the Institute for Family Business Research Foundation;

− Yorkshire Water on circular economy system redesign, GBP34,700; Institute of Banking & Payments Federation on bank lending to Irish SMEs, GBP2,000; and

− QNRF Lifelong Learning, GBP54,517, Weerakkody, Irani; Safeguarding Food and Environment in Qatar, GBP17,340, Irani, Sharif; Entrepreneurship for Women in Qatar, GBP57,190, Weerakkody, Irani, Omar; BlockChain in Qatar, GBP77,603, Weerakkody, Sivarajah;

− BIHR 3-year PhD studentship (GBP60,000, ends April 2024) on city-wide food systems and their impact on health between UoB (Sharif) and BIHR/BTHFT as part of the GBP6,500,000 UKPRP-funded 'ActEarly' research project.

Infrastructure and Facilities

In 2018-2019, SoM relocated from its Emm Lane campus to the main campus closer to the city centre in Bradford with larger, state-of-the-art facilities. The relocation was a strategic decision taken by the Senior Management Team led by the Vice-Chancellor and the Dean of the Faculty in full consultation with staff and students. The relocation to the main campus marked the final phase of the refocusing exercise and by physically placing SoM at the centre of the University campus, the School is better able to contribute to the strategic direction of the University and provide a high-quality environment for staff and students. Our staff are now in a better position to access the wide range of resources and facilities available at the main campus, to promote management research, education and training to other disciplines, and take advantage of

opportunistic links with other Faculties. Opportunities for interdisciplinary research for both staff and PGR students have also increased. Staff offices for the RCs are clustered around a communal space that can be used for formal meetings, informal or social gatherings. This physical environment is designed to foster togetherness and reciprocity.

The School made significant investments (GBP2,250,000) during the REF period including a new dedicated Bloomberg suite, a Community Innovation Lab (CIL), and computing facilities for staff. The Bloomberg suite, with a real-time LED share price ticker, has simulation trading software for finance, ethics and behavioural research. As part of this investment, our staff and students can now use a new Data Analytics Centre facility. The CIL is for supporting entrepreneurship and start-ups, facilitating deeper interaction and synergies between the School and local businesses and providing a network to enhance research collaborations with businesses. It also provides dedicated DBA/MBA teaching/training facilities. SoM had committed GBP100,000 further investment in the CIL, which was unfortunately delayed due to Covid-19 and is now commissioned for September 2021. FoMLSS PGR students have dedicated study spaces, close to staff offices, with an investment of GBP50,000 in IT facilities. All PGR facilities are accessible for those with disabilities.

We have access to other University infrastructure, including the central High-Performance Computing facility (HPC). Sivarajah and colleagues in the AI Research (AIRe) group are collaborating on several projects and co-supervising PhD students, who amongst others frequently make use of the HPC facility.

SoM continually reviews its library provision and research databases to keep them relevant and world class. The UoA provides access to databases such as Thomson Eikon, Datastream, FAME, Thomson One Banker, and data analysis software including MatLab, R, SPSS, Stata and EMOS. SoM has a dedicated academic member of staff (Wang), who is the Bloomberg Suite and Database Lead. Research is further supported by dedicated, full-time Academic Subject Librarians. The Library at UoB has continued commitment to resources such as books (with more than 17,000 physical management texts; 28,000 eBooks including collections of ProQuest Academic Complete, Emerald Business, Management and Economics eBook Archive, and Sustainable Organization Library), journals (41,000 journal titles including extensive full text collections available through ProQuest ABI/Inform, EBSCO Business Source Premier and JSTOR), and databases. In addition to the existing subscription databases, management research has been enhanced by investment in two new databases (Business Source Complete and Sage Online Journals). The Library continued to subscribe to the 'eBrary' package, providing more than 86,000 titles of multidisciplinary content for researchers. Library access is 24/7, with interim arrangements for online access during Covid. Remote access to cluster PCs with specialist software is available 24/7, and a range of software is available (e.g. SAS, SPSS, NVivo, Matlab, Minitab, Endnote) for staff and students to download to their personal devices where vendor licensing allows. Online provisions, e.g. Zoom, Teams, and OneDrive, are also available to staff and PGR students on and off campus.

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

Staff actively contribute to the development of their discipline. These contributions include keynote/invited speakers at conferences/events, external awards, journal editorships, representation on professional/public bodies, organization of research events, collaboration, media/public engagements, and visiting professorships and scholars.

Keynote/invited addresses

We have a long track record of staff invited to give keynote/plenary addresses at major research events or contribute as panel speaker. Notable examples are listed below.

Organization Studies: innovation and creativity in organizations – National University of Taiwan (2014); International Association of Administrative Professionals Conference, Paris (2014); and recruitment and selection – 1st International Selection Research Workshop, University of Surrey

(2017) (Anderson); team trust in Long Duration Space Explorations, NASA, Johnson space centre, USA (2017) (Costa, Anderson).

Circular Economy and Development: Circular Economy and Smart Cities – e.g. Smart Cities World Expo, Barcelona (2019) (Sharif), Circular and Green Economy at Warsaw Circular Economy Summit, Poland (2018) (Sivarajah); Food, Water, Energy Security – Water Symposium, World Technology Universities Network, Bradford (2019), 7th International Symposium on Energy, Manchester (2017), Food, Water and Energy Security at Oxford Food Forum, University of Oxford (2017) (Sharif); Sustainable Development – e.g. International Conference on Global Economy and Sustainable Development, Beijing (2018) (Sivarajah).

Digital Innovation: Artificial Intelligence (AI): e.g. AI Tech North Summit (2020) (Sharif), AI in Security and Defence, Beirut (2019) (Sivarajah); Blockchain: e.g. International Congress on Blockchain Business & Security, Rabat (2019); Digital Government: e.g. Digital Leaders UK Saloons (2016, 2017), International Congress of Education Innovation Management of the Public Sector, Brazil (2015) (Weerakkody).

Supply chain management: 3rd International Conference on Projects and Logistics, La Rochelle (2017) (Sharif), Value Creation in West Yorkshire's Procurement and Supply Chain Management, ARUP, Leeds (2019) (Sivarajah).

International Business: European Economic Integration – Genshagen Foundation, Weimar Triangle Roundtable Discussions, Berlin (2017), plenary address at the ICQAHEA Conference Yaounde (2018), panel speaker at EU Commission on Jean-Monnet Activities, Brussels (2019) (Trouille); International Joint Ventures in Emerging Economies – Joint Conference of College of Economics and International Trade, Hunan University and Chinese Economic Association (UK/Europe) (2016) (Wang).

Awards

Some staff have received recognition for high-quality research through external awards. Examples include Wang's work on Innovation-Export Relationship which was a Best Paper Award Finalist for the International Management Division, Academy of Management (AOM) (2020); Chu's work on the Influence of Confucianism and Buddhism on Family Business Practices and Identity, was awarded Best Paper in the Management, Spirituality and Religion (MSR) stream, AOM (2019); and Rana's paper on Mobile Wallet Usage in India won the Commendable Research Paper Award, IFIP WG 8.6 Working Conference (2020). Further, Anderson's work published in Journal of Management (JoM), was the winner of the AOM/JoM Scholarly Scientific Impact Award (2019), and Rana received the Highly Cited Researcher 2020 Award (top 1% for the field) from Clarivate Web of Science.

Contribution to and influence on the research base

Journal editorships

Staff are encouraged to develop their expertise, raise their individual and Bradford's profile, and contribute to their discipline by undertaking journal editorial roles. Many staff, 24 of 35 submitted, have editorial roles covering a range of journals – three Editors (three journals), 11 Associate/Senior/Technical/Handling Editors (14 journals), 13 Editorial Board Members (20 journals), and eight Guest Editors (13 journals).

In AFE, Hearn is Associate Editor of Research in International Business & Finance and Senior Editor of International Journal of Emerging Markets (IJEM); Fry, Li and Mousavi are on the editorial boards of Cogent Economics & Finance, Journal of Accounting & Emerging Economy, and Journal of Finance & Accounting Research respectively.

In POE, staff are on the editorial boards of Journal of Management (Anderson), European Journal of Work and Organizational Psychology (EJWOP), Journal of Business and Psychology,

and International Journal of Selection and Assessment (Anderson, Costa). Other editorial positions include Costa (EJWOP, 2011-2018) and Wallace (Personnel Review and Journal of Quality and Wellbeing Research), while Smith reviews for New Technology and Work and Employment.

In BACES, Irani is founding editor of Transforming Government: People, Process & Policy and edits Journal of Enterprise Information Management (JEIM). Other editorial roles include Sivarajah, JEIM; Vincent, Journal of the Operational Research Society (JORS) and International Journal of Business & Emerging Markets; Weerakkody, Editor-in-Chief for International Journal of Electronic Government Research (IJEGR) (2008-2020) and Information Systems Frontiers (ISF).

In IBMB, staff serve on editorial boards including Adomako (Corporate Social Responsibility and Environmental Management Journal), Rana (Government Information Quarterly, GIQ), Trivedi (Journal of Promotion Management), Trouille (Review of European Affairs) and Wang (International Business Review and Management and Organization Review). They also hold editorial positions, for example Adomako (Journal of the International Council for Small Businesses), Rana (IJEGR, International Journal of Information Management – IJIM, and ISF), Trivedi (IJEM) and Trouille (Public Policy Studies, SGH Warsaw)

Guest Editors include e.g. Anderson (EJWOP); Adomako (Technological Forecasting & Social Change); Akbar (Sustainability); Irani (Journal of Business Research, JORS); Kizgin (e.g. Journal of Consumer Behaviour, IJIM); Rana (e.g. GIQ, ISF, International Marketing Management).

ECRs with an editorial role include Ismagilova, Tamilmani (Associate Editor, IJEGR), Mahroof (Editorial Board, JEIM), Omar (Guest Editor – IJEGR, ISF).

Representation on professional bodies

Staff participate on grants committees, are members of research councils or similar national and international committees, and act as grant proposal reviewers.

Reviewers of funding bodies include those from the UK research councils (e.g. EPSRC, Irani, Sharif; ESRC, Hearn, Sharif, Trivedi, Weerakkody; UKRI, MRC, Sharif), charities (e.g. British Council Newton Fund and British Academy, Sharif), and internationally (e.g. EU, Sharif; Danish Council for Independent Research, Fry; Czech Research Foundation, Danish National Research Foundation, National Natural Science Foundation of China, and Swiss National Science Foundation, Sharif; National Science Foundation, US, Irani; QNRF, Irani, Sharif, Weerakkody; Research Council Academy, Finland, Weerakkody; Marsden Fund, New Zealand, Wang). Trouille is an accredited independent evaluator and ethics expert appointed by the EU Commission's Directorate-General for R&I (H2020) and the Agence Nationale de la Recherche, Paris.

Other key associations of staff include Anderson - Elected Fellow, American Psychological Association (APA), Society for Industrial-Organizational Psychology, Division 14 of APA; Smith – Executive Committee Member, British Universities Industrial Relations Association; Vincent – Fellow, Royal Statistical Society (RSS), Pan-Pacific Business Association; Wallace – Fellow, RSS; Weerakkody – Fellow, British Computer Society.

Further, Wang was Academic Quality Committee member of WRDTP, and Hearn is Deputy Director, Sustainability Growth, Management and Economic Productivity pathway of WRDTP, both contributing to the training and development of future researchers. Kizgin is deputy Chair for Digital Marketing and Data Analytics Special Interest Group.

Contribution to the discipline through organizing conferences and research events

Chu with others organized the symposium in AOM (2019) on MSR and won the Best Symposium & Best Show Case in MSR stream prize. She also organized the panel for Society

for Business Ethics (2019). Rana (chair), Tamilmani (co-chair) chaired the Social Media track (IFIP WG 8.6 Working Conference). Sivarajah co-chairs the e-business and e-government track (forthcoming British Academy Management, BAM, 2021 Conference). Trouille's ongoing work on the regional integration of East African Community and Africa-Mediterranean-Europe (AMENET) within the Jean-Monnet Network involved the organization of 15 international activities between 2017 and 2019. These included three research and policy workshops, four training and dialogue sessions, two roundtable debates and six conferences, in seven countries (Belgium, Ethiopia, Kenya, Rwanda, Tanzania, Uganda and China). In the future these activities are expected to encourage innovations on creating sustainable societies in Africa. Weerakkody chairs the e-Government track (Americas Conference on Information Systems, 2014-2020) and organizes the Transforming Government (tGov) workshop (Bradford, 2017-2021).

Collaborations

We actively seek out collaborations from within and outside academia, national and international. Existing research collaborations extend across the globe. Staff published with researchers from more than 32 other UK universities, and institutions from 30 other countries in Europe (12), the Middle East (three), Africa (six), South-East Asia (five), North America, and Australasia. Research of 19 staff in our submission involve an overseas dimension, with potential for international impact.

Significant project partners on key research themes include e.g.

− Trust Development in Workplace – with University of Valencia (Spanish Ministry for Science and Technology grant); and the team trust project (NASA Johnson Space Centre funded) advises space crew teams on developing and maintaining team trust within small teams in extreme environments of long duration, isolation and confinement, which led to further work on how the findings can contribute to shaping the selection and training practices for long duration space missions (Costa, Anderson);

− Food Security – e.g. with Georgetown University-Qatar (USA/Qatar), Cranfield, Warwick (UK), Western Sydney University (Australia), the QNRF-funded project provided an in-depth analysis of food supply/demand and identified key drivers of food waste using causal mapping and simulation, which had significant impact on policy-making and consumer behaviour in Qatar, Sri Lanka and Bangladesh (Irani, Sharif); and with Brunel University London, the British Council-Tubitak joint funded project studied food security in humanitarian contexts for refugee camps in Turkey (Irani);

− Circular Economy (e.g. IDF-funded projects) – 1) the project 'Feasibility study for an Affordable Microplastic Pollution Mitigation Solution of Water Supplies' aims to build on strengths in resilient and re-usable engineered materials for affordable and sustainable clean drinking water and sanitation, collaborating with partners including academic institutions in India, Egypt, Uganda, a charity (Ellen MacArthur Foundation) and industry (Lambson Ltd, UK) (Sivarajah, FoLS); 2) collaborating with Universities in Tanzania, the Digital Health and Circular Economy project aims to contribute towards the design of a circular economy-enabled digital health network infrastructure in rural Tanzania to improve access to and quality of maternal and new-born healthcare (Sharif, Sivarajah, FoEI, FoHS);

− Health Interventions (e.g. MRC-funded projects) – school food systems with York, Newcastle, Bath and Queens (Belfast) universities, and city-wide food systems ('ActEarly' programme) with UCL, Leeds, York and QMUL universities (Sharif);

− Digital Government – In addition to the e.g. Participatory Budgeting project (EU H2020-funded), we are also involved in the Digital Transformation on Public Services and Citizen Participation project with HSE University (Russia) (Weerakkody, Sivarajah);

– QNRF-funded projects: Lifelong Learning – with Qatar University (QU); Blockchain – with QU and TU Delft; Entrepreneurship for Women with TU Delft, QU and non-academic partners from UK, Netherlands and Sweden, the project is developing a digital platform to promote Female Entrepreneurship in Qatar through co-innovation (e.g. Sivarajah, Weerakkody, Irani);

– EU Economic Policy – with the Franco-German Institute (Ludwigsburg), the French Institute of Foreign Relations (Paris-Brussels), the German council on Foreign Relations (Berlin) and BMW Center at Georgetown University (USA); and Jean-Monnet Erasmus EU-funded projects on Regional Integration and Sustainability involving 14 universities from 11 countries (Trouille).

Another example of collaborations leading to impactful research is the digital engineering platform (DEP) project, conducted in collaboration with Tyco International, an MNE. The engagement started out with a KTN event, leading to a research project, where an in-house multifaceted DEP was implemented. The DEP provides a unitary data repository and a decision support system that has been having real impact on Tyco's working processes and employees.

International research collaborations are also at the forefront in ECRs' agenda. Examples include digital transformation of public sector (Omar), partnering with Qatar University (Qatar), Swinburne University of Technology (Australia), local and central government agencies (Oman); and post Covid-19 hospitality industry recovery (Waseem), partnering with researchers from Universities of Otago (New Zealand) and Macquarie (Australia).

Knowledge transfer is evidenced in joint publications with non-academic partners which led to tangible impact, e.g. Tyco on DEP (Sivarajah); Conwy County Borough Council on cloud computing (Irani, Sivarajah); Cambridgeshire County Council, Open Service Engineering group on e-Participation and open data in local government policy decision making (Sivarajah, Weerakkody, Irani); and Hardeck Möbel GmbH (Germany) on print advertisements (Trivedi).

UoB signed a Memorandum of Understanding (MOU) with WWF-CEE to promote Circular Economies and Sustainable Development, with SoM playing a significant role. SoM signed an MOU with IIMJ to promote and share knowledge on eco-friendly 'circular economies' from a community and urban perspective and enable research collaborations.

Media/public engagements

Staff seek to disseminate and maximise the benefits of their research to businesses and academic communities, public policy makers and broader society, through open media channels. Staff regularly disseminate their research via blogs (e.g. Chartered Association of Business Schools, London School of Economics academic blog), major newspapers/media (e.g. features in FT, Guardian, Telegraph, Independent, Times Higher Education, Economia, Gulf News), and interviews (on TV/radio, e.g. Adomako interviewed by major Ghana TV stations about his findings on entrepreneurship in Ghana; Ismagilova on panic buying during Covid-19). UoB is one of the founding partners of The Conversation, and our staff are regular authors for the platform. Staff give guest speeches at professional conferences, e.g. Smith gave a talk on 'The Forgotten Workers' at the National Conference of Movement of Christian Workers, a charitable organization, whose mission is to tackle injustice and inequality.

The UoA promotes engagement with parliamentary committees (e.g. modelling of emergency evacuations, Fry; low-paid workers, Smith; digital government, Weerakkody); government departments (e.g. Department for Business, Energy & Industrial Strategy, Fry); local councils (e.g. Bradford, Leeds, Hounslow, Weerakkody); and trade unions (e.g. Trade Union Congress, USDAW Union, Smith).

Representation on public bodies

Irani is Chair of the Bradford Economic Recovery Board, a public-private-cultural sector partnership linked with the West Yorkshire Combined Authority and charged with spearheading

Bradford's post Covid-19 recovery plan. He is also a member of the External Industry Reference Group for MOD (UK), was member of the United Nations (Economic Council for Muslim Countries) and was full-time seconded as a Senior Policy Advisor at the Cabinet Office (Jan-Oct 2014). Sharif is a member of the Bradford Council Stronger Communities Partnership Board, Advisory Board Committee and the Climate Change Steering Group at West Yorkshire and Harrogate Health and Care Partnership. Spicer is a member of the Bradford Chamber of Commerce Leadership Group.

Visiting professorships and scholars

Notable visiting professor positions at institutions overseas, include Hearn, Armenian State University of Economics (Armenia), IESEG School of Management (France), and previously Dunya University (Switzerland/Afghanistan); Rana, Indian Institute of Management Tiruchirappalli (India); Akbar, Comsats University Islamabad (Pakistan); Anderson, University of Valencia, Maastricht University, University of Santiago de Compostella (Spain) and Costa, University of Valencia (Spain), resulting in funding for a visiting Professor's 6-month visit to Bradford; Wang, Hunan University and South Western University of Finance and Economics (China), both led to fruitful research collaborations; and Weerakkody, Qatar University (Qatar) for three years, leading to substantial and continued collaborations on successful joint grant applications (GBP189,310).

Visiting scholars contribute to our vibrant research environment through knowledge sharing with staff, doctoral students, and the wider School. Since 2014, there have been 29 visiting professors/fellows – over half of whom are international. Examples of academic visitors include Professors Marijin Janssen (TU Delft) and Ashique Jhatial (University of Sindh, Pakistan). Other visiting fellows include those from government departments e.g. Paul Waller (International Advisor on Government and Public Administration) who supported the Digital Government ICS, Jamie Saunders (Bradford Council), William Barker (Ministry for Housing, Communities and Local Government), and practitioners/professionals (e.g. Dr Gabriel Ivbijaro, Practice Principal of three large GP surgeries in Waltham Forest (London), a specialist in Integrated and Primary Care Mental Health, with expertise in service re-design).