

Institution: Ulster University
Unit of Assessment: 17
<p>1. Unit context and structure, research and impact strategy</p> <p>Context</p> <p>Over the last five decades, the Ulster University Business School (UUBS) has built an international reputation for academic excellence in research and teaching. At the same time, it is recognised in the region for providing impactful research support to organisations in developing and enhancing their business and management capability. Research by the UUBS Unit of Assessment ('the Unit') aligns with the priority areas of key stakeholders such as the UK Government (Taylor Review on Working Practices and Productivity), ESRC (Productivity, Innovation and Governance) and the Northern Ireland Department for the Economy (Building a Stronger Economy). This approach positions us to inform and influence policy development and implementation, and we enable our researchers to engage in world-leading work that ultimately enhances organisational innovation, efficiency and effectiveness in a range of sectors.</p> <p>The key strategic objective of the current REF cycle has been to build upon the achievements of the REF 2014 period, when the focus was on research selectivity, increasing our overall research power, in terms of numbers of staff submitted while prioritising research with the best potential for regional, national and international application. The key developments in this REF period include:</p> <ul style="list-style-type: none"> • Increasing the number of staff returned from 22.4 FTE in REF 2014 to 34.4 FTE in REF 2021. • Enabling collaboration between our researchers and international colleagues, resulting in over 50% of submitted outputs involving international authors, compared to 42% in REF 2014. • A research spend of almost £7.5M in competitive external research grants, representing a 53% increase on the levels of funding received during the REF 2014 period. • A vibrant PhD community, achieving 89% satisfaction rate in the 2019 Postgraduate Research Experience Survey (PRES), placing us third in the sector. • An investment of £1M by Ulster University in a Food and Drink Business Development Centre as part of our Institutional strategic aim to support the regional economy. <p>Unit Structure</p> <p>UUBS's staffing strategy is implemented by the Faculty Associate Dean for Research and Impact (Humphreys), a post newly created in this REF period. The Unit's Research Director (RD) (McCracken), working alongside senior researchers, is responsible for putting into operation and monitoring the strategy. Together, the senior team ensures that staff are provided with leadership, vision, training, resources, equipment and space to continue to build on the Unit's thriving research culture and achievements.</p> <p>Given our Civic University ethos, the Unit recognises the need for research to be openly accessible to all. Researchers are encouraged to publish in open access outlets, with ringfenced funds to support this initiative. A dedicated executive administrative assistant supports researchers to ensure that their outputs meet compliance regulations for accessibility of publications to the wider academic community and the general public.</p> <p>In addition, all active researchers are required to undertake the University Research Integrity Programme (100% completion has been achieved in the Unit), which is a mandatory course for anyone conducting research with human participants that also engages researchers with ethics, diversity and equality issues. Our Business and Management Ethics Filter Committee (Chair -</p>

Miller) reviews all staff, PhD or student research involving human participants; depending on the level of risk the University Research Ethics Committee's approval may also be required.

Research is organised across three broad sub-disciplines, **Operations Management and Contemporary Organisational Issues**, **Accounting and Finance** and **Marketing**. In addition to these three main research themes, there are two research centres based in the Faculty: the **Food and Drink Business Development Centre (FDBDC)** and the **Economic Policy Centre (EPC)**.

Operations Management and Contemporary Organisational Issues

The Unit has a long-established tradition of research in the Operations Management field, with key areas of investigation coalescing around **supply management and innovation in business processes**. For example, researchers have investigated sourcing decision-making (Loane, McIvor and Humphreys); organisational culture and supplier development strategies (Cadden and McKittrick); supply chain dynamics and interorganisational systems (Fang); lean management (Humphreys) and performance measurement and quality management (McAdam). Researchers have also investigated organisational innovation, focussing on operations, innovation and R&D investment (Wiengarten, Yeung); transportation dynamics (Carey; McHugh; McIvor and Humphreys) and informational processing and decision-making (Fang). Another area of work has centred on **corporate social responsibility and ethical issues in operations management**, with a particular focus on corporate environmental initiatives and health and safety - operational risk management (Yeung, Humphreys, Wiengarten and McAdam).

Researchers in this sub-discipline have also studied contemporary **organisational issues linked to international business**. Beamish, Miller and Wu have examined joint ventures and offshoring in organisations and senior executive behaviour in international firms. Power and Boyd have contributed to the **tourism** domain, focussing particularly on **ethical and post-conflict tourism**, while several researchers have sought to understand **organisational innovation** in terms of enhanced strategies for people management and employee behaviour (McCracken, Fang), value co-creation and technology transfer (Miller, Woods, Bonner, Ibbotson, McAdam, Moffett) as well as delivery of educational development interventions (Joseph-Richard, Hollywood). The unique insights of Ulster's research in this area include:

- Wiengarten and Humphreys' exploration of the related issues of **health and safety and managerial behaviour** in the workplace. They have shown the importance of regulation adherence and how firms which breach safety regulations are exposed to negative long-term financial performance.
- The research carried out by McIvor and Cadden has influenced policy-makers and strategic funding bodies with regard to **sourcing decisions** (this research underpins Impact Case Study 1 (ICS1)).
- **University technology transfer**, which has been the focus for several researchers including Miller, Woods, Bonner, Ibbotson, McAdam and Moffett. For example, in their research Miller and McAdam have provided new evidence on the contribution of universities to economic development.

Accounting and Finance

The research carried out in this sub-discipline is aligned with contemporary **accountancy and finance** issues. For example, **corporate social responsibility issues** have been a key emphasis, with research into: ethical accounting practice (Ballantine, Ward); organisational governance (Ballantine, Gallagher); and fiscal power devolution (Birnie) taking centre stage. Others have investigated **board diversity** (Ward); **non-departmental public bodies** (Wall); **trade union finance** (Tong) and **economic history** (Henderson). Illustrative highlights of key projects include the work of:

- Ballantine, who in her research on **ethical banking** issues devised a mechanism to conceptualise accounting and accountability for the common good.
- Ward, who investigated **gender diversity** and showed that Boards with higher female representation exhibited superior financial management when measured against return on assets.
- Birnie, who in his authoritative research on **fiscal devolution**, investigated which taxes were the most suitable candidates for levying by devolved governments.
- Henderson, who in his research linking religion to **economic development in post-Famine Ireland**, identified an economic convergence between Catholics and Protestants, providing evidence of an upward socioeconomic transition by the Catholic population.

Marketing

In the diverse field of marketing, UUBS has pursued two key themes for achievement of maximum impact on the Northern Ireland (NI) economy. First, given the prevalence of Small and Medium Sized Enterprises (SMEs) in the NI region, the **marketing/entrepreneurship nexus** is a dominant area. McCartan and McGowan have examined knowledge management and decision-making in entrepreneurial firms, while Quinn and Hutchinson have investigated internationalisation and SME performance. Related to this, understanding innovation and economic development in food production and small rural agri-food firms has also been a key focus (Quinn; Furey; Ramsey).

Secondly, by tracking the changing economic landscape and the influence of technological advances in organisations, several researchers in this group have explored the **role of the internet and social media in firms' marketing** (Brown, Ramsey). Simmons and Brown have also studied more traditional marketing issues in the context of branding innovations, while Brown, Cotte and Brennan have focussed on services and retail marketing as well as consumer behaviour. During this REF period researchers have made significant contributions in these areas. For example:

- Research undertaken by Quinn into **SME owner-managers/entrepreneurs in the artisan food producer sector** forms the basis for ICS 3. The underpinning research investigated how artisan firms need to reinforce formal/informal networks, family associations and international sources.
- Brown has explored the influence of **retro brands** in contemporary markets.
- Cotte has examined **online betting habits** and provided guidance to policy-makers on consumer behaviour.
- From a retailing perspective, Simmons has investigated how **UK retailer loyalty card data** can help retailers better understand their consumers' preferences.
- Furey and Hollywood's interdisciplinary work on **food insecurity**, which forms the basis of ICS 2, demonstrates the importance of retailers in promoting healthy food choices.

Research Centres

The **FDBDC** was established in 2018 as a response to the need to strengthen the NI regional economy in key priority areas, one of which is agri-food. The sector had sales in excess of £5Bn in 2019 and is a major exporter, with 65% of turnover going overseas. Four new appointments to the Centre were made at professorial and senior lecturer levels, representing an investment of £1M over five years. Research in the FDBDC focuses on the **food supply chain** and researchers work with colleagues from the three core thematic areas to address issues related to **agri-food SME innovation capabilities** (Quinn, Simmons), **food security / poverty and consumer behaviour** (Hollywood, Furey), as well as **supply chain and technology-driven distribution solutions** (Cadden, Humphreys, McIvor). Several researchers work with colleagues from other faculties: Furey and Hollywood with Life and Health Sciences (LHS) on the use of global positioning technology to track rural food poverty and Cadden with Computing and Engineering (CE), on the application of blockchain technology to food traceability.

The **EPC** focuses on applied research, designed to inform Government policy on the development of the NI economy. Miller, Bonner and Birnie work closely with colleagues in the EPC, conducting research into **developing skills, innovation and competitiveness** in the region. A clear example of the applied nature of the research undertaken in the Centre is the construction of a **skills barometer**, designed to estimate future skill needs and gaps by level, sector and subject area. Colleagues in the Unit have utilised findings from this skills barometer to further inform their research. For example, McIvor and Cadden have studied the implications of Brexit for Irish firms and the need for those firms to develop enhanced skills and capability for **sourcing and supply chain innovation**.

Research and Impact Strategy

Research Strategy

During this REF cycle, the Unit has been guided by the University's five-year strategic plan (2017-2022). The University aims to "**deliver globally significant research with local relevance; ... and make a lasting contribution to society**". This Institutional strategic focus, which centres around **relevance and renewal**, is also reflected in the overall **UUBS vision** to "**create possibility ... shape the futures of our students and build opportunity into the businesses they will join**". This ambition for impact is embodied by our researchers and embedded in our key strategic objectives and actions for the current REF period:

Key Objectives	Progress to Date / Support and Activities
To increase the number of staff submitted to REF 2021 and to build a supportive and collegiate research culture.	<p><i>Progress:</i> 54% increase in staff submitted to the REF, from 22.4 FTE in REF 2014 to 34.4 FTE in REF 2021.</p> <p><i>Support:</i> Formal and informal mentoring has enabled ECRs to work with experienced colleagues. Investment has been made in recruiting new research leaders (Miller; Simmons) and new researchers (Bonner, Power, Gallagher, Woods) to enhance research capacity in terms of new research funding streams, PhD scholarship collaboration and research outputs.</p>
To continue to facilitate Unit members in producing world-leading outputs and to disseminate their research internationally.	<p><i>Progress:</i> Members continue to publish in world-leading journals in the Business and Management field.</p> <p><i>Support:</i> The Unit provides less experienced researchers with a peer review process for their outputs, by which senior staff who have substantial experience in publishing can provide advice and guidance on crafting their submission. There is also a monthly journal paper publishing clinic, where researchers can get advice on, for example, critiquing the literature and data analysis. In addition, researchers are allocated financial support (£2k per annum) to attend international conferences, which often leads to publications, and are encouraged to participate in the Unit-led Research Seminar Series of internal events and networking forums.</p>

<p>To build on existing collaborations with other faculties and enhance interdisciplinary research, develop partnerships and research collaborations with national and international scholars.</p>	<p><i>Progress:</i> The Unit has renewed its focus on interdisciplinary research in key areas of innovation, entrepreneurship in SMEs, and the agri-food supply chain. Several PhD researchers are jointly supervised with other faculties (e.g. Humphreys and McIvor with Maguire from CE in supervising Badakshan; Miller with Dornan from LHS in supervising Rhine). Researchers collaborate with national and international colleagues in publishing (over 50% of REF submitted outputs are with international colleagues) and funded projects (e.g. Brennan with CE and LHS on a UKRI - GCRF project).</p> <p><i>Support:</i> Researchers have been encouraged to participate in University-wide development initiatives as well as external capacity-building events, organised by, for example, BAM, EISAM and ESRC, to encourage cross-fertilisation of ideas and research interests and enhance their capacity to apply for external grant funding as well as publishing for impact.</p>
<p>To increase external competitive research funding by 50% over the current REF period from a range of funding sources.</p>	<p><i>Progress:</i> Unit members have increased research funding spend by 51% from £4.9M in REF 2014 to over £7.4M by the end of the current REF cycle. Unit members have received grants from a diverse range of funding bodies including the ESRC and EU, charitable trusts and public bodies.</p> <p><i>Support:</i> Unit members are encouraged to attend funding workshops to improve their writing for grant applications. At the same time, researchers work closely with professional service colleagues in the Department for Research and Impact. For example, those colleagues review potential grant opportunities online and inform us of any which fall within the research expertise of colleagues in the Unit. Approximately 30% of our research funding is as a result of this monitoring by support services. In addition, given their global view of grants across the faculties, they assist in identifying cross-disciplinary opportunities, which represent 20% of our research funds.</p>
<p>To collaborate with the Ulster University Doctoral College (DC) to improve the quality and delivery of doctoral studies.</p>	<p><i>Progress:</i> In the 2019 PRES survey, PhD researchers registered high satisfaction levels (89%), which is above the national benchmark for the sector. During the current REF period we managed to raise our PhD completions by 3% from 34.33 completions in 2014 to 35.53 in 2021. Collaborations with other institutions (e.g. Kempten University of Applied Sciences) and funders (e.g. Department of Agriculture, Environment and Rural Affairs (DAERA), Teagasc (the Irish Agriculture and Food Development Authority), the Northern Ireland and North East Doctoral Training Partnership (NINE DTP) and Ghana Government) have helped to enhance the diversity of our PhD cohort. We currently have PhD researchers from a wide range of nationalities (Belarus, China, Germany, Ghana, India, Iran, Ireland, Sweden and UK).</p> <p><i>Support:</i> To ensure that our PhD researchers feel supported, listened to and integrated into the Unit, the RD and PG tutor work closely with the DC and PhD supervisors in monitoring their progress. There is a fortnightly meeting held with all PhD researchers, to identify any areas which require improvement and to rectify any problems. All PhD researchers are</p>

	encouraged to utilise developmental funding to enhance their knowledge and develop networks and research skills by presenting at international/national research conferences and doctoral colloquiums.
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Impact Strategy

Based on the Institutional Research and Impact Strategy (2017-2022) we have embedded a '**culture of impact**' in all of our activities and have achieved success with our strategic focus on funding sources that maximise economic and societal impact. The UUBS has strong links with regional and national commercial organisations, enabling researchers to work with established networks and build relationships with research users and stakeholders (many of whom are UUBS alumni), especially professional associations and public sector bodies. For example, McIvor and Cadden have worked with Manufacturing NI (a lobbying organisation for manufacturing firms in NI) and Intertrade Ireland (a Government-funded organisation that helps SMEs on the island of Ireland) to explore new sourcing strategies to manage Brexit-related supply chain risks.

To ensure that research in the Unit is relevant to the wider community, members are encouraged to engage with **policy-making and representative organisations**. Several of our senior members hold, or have held, high profile positions in key organisations which are pivotal in achieving and promoting research and encouraging knowledge exchange within stakeholder communities. For example, McHugh is currently a member of the IoD NI Committee and IoD UK Council. As a former President of the Institute for Small Business and Entrepreneurship (2015-17), McGowan plays a key role in developing relationships and engaging the SME community with research. These efforts are facilitated by our links with the Federation of Small Business (the current regional head sits on the UUBS advisory board).

Other members (for example Furey and Hollywood, Quinn and McAdam) have worked closely with **policy-makers in the area of agri-food development**, including DAERA and the Food Standards Agency (FSA), as well with a range of prominent retailers (Tesco, Marks and Spencer, Asda and Lidl). This work by Furey and Hollywood is showcased in ICS 2, which provides evidence that food affordability is inextricably linked to health and wellbeing. Research underpinning ICS 3 by McAdam and Quinn makes recommendations on food strategy for artisan agri-food producers in the UK and Europe.

Researchers also interact with stakeholders in the co-production of research. For example, the recent **Business Support Initiative**, led by Miller, was established to understand how research in the Unit can help businesses mitigate the impact of COVID. Typical interactions focused on tourism and the importance of establishing knowledge-sharing clusters to enable SMEs to cope with COVID impacts. In 2020 McCracken joined the **ProPEL Hub**, a collaborative ESRC-funded research project with six UK universities and the Chartered Institute of Personnel and Development (CIPD). The project is designed to maximise the impact of ESRC research by supporting productivity improvement with enhanced workplace employee engagement.

Another strategy for maximising the impact of research is to **ensure effective knowledge translation through the adaptation of research findings to specific policy and practice contexts**. Unit members have presented their research at the Knowledge Exchange Seminar Series (KESS) for members of the NI Assembly and their advisers. For example, Ballantine and Wall presented findings on their study of gender budgeting in the public sector in April 2017, and in February 2016 Hollywood delivered a KESS briefing that informed the NI Assembly and Executive Review Committee about the importance of local produce and of creating added-value food products. These KESS events are significant as they offer (for the first time in the UK) an opportunity for enhanced research exchange between academics and policy-makers on vitally important social and economic issues. Researcher interaction with key stakeholders is also illustrated by the dissemination of the Advance HE research (McCracken and McHugh) into Senior Leadership Development in UK Higher Education.

Researchers have reached wider audiences by **engaging with the stakeholder community** through events (public meetings, project launches and evaluation events), interactive media (project websites, podcasts, webzines and webinars) and publications (leaflets, booklets). For example, Intertrade Ireland hosts on its website for businesses Mclvor and Cadden's research findings on the impact of Brexit for supply chains. Birnie gave oral evidence on the potential effects of Brexit on the NI economy to the House of Commons Department for Exiting the EU Committee (October 2019). Our researchers are expert communicators who, as trusted sources of specialist commentary on business and management issues for the media and policy-makers, regularly make their research and expertise accessible to the mainstream.

Future Development

We have three key strategic objectives for the future direction of the Unit:

Strategic Objective	Future Outcomes
<p>Build on the investment in a FDBDC by creating a world-leading research hub which:</p> <ol style="list-style-type: none"> i. brings together expertise along the agri-food supply chain from a range of disciplines. ii. supports producers, distributors, retailers and consumers with impactful research. 	<p>It is anticipated that by the end of the next REF cycle the Centre will provide a fully integrated research facility to support the agri-food sector. The Centre will consist of a number of research labs, and will provide access to digital consumer data sets in the following areas:</p> <ul style="list-style-type: none"> • A Food and Consumer Testing Suite (already established) which offers producers the opportunity to create new food or drink products and test their appropriateness for the market. • A Consumer Insight Lab (currently being constructed) consisting of a virtual reality store, allowing retailers to evaluate different product designs, store layouts and consumer behaviour. • Loyalty card data from retailers (currently utilising Dunhumby data), which allows producers to identify new product ideas. • Food insecurity measurements using alternative technologies such as geographical information systems. • An assessment of the impact of our buying habits on health, based on large scale consumer behaviour studies. • An evaluation of the use of new technologies, such as sensory devices and blockchain technology in monitoring products as they move along the supply chain.
<p>Establishment of an International Trade Centre (ITC) to study global trading relationships post Brexit</p>	<p>The ITC is a proposed new centre to support research on global trade. As a result of the NI protocol, the region is in the unique position of remaining in the EU Customs Union, while the rest of the UK is outside. This presents significant trade opportunities for NI businesses nationally and internationally. Potential research areas include:</p> <ul style="list-style-type: none"> • Logistics management • International marketing • Customs and border management • International trade policy • Global supply chains • Customs reform and new technologies <p>It is anticipated that the research activities of the Centre will examine best practice approaches to trade and border</p>

	management, providing empirical evidence to inform strategic decision-making and policy.
Support the continuing development of our doctoral programme and ECRs	<ul style="list-style-type: none"> • Build on the funded scholarship opportunities across the UK and Ireland. For example, Teagasc, DAERA, NINE DTP pathways. • Attract high quality international PhD researchers, working closely with the Faculty Associate Dean for Global Engagement and international partner universities. • Engage with the next generation of researchers, practitioners and policy-makers by being open to multidisciplinary research and oriented to impact, through our doctoral, taught postgraduate programmes and short courses. • Encourage the continuing development of our doctoral programme to enable and support researchers who produce original and rigorous research, address issues through multidisciplinary and interdisciplinary perspectives, and demonstrate commitment to ethics and integrity.
To extend and strengthen our funding base	<ul style="list-style-type: none"> • Develop the sustainability and excellence of our research by targeting diverse research funders, including the Research Councils, Global Challenges Research Fund, EU and prestigious charitable funders. • Sustain current high levels of grant income generation, profiling innovative and rigorous interdisciplinary and empirical research. • Drive funding through the two research centres, FDBDC and ITC, by encouraging cross-faculty and international collaboration.

2. People

Staffing strategy

Resourcing and Workload

Since the 2008 RAE and 2014 REF submissions, a dual approach resourcing strategy has been used:

- (i) We continue to '**grow our own**' researchers, developing both experienced and newer academic staff to complement and sustain our strong core of established researchers. During this period, five members who were previously not research active for REF 2014 have been submitted to REF 2021. These members have further developed their expertise in key strategic areas linked to economic performance and competitiveness (Birnie; Brennan), sustainable tourism development (Boyd); digital marketing (McCartan) and SME innovation and growth (Quinn).
- (ii) We have augmented our base by externally **recruiting talented researchers**. Over the current REF cycle, we have recruited ten new members of staff whose skills and knowledge complement those of existing staff, enhancing the vitality of research in the areas of marketing, innovation and entrepreneurship (Gallagher; Miller); accounting, finance and economics (Birnie; Bonner; Tong); Leadership and Human Resource Management (Joseph-Richard; Woods); and Hospitality and Tourism Management (Hollywood; Power; Simmons). A key expectation for all new applicants for research-

Unit-level environment template (REF5b)

relevant positions is a PhD qualification, and the RD attends selection interviews to ensure that all research-related appointments strategically align to the work of the Unit.

This dual approach has succeeded in assuring continuity of research development and has increased the number of staff submitted from **22.4 FTE in REF 2014 to 34.4 FTE in REF 2021** (Table 1 shows research-active staff by role).

Table 1: Unit Staff by position

	Total	Professor	Senior Lecturer / Reader	Lecturer
REF 2014	(22.4 FTE)	10.4	8	4
REF 2021	(34.4 FTE)	14.4	12 (1 ECR)	8 (5 ECR)

Several of those who have taken up teaching and research roles recently are Ulster PhD alumni (Gallagher, Hollywood, Simmons, Miller) who have returned from other institutions (Liverpool John Moores, Sunderland, Queen's Belfast), bringing new expertise and professional networks. Also during this REF period, two colleagues have been promoted to professorships (Hutchinson, Ramsey) and three have received senior lectureships (McCracken, McKittrick, Brennan).

In addition, we have continued to work with seven adjunct professors (0.2 FTE contracts) who were recruited prior to REF 2014 to support research capacity development, and who have long-established links with the Unit. Six of the adjuncts are active in supervising PhD researchers and several outputs with Unit staff. In addition, all have taken part in delivering seminars and workshops during the REF cycle, as well as providing peer review of research outputs and funding applications for less experienced researchers. Beamish, Ramsey and Loane have successfully obtained funding for a GCRF pump-priming project supporting the world's poorest 39 countries, to improve entrepreneurial skills in African businesses (Destin4Africa).

The RD, with the support of the Associate Dean Research and Impact (ADRI), works proactively with Heads of Department (HoDs) in the Faculty to ensure that workloads are monitored and researchers' developmental needs discussed through annual trilateral research meetings. At these meetings annual research priorities are set, and tailored support, training and personal development are agreed and aligned to targets and objectives for the Unit. The workload of all researchers is proactively managed to protect time for research. Those who are in the early stages of their careers normally have 20% less teaching duties than more experienced staff. A key element of the resourcing strategy is to stimulate growth in the number of active researchers, and efforts are made to accommodate those who are more focused on teaching duties but who would like to develop their research profile in the longer term. For more experienced Unit members, utilising a transparent workload model means that activities are balanced in terms of teaching and administrative responsibilities, and ensures that dedicated time is reserved for substantive research activities. Teaching is often organised in blocks of time, which means that some researchers will deliver their teaching over one semester and dedicate the other two semesters to research.

Researcher Support Strategy

The Unit comprises a diverse range of researchers drawn from professional practice as well as more orthodox academic routes, and continually investing in building research capacity through staff development is a vital part of our strategy. The unit implements the University's Concordat to support the Career Development of Researchers' principles with annual opportunities for advancement, regular training and development. Colleagues are actively encouraged to undertake further training and participate in tailored, high-level development support schemes. University development programmes have been put in place for researchers. Staff in the Unit have availed of these initiatives to build their skills and knowledge in key research areas linked to research funding, publishing and developing impact, with the majority of those in the Unit's submission participating in three or more training events organised by the University over the last two years.

Beyond the extensive portfolio of University development opportunities and programmes, the Unit has grown a **collegial and congenial research culture**. Members are encouraged to 'road test' conference presentations at lunchtime seminars and one day research events. The Unit normally organises on average one seminar/workshop per month in a broad range of areas. As well as presentations from Unit members and PhD researchers, we have welcomed visiting speakers from leading institutions in the UK, USA and Europe (e.g. Trullen-Fernandez from Esade (Barcelona) on HR strategy; Canning and Brennan from University College Dublin on Doctoral Education in Ireland; Spinelli from Babson College, USA on Design Thinking). Unit members have also been supported to attend a wide range of workshops on publishing, advanced research techniques and attracting research funding, which have been run by, for example, ESRC and the EISAM. Financial support is available for members presenting papers at both national and international conferences.

Given the applied nature of **Knowledge Transfer Partnerships (KTPs)**, Unit members use these funding sources as a mechanism for informing their research and gathering case study data. Staff are encouraged to use the academic allocation of funding from KTPs (typically £27k per project) to support their research activities, for example through employment of research assistants, teaching relief and conference attendance. At the same time, several organisations which have been involved in KTPs have gone on to collaborate on other research initiatives. Since 2013, nine KTPs have been undertaken with a range of organisations from various sectors including hospitality and events (Ground Espresso Bars - Hutchinson; Odyssey Trust - Moffett); electronics and engineering (Arbarr Electronics and Inspectvision Ltd. - McGowan) and Pharmacy (Ballee Pharmacy - Brennan). Eight research outputs in the REF submission have included data from organisations involved in KTPs.

As part of a wider University initiative, a formal **Research Mentoring Programme** has been introduced, through which less experienced researchers collaborate with experienced research staff over a six- to twelve-month period to develop their research agenda. Since its initiation, the majority of REF eligible staff have participated in the programme. For example, early career researcher Power (working with Humphreys), and Miller (working with Quinn) were successful in applying for competitive funding for PhD scholarships from DAERA and Teagasc, respectively. In 2018 Woods (working with McCracken) received an honorarium from the University Forum for Human Resource Development (HRD) in 2018 to study creativity and HRD in small software development firms.

For more experienced researchers, there are a number of **initiatives to enhance research expertise and international collaborations**. The University operates leave of absence (typically up to one-year duration), career break schemes (typically up to three years' duration) and a sabbatical programme that gives staff the opportunity to work for extended periods of time away from the University. For example, several staff members have utilised research sabbaticals to work intensely on research activities. For example, McHugh collected and analysed data for an Advance HE (Leadership Foundation) project focusing on senior managers in the higher education sector and McAdam disseminated findings from an EU-funded project which looked at SMEs and their innovation capabilities.

PhD researchers

PhD researchers are a highly valued, vital group who contribute to the Unit's vibrant overall research culture. Working with the Doctoral College, the Unit provides comprehensive administrative and pastoral support for the researcher cohort throughout their PhD journey. In 2020 there were 54 active (28 full-time, 24 part-time) PhD researchers registered. During the current REF period a total of 35.53 PhD researchers successfully completed their studies, which represents an increase of 3% on the REF 2014 period.

Several initiatives have been introduced to **increase the number and quality of PhD researchers**. For example, in 2019 we entered into a collaborative arrangement with a German University (Kempten University of Applied Sciences) which allows suitably qualified MBA

graduates to study for a part-time PhD. As a result of the strategic partnership between UUBS and Chicago Mercantile Exchange, in 2018 a PhD scholarship was funded to investigate the impact of cryptocurrency on financial markets. Competitive funding acquired in 2019 from DAERA and Teagasc resulted in three full-time PhD researcher scholarships being secured.

At the Institutional level, the DC monitors all PhD researcher activities and provides administrative and pastoral support as well as offering a **Researcher Development Programme**. As part of this programme researchers from the Unit have delivered various workshops. For example, McCracken has hosted sessions on “getting published” and Joseph-Richard has regularly presented to PhD researchers on “qualitative research design”. At Unit level, the RD, with help from the PhD Postgraduate Tutor, co-ordinates all aspects of academic life for PhD researchers in the Faculty, ensuring that key administrative milestones are met and support is given as shown below:

Research Supervision

Each researcher is allocated to a supervisory team of two or three staff members, of which at least one must have experience of supervising to completion. At the new researcher’s induction session, the main aspects of completing a PhD are outlined. Researchers and supervisors are expected to hold regular meetings with their supervisors and to use the PhD Manager system for monitoring progress following the three-stage support strategy:

- Stage 1 (Year 1): Doctoral workshops and skills training programmes. Researchers are also encouraged to participate in doctoral colloquiums at national conferences in their field of study.
- Stage 2 (years 2/3): Preparation and presentation of a paper at a national or international conference. Researchers are expected to present either their conceptual work or some early empirical findings at an academic conference. Full-time DfE scholarship-funded PhD researchers benefit from a £900 annual development grant.
- Stage 3 (years 3/4): Preparation of a journal article. As noted above, from Year 1, researchers are encouraged to interact with academics in their discipline. It is envisaged that at this stage they would be in a position to submit their work to an academic journal.

Festival of PhD Study and Unit level Annual PhD Research Day

PhD researchers, especially those who are in the second and final years of study, are encouraged to contribute to the Doctoral College-led Festival of PhD Study, to present their work to University staff and PhD peers in a series of events held in April each year. In 2019 60% of the final year full-time cohort presented research papers. In addition, all researchers are invited to discuss their PhD progress with experienced researchers from the UUBS at a Faculty Research Day. This event, normally held in June, is designed to promote collegiality and capacity-building amongst researchers.

Research Seminars and Discipline Specific Skills Training

Throughout their registration period researchers are encouraged to present their work to Faculty staff, to attend presentations and seminars led by Unit researchers and to engage in the business and management workshops that are provided both in-house and externally. For example, courses in advanced statistical techniques and on qualitative and quantitative research methodologies are offered in-house. However, where students have specific skills training requirements, they can avail themselves of external training opportunities from organisations such as the BAM or the EIASM, as well as the NINE DTP programme.

An indicator of the satisfaction of our PhD researchers is provided by the 2018 and 2019 PRES, where in 2019 the overall satisfaction rate of 89% surpassed the 87% we recorded in 2018. These satisfaction scores are well above the 2019 sector average of 83%. This rating placed us

Unit-level environment template (REF5b)

in third position overall in the sector and, when the benchmark data was analysed, we were placed first in the sector for research culture and supporting resources (Source: AdvanceHE).

A further illustration of the excellent standard of supervision PhD researchers receive is provided by Ramsey who was recognised for her supervisory efforts in 2020 by being named as runner-up in the Times Higher Education Outstanding Supervisor of the Year award.

As noted above, in years 2-4 of their studies we encourage PhD researchers to actively participate in national and international conferences. Over the current REF period several researchers have won best paper or presentation awards, for example Millar (Best paper award in Operations at BAM Conference 2016; Wang (Research Conference Best Presentation Award - International Conference on Social Economics, Politics and Policy 2019); McClelland and Kulichyova (ESRC Festival of Science - small grant awards to present research - 2018 and 2019 respectively); Hanna (Ellen MacArthur Foundation bursary award to present research at Zero Waste Scotland Collaboration Event - Glasgow 2019).

Equality and Diversity

We are committed to implementing Ulster University's equality and diversity policies relating to equal pay, bullying and harassment, transgender staff and students, disability and physical access for disabled people. We aim to foster an **inclusive, flourishing culture** that enables both staff and students to achieve their potential. We are committed to taking full cognisance of gender - and other diversity-related issues, and to contributing to a healthy and equal society. We have an ethos of shared governance, values and behaviours based on integrity, and professionalism. Diversity and inclusivity are valued, actively promoted and embedded in all research processes and policies as outlined in our Code of Practice (CoP). As the CoP places people at its centre, is mindful of the needs of all staff and ensures barrier free processes to maximise inclusivity and participation in REF, we used it as our roadmap for identifying research active staff and selecting outputs for REF 2021.

Of our 34.4 FTE submitted staff, 15.2 FTE are female (43% FTE). With regard to our 13 FTE Professors, 4.2 FTE are female (21% FTE); of 12 FTE SL/Readers, five are female (42%), and of seven lecturers, 5 are female (67%). During the REF cycle, of the two promotions to professorial level in the Unit, both were female (Hutchinson and Ramsey). The Unit also includes staff of diverse national origin, including India, Germany, China, Hong Kong and Canada. The Faculty is preparing for Athena SWAN accreditation for the bronze award, with one of the female professors in the Unit (Ballantine) coordinating the submission and applying her research expertise in equality and diversity issues in public sector organisations. With a wide range of stakeholders (HoDs, PhD researchers, senior and early career researchers, administrative and professional staff) involved in committees linked to the Athena SWAN initiative, the process for gaining accreditation has significantly raised awareness of equality and diversity issues in the Unit.

Ensuring that equality and diversity are promoted throughout the Unit is vitally important, and we are fortunate to have several researchers (Ballantine, Wall, Ward) who conduct research in this area. Having such **senior researchers involved in equality and diversity action** has proved invaluable as they have actively applied their research and raised awareness of the need for better diversity practices.

The University has a **comprehensive policy for equality and diversity**, and all staff in the Unit are offered appropriate training in this area. Those involved in recruitment and selection of staff and PhD researchers must participate in recruitment and selection training which includes equality and diversity awareness as a key element. In addition, the Unit is an **inclusive workplace** that recognises its staff's responsibilities beyond the workplace. Flexible arrangements can be requested and there is a specific Returning Carers scheme. The Unit has facilitated requests for staff to vary their contractual commitment to a fractional appointment in order to facilitate caring commitments.

3. Income, infrastructure and facilities

Our **research spend** has increased by 51% from £4.9M in REF 2014 to £7.5M in REF 2021, and our overall research funding for the period puts us in the top quartile of UK business schools (source: Chartered Association of Business Schools annual funding report, 2020). Funding has come from prestigious sources, such as the Research Councils (£2.2M) and the EU (£914k), but researchers have also made significant progress in **diversifying funding sources**. Researchers have undertaken projects for regional and national agencies, charitable trusts and public bodies, including the Food Standards Agency (FSA), British Academy, Intertrade Ireland, Joseph Rowntree Foundation and CIPD. There are three key strands to the funding strategy of the Unit: collaboration with other faculties, national and international collaboration and work with key stakeholders to support the regional economy. Unless otherwise stated, the funding figures indicated below indicate not the total grant awarded, but the funds that were awarded to the Unit.

The Unit has been involved in a number of **cross-faculty collaborations**. For example, an EU-funded project, (REAMIT - £348k), led by Ramsey with colleagues from other Ulster faculties (CE and LHS), focuses on improving the resource efficiency of agribusiness supply chains by minimising waste through the use of big data and internet of things sensors. Further evidence of the success earned in pursuit of this interdisciplinary strategy is found in the links that Loane and Ramsey have established with colleagues from CE and LHS in their successful EU grant (ChatPal - £173k), which sought to examine the interface between technology, mental health and wellbeing in rural areas. Ballantine worked with Social Policy to attract Joseph Rowntree Charitable Trust funding of £124k for a project on understanding gender diversity in senior leadership positions.

Researchers in the Unit have established **fruitful partnerships with colleagues in other institutions**, both nationally and internationally. For example, McCracken is working in collaboration with six leading UK universities on an ESRC-funded research project (£159k) designed to support productivity through enhanced workplace practice and employee engagement. Hollywood and Furey received funding from **safe food** (the public body responsible for raising consumer awareness of issues relating to food safety and healthy eating across both the Republic of Ireland and NI) for collaborative work with five universities in the UK and Ireland, to investigate food promotion strategies and their impact on health. Other researchers have developed international research partnerships when seeking competitive funding. For example, Brennan collaborates with eight universities from South America, Africa and Asia, as well as with colleagues from CE and LHS, on a £5.7M (of which the Unit spend over the REF cycle is £220k) UKRI-GCRF project to apply innovative practices to the production of safe water technology in developing countries.

With a strong emphasis on Ulster's mission to enhance local and regional communities, other researchers have developed **innovative relationships with organisations outside HE**. For example, Ramsey and Loane worked with regional councils in NI and the Republic of Ireland as part of their EU-funded research (Trail Gazers - £192k) to understand the impact of investment in developing walking and recreational trails. Similarly, in their EU-funded research (LOCFOOD – £134k) into innovation in small firms, Quinn worked with various European local authority partners (e.g. Nordland Council (Norway) and Newry, Mourne and Down Council (UK)) to identify best practices. The research directly influenced over 100 commercial firms across 12 European nations, including Spain, Norway and Italy.

To ensure continuity and sustainability of research funding, we have adopted a **rigorous evaluation process to support staff submitting research proposals**. Researchers take part in workshops run by BAM and other professional bodies, and adjunct professors and senior staff provide peer review advice to enhance the quality of grant proposals. Researchers who lack experience in seeking funding are encouraged to develop their grant-writing expertise by concentrating on small grants, before moving on to larger funding sources. For example, Hollywood built on earlier small-scale funded studies before securing larger funds from the FSA and **safe food**.

The advice and support service provided by colleagues in the **Department for Research and Impact** has been critical to the development of funding applications. For example, a dedicated Faculty Grant Development Manager monitors potential funding opportunities, provides advice on funders' criteria and helps researchers to construct detailed breakdowns of project costs. This high-level support has been instrumental in enabling members to submit better quality proposals. The Faculty has also invested in supporting research funding applications by employing a dedicated Research Associate whose role is to assist with collation of background research, collection of data and drafting of funding applications.

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

Collaboration

Researchers from the Unit collaborate with a wide range of stakeholders including colleagues from national and international academic, commercial and policy-making organisations. Key examples of collaboration are shown under the three main research themes as outlined in Section 1.

Operations and Contemporary Organisational Issues

In **Supply Management** there are extensive global collaborations: Cadden and Humphreys are developing their work on business analytics/innovation and on supply chain modelling using artificial intelligence, with colleagues across UK/Ireland and the Middle East (Newcastle; Brighton; University College Dublin (UCD); Ajan University (Qatar)); McIvor has collaborated with colleagues at Mainz University of Applied Sciences and the Technical University of Denmark on reshoring and outsourcing of supplier capabilities and Carey has extensive links with colleagues at Ben-Gurion and Leeds on transport logistics.

In the **Business Improvement, Innovation and Leadership Development** areas, we have cultivated extensive collaborative links: Bonner with colleagues at Warwick connected to local knowledge and innovation practices; McAdam and Miller with colleagues in Finland (Vasa; LUT), Denmark (Copenhagen) and Germany (Munster) on local economic development issues; Miller, Moffett, McAdam and Woods run extensive national collaborations with colleagues from several UK universities (QUB; Lancaster; Cambridge) on innovation and technology parks; McCracken continues to build on relationships with colleagues from New Zealand (Otago) and Canada (Memorial) investigating human resource business partnerships, and, with six universities (Strathclyde; Aston; Sheffield; East Anglia; Nottingham; Cardiff), is also a co-investigator in the ESRC Productivity PROPEL hub, which investigates workforce productivity and engagement.

Accounting, Finance and Corporate Governance

Ballantine has established links with the South African Institute of Chartered Accountants and continues to work with partners at the University of Cape Town on gender budgeting; Ward has collaborated with prestigious institutions such as Institut für Finanzdienstleistungen (Germany), Trinity College Dublin and UCD on credit union strategy; Birnie, Henderson and Tong have links with colleagues from Queen's University Belfast on economic development/economic history and from Edinburgh on trade union finance respectively.

Marketing and International Business

In marketing, we have maintained productive relationships with researchers from various UK institutions, for example Gallagher with Edinburgh Napier University on small business development. International business and tourism researchers have established extensive international collaborations: Loane and Ramsey with colleagues from Algarve, Glasgow and Turku (Finland) on their important work on European peripheral regions; Boyd with colleagues

at the University of Jammu (India) on post-conflict tourism; Fang and Ramsey with colleagues at Australia National University who are investigating trust in e-commerce.

Researchers in consumer behaviour and retailing have links with several universities in the USA: Brown researching marketing strategy and value with colleagues at Loyola University Chicago; Hutchinson working with the University of Susquanna to investigate crisis leadership in SMEs; Simmons working on smart cities and digitalisation with colleagues at North-Eastern University, Federal University of Paraná (Brazil), Sabanci University (Turkey) and ESC Rennes (France).

Contribution to research base

Our Unit members invest substantial time and effort in journal editorial duties, including refereeing peer-reviewed publications. We serve on grant panels and are in positions of significant influence through our memberships of research societies and associations.

Operations and Contemporary Organisational Issues

Editorial Roles and Academic/Industry Panel Memberships: Carey is Consulting Editor, *Transportmetrica B: Transport Dynamics* and is a member of the Editorial Board of *Transportation Research Part B*; Mclvor, McAdam, Humphreys and Wiengarten make editorial contributions to *The International Journal of Operations and Production Management* (Humphreys and Wiengarten as associate editors and Mclvor and McAdam as editorial board members); Wiengarten is also Associate Editor for the *Journal of Operations Management* and *Journal of Supply Chain Management*; Yeung is departmental editor, *Journal of Operations Management*; McCracken is Editor in Chief, *Education and Training*, and is a member (Associate Editor) of the editorial team, with McHugh, Humphreys (Joint Editors in Chief) and Woods (Associate Editor), *Leadership and Organization Development Journal*.

McHugh was a member of the CBI NI Council until 2017 and is currently a member of the IoD UK and Regional Councils, and of the ESRC Strategic Advisory Network. She also serves on the ESRC COVID-19 Panel of Experts Committee, the ESRC Peer Review College and the BAM wellness in academia initiative. She was also recently appointed as a member of REF 2021 subpanel UoA 17. In 2019 Humphreys was an advisor to the Faculty of Engineering, Hong Kong Polytechnic University, supporting the development of research proposals for the Hong Kong Research Grants Council. McCracken is currently the Pathways Director for Business and Management PhD programmes for the ESRC Northern Ireland North East Doctoral Training Partnership.

Accounting, Finance and Corporate Governance

Editorial Roles and Academic/Industry Panel Memberships: Ballantine is Vice-Chair of the British Accounting and Finance Association and the current Associate Editor, *Journal of Accounting Education*, and member of the Editorial Advisory Board, *Accounting Education*; Ward is an Expert Panel Member for the Dublin-based Centre for Community Finance Europe, External Academic Fellow at the Centre for Responsible Banking & Finance (based at the University of St Andrews), and an International Member of the Centre for Non-Profit and Public Sector Research at Queen's University.

Marketing and International Business

Editorial Roles and Academic/Industry Panel Memberships: Beamish has served on 20 management journal boards in various editorial roles during the REF cycle, including the *Journal of International Business Studies*, *Journal of Management Studies* and *Strategic Management Journal*; Cotte is on the editorial board of the *Journal of Consumer Research* and *Journal of Marketing*; Quinn serves on the editorial board of *International Journal of Retail & Distribution Management*; McGowan on the editorial board of *Journal of Small Business and Enterprise*

Development; Fang and Ramsey are co-editor-in-chief and senior editor, respectively, of *Information Technology & People*; Fang is Senior Editor of *Information Systems Research* and *Information Systems Journal*; Simmons is a member of the editorial review board for the *International Journal of Entrepreneurial Behaviour and Research*. Researchers have also organised international conferences: Hutchinson as co-chair of the BAM Conference (Belfast, September 2014) and as chair of the retail and marketing special interest group at the *British Academy of Management* (2011–16). Simmons is a Member of the ESRC peer review college. Ramsey was appointed chair of the evaluation panels for several EU Horizon 2020 programmes in 2014. Furey, bringing her expertise in food security, sits on the NI Consumer Council, and, on the basis of her expertise in food technologies and processing, Hollywood was invited in 2020 to join the All-Island Plant Innovation hub steering group.

Contribution to economy and society

Researchers are encouraged to work externally with profession-specific partners and societal stakeholders in order to contribute to shaping policy and the public conversation on business and management. The impact case studies on work led by Quinn and McAdam, Hollywood and Furey, and McIvor and Cadden provide evidence of this contribution; other examples of key contributions to the economy and society are highlighted below.

Operations and Contemporary Organisational Issues

Brennan's work for the Safewater project has made an important contribution to the global community, given the drive to develop low-cost and sustainable technologies for safe drinking water in developing nations. Brennan and his international co-investigators have used their expertise in business modelling and data analytics to develop and test a small device for efficient and cost-effective assessment of water quality management in developing and middle-income countries. Brennan also contributes to the UNICEF-supported Translate project, a smaller £836k project that has commercialised innovations being developed by Safewater.

Researchers have helped to develop leadership and innovation capacity amongst local entrepreneurial SMEs. For example, research from Hutchinson shaped the Lead2Grow programme for entrepreneurial leaders in the creative sector (publishing, music, theatre, museums and galleries, film and television, fashion, tourism, and computer games). In evaluating the skills workshops offered to these participants in 2019-20, many participants noted how the programme had improved performance and stimulated new or renewed technologies or processes. McAdam and Miller have been active in the Invest NI (this public body is equivalent to the Local Enterprise Agencies in GB) innovation cluster network, run in partnership with DfE, where their research has informed the design of the Collaborative Growth programme for NI companies.

The CIPD commissioned McCracken, McIvor and Wall to research the visibility of human capital in annual reporting amongst the UK FTSE 100. Their investigation of the narrative reporting practices of top-performing UK firms informed the Financial Reporting Council and influenced the development of both the Corporate Governance Code and the Stewardship Code. In 2017 CIPD cited the investigation in its response to the UK Government's Green Paper on Corporate Governance.

Accounting, Finance and Corporate Governance

The research group (Ballantine, Wall, Ward) participates in a wide network of non-academic international research collaborators via the Credit Union Research Forum and the International Research Society for Public Management. In addition, given the Unit's strength expertise in public finance initiatives, researchers have fostered links with the Audit Office, Strategic Investment Board, Northern Ireland Water and Local Government Association.

Given the significant changes occurring as a result of the UK's exit from the EU and the COVID crisis, it is important that researchers from the Unit comment on and clarify issues for business and the general public. Birnie has worked with mainstream media organisations (e.g. BBC and UTV) to describe the potential impact of Brexit on the NI economy. In 2019 he gave oral evidence to the House of Commons Department for Exiting the EU Committee on possible effects of new NI-GB trading frictions in the context of the 1998 Belfast Agreement, and in 2020 he participated in a Brexit roundtable discussion organised by HM Treasury on the UK Internal Market. He has also provided written evidence to the House of Commons Northern Ireland Affairs Committee on the economic impact of COVID-19 in Northern Ireland.

Ramsey and Gallagher have also informed national Government decision-making. Their written evidence on statistics for the economy and public finances given in 2015, influenced both the Commons Public Administration Select Committee's report and the Government response to it. The researchers' evidence on the quality and accessibility of local, regional and national level statistics was incorporated into the feedback from the Chair of the Public Administration Select Committee to the National Statistician of the UK Statistics Authority.

Marketing and International Business

Furey and Hollywood's research into food access and food poverty informed DAERA's Future Food Policy Framework by providing guidance on the future direction of the agri-food agenda. The researchers have also worked with major food retailers such as Tesco, Lidl and Marks and Spencer on food promotion strategies and health. Their research has led to these world-leading retailers adopting new product placement practices: increasing the quantity and nutritional quality of foods, reducing reliance on the use of volume-based promotions and investing in healthier options through product reformulation. In the absence of further regulation of retailers, this contribution to mitigating the obesity and nutrition crisis is profoundly important (see ICS 2).

Ramsey and Loane are active in two ongoing EU projects that aim for a range of societal, economic, environmental, policy and quality of life impacts across the peripheral regions of the EU. For example, the ChatPal project, which has been co-designed with key stakeholders in the sector (Action Mental Health, NHS Western Isles (Scotland), Norbotten Association of Local Authorities (Sweden)), is designed to improve current mental health service provision for citizens by increasing access to psychotherapeutic support using a computer-based intervention service in the form of a conversational user interface. Findings from the project have informed policy and helped alleviate problems associated with poor mental health such as isolation and reluctance to seek help. In the TrailGazers project, which includes UK and Irish partners from Donegal and Sligo county councils, Causeway Coast and Glens council as well as those from other European regions (City of Louvigne du Desert; Direccion General de Proteccion de la Naturaleza-Gobierno de Canarias; Municipio de Vianna do Castelo), the focus is on the socioeconomic impacts of investing in walking trails in peripheral areas of Europe. Such regions rely heavily on the economic spin-offs from tourism to generate employment and income for these communities yet work on quantifying the economic and social return on such investments has been limited. The TrailGazers research addresses the lack of a policy to promote and sustainably manage these assets.

Major honours, awards and prizes

McHugh was awarded an OBE for services to Higher Education and Business Development in the 2020 New Year's Honours list, and her contribution to business research has also been recognised with a Lifetime Achievement Award Ulster Television/Business Eye/Flybe - 2015). Cadden, Humphreys and McKittrick's research on organisational culture and supplier operational performance, and Wu, McHugh, Humphreys and Wiengarten's work on information sharing and firm performance, received best paper awards at the BAM conference in 2016. Wiengarten was awarded the highly prestigious Jack Meredith Best Paper Award 2020 in *The Journal of Operations Management*. Humphreys and McIvor were cited in the Top 20 of supply chain management researchers in Europe (source: *International Journal of Production Economics*,

Unit-level environment template (REF5b)

2018) and Humphreys and Wiengarten were placed in the Top 50 scholars globally in supply chain management (source: *Supply Chain Management: An International Journal*, 2019). McAdam won the best paper in innovation management at the 2018 EUROMA conference. Miller received the early career best paper on new venture creation at the Institute for Small Business and Entrepreneurship conference on 2019. Joseph-Richard received the British Academy of Management education practice award and best paper award at the BAM conference in 2014 and 2020 respectively, for his work on doctoral education. Ramsey was runner-up in the prestigious Times Higher Education Award (2020) for her contribution to PhD supervision. McCracken won the Alan Moon Memorial prize for best paper in the 2014 University Forum for HRD International Conference and more recently was runner-up for best paper on employee frustration in the social care sector for *Work Employment and Society* journal in 2019. Beamish received the International Management Eminent Scholar Award from the Academy of Management in 2017, as well as best research paper in global strategy from the Academy of Management in 2016, and the JIBS Gold Medal for Scholarly Service and JIBS Gold Medal for Research, both from the Academy of International Business in 2019.