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| Institution: University of Birmingham |
| Unit of Assessment: UOA17, Business and Management Studies |
| <p><i>Note: the surnames of Category A colleagues are highlighted in bold throughout the document.</i></p> <p>1. Unit context and structure, research and impact strategy</p> <p>a. Unit context and structure</p> <p>Birmingham Business School (BBS) is the oldest, and one of the largest, business schools in the UK. It was founded as a School of Commerce in 1902 to support and guide businesses in the region and across the UK. It retains this 'civic' mission today, rewritten for global times. In 2017, the School renewed its vision, mission and strategy, and seeks to promote curiosity and thought leadership for responsible business. This includes delivering world-leading research that provides responses to the key challenges that face the economy and society, regionally and globally, and promoting an environment where staff are able to thrive and achieve their best work (2018-2026 strategy). Since REF2014, total FTEs have more than doubled to 141.15 FTE Category A staff (against a 45% increase across UoB).</p> <p>Discipline-based rigour underpins BBS activities, which are organised around six Departments (Category A FTEs are indicated in brackets): Accounting (15.4), Economics (34.4), Finance (19.8), Marketing (19.4), Management (40.25), and Strategy and International Business (11.9). The Department of Economics, previously submitted to the Economics Unit of Assessment (UoA) in REF2014, is now included in the Business and Management UoA, reflecting consolidation of the School mission and increased integration between all BBS Departments, as well as the Department of Economics' focus on business economics and research in support of responsible business. No staff from outside of BBS are submitted to UoA17 and no BBS staff have been submitted to another sub-panel.</p> <p>BBS uses two design principles to underpin success. First, it is 'highly aligned' in that there is a common sense of goals to be pursued, and colleagues have a clear recognition of how to achieve these (with early career colleagues being carefully inducted and supported in this endeavour through Departmental, School, College of Social Sciences (CoSS) and cross-College initiatives). At the same time, BBS is also 'loosely coupled', in that colleagues pursue these goals in a way that fits with their disciplinary fields' focus and priorities. The creative tension between these two dynamics supports a focus on research topics that both draw from and expand disciplinary boundaries. This approach is an appropriate strategy for organisations such as BBS, as it stimulates creativity among relatively autonomous workers and engenders drive, confidence and ambition. Moreover, the School's position within a College of Social Sciences provides numerous opportunities for inter- and multi-disciplinary research in partnership with other social science disciplines, alongside partnerships with other Colleges, as well.</p> <p>In this approach, Departmental support structures and disciplinary affiliations are supplemented by research centres, institutes and clusters that focus on 'challenge-based' topics and create the context for cross/multi/inter-disciplinary engagement. This approach represents a continuation from REF2014, with the 2018-2026 strategy seeking to focus on a smaller number of key areas underpinned by investment in research support and recruitment of relevant scholars. Crucially,</p> |

however, all colleagues are supported to undertake research that they find meaningful; being strategically focused is not at the expense of ensuring colleagues pursue their passions.

Some of the 2014 clusters have become centres (noted below) while others were seeded by UoB strategic investment (e.g. City-REDI). Our structure is flexible enough to adapt as concentrations of scholars change, while always maintaining a broad strategic focus on responsible business. For example, during **Trehan's** tenure at BBS, she led the Centre for Women's Enterprise, Leadership, Economy and Diversity and Ram led the Centre for Research in Ethnic Minority Entrepreneurship. While these centres moved as their BBS colleagues moved to new places, they have left a strong legacy in BBS, notably in the Work Inclusivity Research Centre and the Centre for Responsible Business. Likewise, BBS's recruitment strategy has ensured that expertise is maintained (e.g. the appointment of **Down** reinforced work on entrepreneurship).

Current research centres (within and beyond the BBS) that underpin BBS activities, support inter-disciplinary collaborations and drive our strategy are

Lloyds Banking Group Centre for Responsible Business (CfRB): CfRB was launched with a £2.5 million investment from the Lloyds Banking Group in 2017 (spanning five years) and draws together colleagues who focus on responsible business research. The Associates of the Centre are drawn from across all Departments and provide a spark point between disciplinary expertise and challenges for responsible businesses, and are the conduit to a larger network of scholars in BBS. Director: **Thomson**.

City Region Economic Development Institute (City-REDI): Established in 2015, the Institute was made possible by a £4 million investment from UoB and was created in response to an increasing need for a multidisciplinary approach to regional challenges. While City-REDI is based within the Business School, it includes researchers from a range of disciplines (economics, economic geography, urban studies, linguistics and sustainability and transport) to develop an academic understanding of major city-regions internationally, with a strong local focus on Birmingham and the West Midlands. City-REDI undertakes academic as well as applied strategic and policy-oriented research which explores the complex and inter-related ways in which people and systems work across city-regions. Co-directors: **Collinson** and **Green**.

Work Inclusivity Research Centre (WIRC): WIRC brings together colleagues and external partners from a range of disciplinary perspectives and backgrounds to focus on individual experience of diversity within organisations and across the career pipeline; the nature of work inclusivity from a critical, sociological perspective; labour market inequalities/disadvantage (using regional, national and cross-country level data); inclusive labour governance; intra- and inter-organisational trust; and understanding the nature of well-being at work. Co-Directors: **Birkett** and **Duberley**.

Birmingham Centre for Environmental and Energy Economics and Management (BCEEEM): This Centre focuses on the economics of flooding, pollution, offshoring, climate change, biodiversity, natural disasters and studies of firms' environmental behaviour (as a subset of what it means to be 'responsible'). BCEEEM is also a part of UoB's multidisciplinary

Birmingham Energy Institute and has close collaborations with the CfRB. Centre Director: **Maddison**.

Centre on Household Assets and Savings Management (CHASM): CHASM is a collaboration between the BBS and the School of Social Policy (also within CoSS), focusing on financial security, capability, inclusion and taxation. Director: **Lymer**.

Centre for Crime, Justice and Policing (CCJP): CCJP has multidisciplinary engagement involving researchers from BBS, Psychology, Law and the Medical School, and focuses on bringing together methodological expertise to focus on themes around crime, justice and policing. This Centre emerged out of the Accountability and Governance cluster (see below) during the current REF period. Director **Bandyopadhyay**.

Sustainable Financial Innovation Centre (SFIC): Established in 2019, SFIC is a cross-College, inter-disciplinary research centre which focuses on financial technology, and that has begun to disrupt and shape the financial sector (drawing in computer science expertise), as well as the role of environmental finance in response to climate change (linking finance to responsible business). Director: **Farag**.

The **National Audit Office-University of Birmingham Tax Centre** is an independent research centre bringing together practical and academic economic, financial and legal evidence – from the UK and internationally – to inform improvements in the administration of the tax system. Director: **Scharf**.

Two research clusters also exist (clusters are less formal than centres and are flexible ways to support emerging research areas):

The **Accountability and Governance Research** Cluster focuses on issues of accountability and governance in the areas of tax and public sector. This cluster includes work focussing on Tax Governance that examines governance issues from the perspective of social, political, legal and organisational theory. Ensuring effective corporate governance is a key aspect of responsible business. Leadership is provided by **Tuck**.

The **Behavioural, Experimental and Data Science (BEADS)** Network is a key element of research infrastructure providing a state-of-the-art experimental economics laboratory designed to run experiments according to international quality standards. Alongside supporting BBS colleagues and PhD students, it also hosts researchers from other disciplines, as well as colleagues across the UK and globally. Leadership is provided by **Drouvelis, Scharf** and **Pogrebna**.

Research activities are guided and shaped through School structures, while retaining flexibility for new areas of work to emerge organically. BBS's Strategic Management Team (SMT) is made up of the Dean (**Cassell**, who is also the Chair) along with the Deputy Deans; Director of Research (DoR); Directors of Education, External Engagement and Responsible Business, and Internationalisation; Director of Operations; EDI Lead; and Head of each of the School's Departments. The School's Research and Knowledge Exchange (R&KE) Committee (chaired by the DoR - **Tuck**) ensures leadership, coordination and management of BBS research activities. The R&KE Committee meets six times a year and is made up of Departmental Research

Directors; Directors of City-REDI and CfRB; colleagues responsible for REF preparation (environment, impact and outputs); the PGR student lead; ECR representative; mid-career/'Hidden Assets' representative; representatives from the BBS Business Engagement team and the College's Research Support Office. Operationally, this Committee allocates seed-corn funding and makes sabbatical recommendations; conference attendance funding decisions are made at the Departmental level. The Committee is also a conduit for information on initiatives/funding, as well as bringing insights from Departments to the School's SMT to support BBS research culture and strategic direction.

BBS's research focus requires understanding the nature of, obstacles to and means of achieving greater social equity. We know that gender, sex, race, ethnicity, sexuality, disability, and class are linked to inequalities of various kinds; BBS places these issues at the heart of its research work and how it is organized. Addressing equality, diversity and inclusion (EDI) issues in BBS operations is therefore essential. EDI has become progressively more strategic and integrated through School, College and UoB structures during the REF period. For example, the Deputy Pro-Vice Chancellor Equalities (**Duberley**) was drawn from the School and is an acknowledged expert in this area. A dedicated BBS EDI Committee grew out of the team who prepared the Athena SWAN Bronze application during 2019-20 (the work undertaken to prepare this application provoked considerable reflection on gender and the intersectional nature of inequality, as did the feedback on the application). The BBS EDI Committee will lead the resubmission to Athena SWAN, as well as focusing on EDI around all protected characteristics and on other aspects of equalities (e.g. shared parental leave use). In particular (and see Section 2), ethnicity, disability, gender and sexuality-related equality issues, as well as those related to caring responsibilities, are focused on. While EDI is championed by a named lead, it is a collective responsibility for the SMT and for all colleagues across the School.

The BBS is supported by an International Advisory Board who meet twice a year. The Board provides advice on research strategy as well as working to support the impact strategy through helping to identify impact partners, facilitating engagement with practice and providing impact related advice to research projects. The Board comprises 21 members (11 women and 10 men) and is co-chaired by Steve Hollis and Jane Lodge (formerly chairs of KPMG and Deloitte, respectively). The Board is racially/ethnically diverse and members have had senior executive-level experience in all major economies around the globe.

In addition, external accreditation visits from the Association to Advance Collegiate Schools of Business (AACSB); Association of MBAs (AMBA) and the European Quality Improvement System (EQUIS) occurred in 2018 (in the case of AMBA) and 2019. BBS is 'triple crown accredited' with the maximum time periods of accreditation having been obtained from all these bodies. The AACSB panel noted that "the mission of the school is well articulated around responsible business and is supported by academic and professional staff and students". Likewise, the EQUIS panel commended the 'bottom up' process to engage faculty and other stakeholders to give the responsible business theme broad acceptance, recognition and authenticity. These observations reinforce the highly aligned-loosely coupled design of the School. Moreover, in 2020 BBS was shortlisted for the THE's 'Business School of the Year' award, with its responsible business orientation being a key aspect of its nomination.

b. Research strategy

Future ambitions highlighted in REF2014 have been met and exceeded. Specifically, BBS sought to build on our reputation for engaged research (this is reflected in a more structured approach to engagement and impact); develop existing research clusters to reach critical mass (see CCJP and WIRC above); forge stronger inter-disciplinary research links (see BCEEEM, CCJP, and CHASM); and proactively seek research funding with external partners (as evidenced by City-REDI and CfRB - see Section 3). Additionally, BBS's commitment to responsible business is reviewed annually by the Responsible Business Committee (a BBS internal committee that focuses on research, teaching and operational matters). Other key processes (for example, the Internationalisation Strategy and a Vice-Chancellor's Review) provide further support for BBS ambitions in this area.

Looking forward, BBS's 2018-2026 strategy seeks to

- strengthen responsible business research areas (and associated thought leadership in this area);
- increase international collaborations;
- support ECRs and 'Hidden Assets' (more of which will be said under staffing), with additional resources to assist their research career trajectory;
- continue to develop distinctive and sustainable doctoral programmes that attract and develop exceptional students who are equipped to work subsequently in the best universities in the world, and in other top organisations beyond academia;
- to ensure the mix of research centres and clusters remain fit for purpose (a research infrastructure strategy is being further refined);
- enhance the impact of BBS research on society, the economy and industry; and
- contribute to inter-disciplinary research initiatives via College and University research centres.

Each of these areas are further developed in relevant sections of this statement. Taken together, these efforts are focused on remaining internationally recognized for research performance.

c. Impact Strategy

Challenge-orientated and engaged research is at the heart of BBS's mission and culture. Colleagues are supported to conduct engaged research and develop pathways to impact through

- the development of an impact culture;
- celebrating engaged research and impact; and
- making resources and initiatives available to directly support pathways to impact.

BBS works alongside organisations in all sectors, at all layers of government and societies across the globe, to help drive responsible and positive change in the world, particularly around the School's responsible business, work inclusivity and regional economic development themes. Seven of our REF impact cases fit under these themes; for example, Trehan and Ram's case focuses on better support for ethnic-minority businesses across the UK and beyond, and Houghton's case on how social marketing research can be used to improve health outcomes. Two other cases demonstrate core strengths and particular passions of our researchers in other areas, thereby demonstrating the BBS 'highly aligned' and 'loosely coupled' approach to

research. Impact is an integral part of research activity, and BBS has ensured that planning and resourcing support this ethos through a range of initiatives.

The School has been actively promoting an impact culture by supporting colleagues to think about regional, national and global key challenges and how their research might help drive solutions when they design their research programmes. An impact communication strategy supports this work and includes regular departmental information sessions, School Assembly events and Impact Awards to highlight work that is creating change. More support and engagement are also provided via a series of impact workshops. These workshops have been designed to support colleagues at all stages of the engagement and impact journey. Regular workshops are run for colleagues who are new to impact; to support colleagues who are starting new projects which have the potential to create change; and for those already undertaking engaged research who want to think about how to develop this work further to drive change in their field.

There are also more specific, technical sessions around evidencing and networking. This activity is supported by two academic Impact Leads (**Birkett** and **Bandyopadhyay**) who are members of the School R&KE Committee, the BBS Business Engagement Lead, and a College Impact Development Officer dedicated to the School. Colleagues also share impact experiences at bi-annual impact lunches and Centres/Institutes have dedicated support for impact. Financial support for impact also exists through ESRC Impact Acceleration Account funding (based in CoSS), as well as from BBS resources. This funding has supported (for example) engagement events, evaluation activities and dissemination of research. The BBS International Advisory Board are also fully integrated into the impact processes of the School and provide an annual review of impact, support colleagues with networking for impact, and provide input into the ongoing impact strategy. The Business Engagement, Public Policy and Communications teams across the School and College also support engaged and impactful research by creating links with industry and policy makers, and by supporting academics to ensure their research is made accessible to a wide range of audiences and stakeholders.

The Impact Cases submitted for REF2021 reflect BBS's strategy to (1) build contacts in the policy world, focusing on bodies such as Parliament, the Regional Combined Authority and industry bodies. (See **Trehan** and **Ram's** work on improving ethnic-minority business leaders' access to business finance and leadership development, **Bensassi's** work on formalising informal trade in Tunisia, and **Houghton's** work strengthening social marketing campaigns); (2) focus impact support on our research centres, where there is the critical mass to build longer-term engagement with external bodies, in order to co-create research as well as bringing our research findings to an external audience (see **City-REDI's** work on industrial strategy, Brexit and COVID and **Bandyopadhyay's** work on 21st-century policing); and (3) taken the opportunity to build on strong collaborations that have been developed with individuals or groups of staff (see **Vendrell-Herrero's** work on digital strategies at the BBC, **Hodder's** work on union renewal and **Lonsdale** and **Sanderson's** work on business development and leadership across the international supply chain of a major global company.

d. Other aspects

Inter-disciplinary Research

UoB is a large, multi-faculty University in which there is considerable scope for work across a wide range of disciplines, but where most disciplines have a critical mass that can lead them to be self-contained. For this reason, BBS has actively engaged with the University in the creation and development of two bodies designed to foster work across disciplines [REF 5a 2.3.1]. The Institute for Advanced Studies (IAS) enables smaller-scale collaborations, the development of embryonic ideas, and the hosting of key external scholars to prompt inter-disciplinary thinking. Additionally, the Institute for Global Innovation (IGI) focuses on tackling major global challenges through the creation of larger, inter-disciplinary research teams that are capable of seeking major external partnerships. Examples of BBS inter-disciplinary leadership include **Duberley/Darko** in the Barriers Within and Into Work theme in Gender Inequality; **Bryson** in the Economy theme within Resilient Cities; **Elliott** in Water Justice and Socio-economic Consequences theme within Water Challenges in a Changing World; **Bandyopadhyay** in the 21st Century Transnational Crime; **Drouvelis** in the Behavioural Economics theme within Aging, Fragility and Resilience; and **Dickinson** in the Economic, Business and Governance solutions within the Environmental Pollution theme. In addition, **Bebbington, Thomson** and **Tuck** are members of a newly-funded workstream on Organised Crime, Corruption and Development, and **Bebbington, Bensassi, Elliott, Maddison** and **Thomson** are part of the UoB network of plastics researchers. Beyond these bodies, **Pogrebna** was the UoB lead for the Alan Turing Institute (focusing on data science applications).

BBS's focus on challenge-based research also has particular salience for inter-disciplinary working, with BCEEM, CHASM, CCJP and City-REDI being inter-disciplinary in design and membership. Likewise, the BEADS network collaborates with colleagues from computer science, political science and psychology. BBS has developed expertise in applying theory/concepts not normally considered to be an intrinsic part of business scholarship; applying methods and techniques not usually associated with business scholarship; taking concepts from business research to contribute to other disciplines; and undertaking joint research with colleagues from other fields – especially where insights could not have been drawn out without joint contributions. For example, **Bensassi** has published work in conjunction with climate scientists to model how trade flows might change in the Arctic as maritime routes open up when ice distributions change. These forms of inter-disciplinarity are apparent in outputs selected for REF.

Open Research

BBS is committed to open access and has sought to achieve this goal in a number of ways. All UKRI-funded research is eligible for University support for Gold Open Access, and this has been supplemented by College funds to ensure every staff member can be supported to have at least one Gold Open Access paper during the REF period (56 publications have been funded). In addition, all research projects must include a data management plan. Extensive training and support are provided to ensure colleagues are able to create open-access data sets, where appropriate.

Moreover, and aligned with a responsible business focus, BBS also uses a range of approaches to ensure research findings are publicly available and to engage relevant stakeholders (including direct feedback to participants and practice-based articles). An example is the weekly West Midlands Economic Impact Monitor: in order to ensure critical mass in the Communications team, and to build synergies in the development of media contacts with other social science disciplines, BBS works collaboratively with College and University Communications teams to co-

create media plans that will enable us to share our research with the broadest possible audience. This includes pitching and writing articles for the media. In addition, BBS contributed approximately 100 articles to *The Conversation* in the period that generated high levels of reads (max 140,000) and comments (max 116), as well as blog posts showcasing research. Colleagues also contribute to the ESRC Festival of Social Science (including **Bandyopadhyay, Birkett, Carmichael, Fender, Gardner, Green, Istanbuluoglu, Kerrigan, Qamar, Szmigin, Taylor, Tuck and Wheatley**).

Research Integrity

A focus on responsible business research infuses BBS' approach to research integrity and builds on BBS's strength in research methodologies. For example, **Cassell** was the founding chair of the British Academy of Management Methodology Special Interest Group, and other colleagues have strengths in this area that guide BBS practice, namely **Chidlow, Duberley, Ghauri, Goulding, Kerrigan** and **Saunders**. The Responsible Research in Business and Management (RRBM) network (an international professional network) supports BBS endeavours, and colleagues also hold roles in key institutions in this area. For example, **Chidlow** is a co-founder and Vice-President of the Academy of International Business Research Methods – Shared Interest Group (AIB RM-SIG), and has led a number of high-profile events to enhance research methods scholarship, teaching and learning. These events focus on values of openness, replicability and transparency of research design, and data management, enhancing evidence trails and reanalysis of research data in order to enhance understanding of the Open Science Framework. **Saunders** has delivered keynotes at international conferences on the need for far greater methodological transparency (e.g. Association of Industrial Relations Academics in Australia and New Zealand, 2020), and is a founder member and on the steering group committee of the British Academy of Management's Research Methodology Special Interest Group.

Institutionally, BBS is governed by the UoB Code of Ethics, Code of Practice for Research and the Supervision Code of Practice (including research students) [REF 5a 2.2]. These codes underpin commitment to research integrity and are informed by the UK Concordat to Support Research Integrity. Formal responsibility for assessing research-project ethics approval sits with the University's Humanities and Social Sciences Ethics Committee. All research is subject to ethics approval through a two-stage process. Projects which do not involve human subjects may proceed after first-stage review.

2. People

a. Staffing strategy and staff development

BBS focuses on creating and sustaining a vibrant and supportive research environment in which all colleagues are valued. This includes targeted support for ECRs, packages to recruit and retain senior research leaders, and supporting all colleagues to seek promotion (with some enhanced measures for women and minority-ethnic staff). 60% of colleagues returned to REF2014 remain in place and this is higher than sector average (the 2019 *Higher Education Workforce Survey* from the University and Colleges Employers Association reports turnover rates for the sector which, if applied to BBS over a seven year period, would have resulted in a 40% retention rate). Several departing colleagues have moved to influential roles such as

Trehan (PVC for Partnerships and Engagement, University of York) and Brammer (currently Dean of Bath School of Management, having been the Dean of Macquarie Business School, Sydney, Australia). At the same time, and as BBS's approach has become externally apparent, it has been a point of attraction for recruitment of field leaders (e.g. **Bailey, Bebbington, Liu, Scharf** and **Pogrebna**). The recruitment strategy follows the research strategy of the School. Applicants who are engaged in responsible business research have been encouraged and recruited (67% of staff recruited in this REF period have responsible business research interests) enhancing the responsible business agenda and research centres, for example, CfRB's Director (**Thomson**), WIRC's co-director (**Birkett**) and City-REDI's co-director (**Green**) have been recruited in this period.

Table 1 summarises the gender characteristics of colleagues, while Table 2 provides a snapshot of BBS colleagues in comparison with the sector. See also subsection 'c' below on approaches to support equality and diversity.

Table 1: Category A staff demographics: gender distribution by Department

| | Professor FTE - percentage female | Reader & Senior Lecturer FTE - percentage female | Lecturer FTE - percentage female |
|---|--|---|---|
| Accounting (n = 15.4) | 45% n = 4.4 | 20% n = 5 | 50% n = 6 |
| Economics * (n = 33.4) | 18% n = 14.2 | 33% n = 9.2 | 50% n = 10 |
| Finance (n = 19.8) | 52% n = 3.8 | 66% n = 6 | 10% n = 10 |
| Marketing (n = 19.4) | 55% n = 5.4 | 60% n = 5 | 55% n = 9 |
| Management (n = 40.25) | 44% n = 11.25 | 14% n = 21 | 50% n = 8 |
| Strategy & International Business (n = 11.9) | 45% n = 8.9 | 100% n = 1 | 50% n = 2 |

* In addition, Economics has a 1.0 FTE independent researcher (female) who is a Marie Skłodowska-Curie Fellow.

Table 2: Category A staff demographics: sector comparisons

Sector data draws from a Chartered Association of Business Schools report on the demographics of UK Business Schools.

| | Sector data (2018/19 data for Business Schools) | BBS data |
|---|--|---|
| Gender statistics | | |
| <ul style="list-style-type: none"> • Female • Male | <p>44%</p> <p>56%</p> | <p>38%</p> <p>62%</p> |
| Ethnicity statistics | | |
| <ul style="list-style-type: none"> • Asian • Black • Mixed • Other • White • Not recorded | <p>18%</p> <p>5%</p> <p>2%</p> <p>3%</p> <p>72%</p> <p>-</p> | <p>20%</p> <p>4%</p> <p>3%</p> <p>1%</p> <p>68%</p> <p>4%</p> |

Drawing from Table 1 and 2, we can observe that women make up 44% of the workforce across all Business Schools and HESA 2017/18 data (across all disciplines) identifies that 26% of professors are female and 16% identify as minority-ethnic. Using this as a rough comparison, BBS has more male employees than average (62% versus 56%). At the same time, female representation in the BBS professoriate (at 39% of FTEs) is well above the sector average, and also above the target of 30% set in UoB's 2019 Gender Pay Gap report and the University average of 27.3% [REF 5a, 3.4.5].

In the senior leadership positions (SMT and those who run research centres), 55% of colleagues are female and 14% of this cohort are minority-ethnic. This suggests a sizeable over-representation of women and a very slight under-representation of minority-ethnic colleagues in these senior roles. Gender differences by level of seniority and by Department evident in Table 1 do not follow easily discernible patterns.

Minority-ethnic representation across BBS is slightly higher than the sector (68% of BBS colleagues report themselves to be white versus 72% in the sector). At the professorial level, the split between white and minority-ethnic colleagues is 80% to 20%, which again compares well with the sector. As might be expected, there are also complexities within the categories used to describe colleagues. For example, only 55% of colleagues who identify as 'white' are British (indeed, there is an equal split between British/non-British colleagues across all Category A staff). This pattern around nationality would be expected given the international nature of the academic workforce. What it does mean, however, is that a large number of colleagues are navigating a foreign-country context with the attendant immigration and cultural complexities that this entails (perhaps more so post-Brexit). This observation does not negate the focus on protected characteristics. Rather, the point here is that a more equal and inclusive work environment yields benefits for everyone.

Performing comparatively well in a sector with entrenched EDI disparities is not the 'end game' for BBS. The School remains committed to articulating and reinforcing an environment where our community of scholars (including research students) can thrive and do their best work. This

ambition infuses the processes of recruitment; developmental support and is ultimately reflected in promotion and retention. Once colleagues present for interview, short lists are formally evaluated for gender representation and any other EDI aspects.

The development needs of colleagues are underpinned by annual Performance Development Reviews (PDRs), a key feature of which is encouraging reflection on research objectives and identifying support that may be needed. PDRs are framed in an explicitly supportive and collaborative way, and do not represent a formal process of 'performance management'. Alongside this annual process, there are supportive processes for colleagues at all stages of their careers, as well as opportunities to benefit from BBS and cross-CoSS mentoring schemes. All research-active colleagues normally have 40% of their time allocated for research.

Colleagues are eligible to apply for leave at the rate of one semester following every three years of service. A total of 106 semesters of leave have been taken from 2014–2020. This is lower than might be expected with 141 FTEs submitted. The reason for the difference is the skew in BBS's Category A staff towards newer staff appointments and the growth in FTEs during the REF period. For these reasons, many existing colleagues have not been in post long enough to be eligible for research leave, something that is expected to correct itself in the near future. Clear plans for work to be undertaken during leave, along with post-leave reports, ensures that the best use is made of study leave provision and the opportunities it presents for intellectual renewal. Colleagues are asked to consider if a period of leave can provide time to develop a research grant application to support their future ambitions. Additionally (see also research infrastructure), support for colleagues to attend conferences where they can test their ideas and develop greater insight into the cutting edge of their fields is provided (approx. £2,200 p.a. is available per person, with additional funds from CoSS that can supplement BBS funding). Tailored packages of support are also available, suited to career stage.

Early career researchers (on research and teaching contracts) have a 25% reduction of workload until probation is passed (usually at Year Three), along with a named mentor for support. ECRs account for 28% of staff on research and teaching contracts. There is a dedicated programme of ECR development and a network that provides support for the ECR cohort and teaching-focused colleagues who do research. The ECR forum chair (**Nyfoudi**) has an additional budget of £2,000 p.a. to support activities, which have included career planning, REF information, research funding, and publishing, as well as social events to allow for more informal conversations. Support for ECRs is also available through a joint CoSS and College of Arts and Law ECR network [REF5a 3.3]. The School ECR Lead is a member of the School's R&KE Committee, to ensure insights from and the priorities of ECR colleagues are represented formally; this position also affords the ECR Lead insight into how this Committee operates, as well as the opportunity to contribute to development of R&KE strategy. In addition, additional funding is allocated to support ECRs to attend high-profile conferences where an ECR might not have a paper to present, but where they would benefit from making contacts and observing discussions. High-profile international conferences across all subject areas have been identified that would be suitable for this support. Moreover, ECRs often begin their careers on fixed-term, teaching-focused contracts and need specific support in order to move to research and teaching positions. BBS encourages those on teaching-focused contracts to apply for conference funding, for School research funding, to participate in the mentoring scheme, ECR activities and writing retreats in order to support their development. In this way, BBS seeks to ensure equality of

access to resources for personal development as well as pathways to research and teaching contracts for those who are seeking these posts.

In line with our research strategy (1b above), *mid-career colleagues* benefit from a 'hidden assets' programme where specific developmental support is provided for colleagues who are post-probation but not yet readers/professors (with an annual budget of £2,000). This programme operates in 'demand mode' and responds to needs as they are expressed, including the establishment of a research methods exchange (where colleagues share expertise on different research methods) and tailored support for writing. Equally important, this programme supports colleagues through mentoring to think strategically about the next stage of their careers, to be more ambitious in their research, and to gain the experience needed to make the transition to more senior roles. This BBS programme is in addition to UoB-level Emerging Leaders programmes [REF5a 3.4.4]. As indicated below, some colleagues have been promoted across several grades in the REF period, and this provides reassurance for mid-career colleagues that they do not have to leave Birmingham to gain recognition for their work.

Senior colleagues have the opportunity to participate in development programmes co-ordinated by the University. The Research Leaders programme [REF5a 3.4.4] recruits 18 colleagues per year from across the University and focuses on developing research leadership and international networks (four colleagues from BBS have taken part in the programme). This has resulted in a cross-institution network who have regular meetings to support the development of further collaborative research activity and who also supports inter-disciplinary efforts. The benefits of this programme can be seen in the case of **Farag**, who is involved in research with the IGI entitled 'Confronting Antimicrobial Resistance' with colleagues from different disciplines whom he met on the programme. Likewise, through involvement in the Programme, **Kerrigan** was able to connect colleagues in Department of Marketing to those in the School of Physics and Astronomy to bring insights about entrepreneurial marketing in hi-tech sectors to their projects.

Support beyond UoB includes the Directors of Research Development Programme, coordinated by the Chartered Association of Business Schools (CABS), and the British Academy of Management (**Birkett** attended the Directors of Research programme and **Tuck** attended the Deans and Directors' development programme). **Chidlow** and **Kerrigan** also attended the CABS Women Leaders' programme.

BBS has a strategy of employing senior staff on fractional contracts in order to promote career progression and provide research support to more junior colleagues. Some of these are individuals who have recently retired, whilst others are individuals from overseas institutions who spend dedicated time within the School focused on strengthening research culture. All have broad and deep experience of editorial processes. Some of these colleagues are on permanent contracts (**Hoskin, Smith, Strobel**), others are on fixed-term (normally three-year) contracts (**Child, Cumming, Hyde, Mol, Saren and Scapens**). These colleagues also contribute to teaching programmes, PhD supervision, co-authoring and research grant applications. They are integrated into their respective Departments and some of these relationships are longstanding. For example, **Child** was a full-time colleague until 2000; **Scapens** and **Strobel** were first appointed in 2013, **Smith** since 2014 and **Hoskin** since 2015.

Alongside colleagues on teaching and research contracts, BBS is also home to a cohort of (25 research fellows (RFs) with cohorts linked to City-REDI (11) and CfrB (5). One RF is deemed to

be an independent researcher, with the remainder being on Grade 6/7 contracts and in their first post-PhD appointments. RFs are funded by a combination of external grants and internal investment which supports the research strategy of regional engagement, e.g. City-REDI (1a). RFs are actively encouraged to participate fully in BBS, College and UoB support schemes and networks, and have dedicated working space (Section 3 b and c below). Likewise, specific support is provided by Institutes/Centres that RFs are attached to. For example, City-REDI provide RFs with a blend of experience and support to work on academic journal articles, policy briefings, blogs and research with direct policy relevance. CfRB network of associates are available for all RFs for formal and informal mentoring and collaboration. RFs in BBS have gone on to a variety of posts, including at BBS (**Qamar**); research and teaching posts at other Business Schools and to research projects in international institutions.

Promotions

Retaining colleagues requires timely promotions processes as well as a supportive environment where scholars can thrive. Focusing on Category A staff, since October 2013, seven colleagues have been promoted from Reader to Professor (**Bandyopadhyay, De Propriis, Drouvelis, Farag, Kerrigan, Lonsdale, and Tarba**); two colleagues from Senior Lecturer to Professor (**Chidlow and Sanderson**) seven colleagues from Senior Lecturer to Reader (**Bandyopadhyay, Bensassi, Farag, Kerrigan, Moraes, Rowbottom and Wheatley**) and 17 from Lecturer to Senior Lecturer (**Bensassi, Chidlow, Di Martino, Ercolani, Farag, Henry, Hodder, Houghton, Jabbour, Kashefi Pour, Kenny, Lewis, McDonald, Rowat, Vendrell-Herrero, Wang and Zhang**). In addition, there are five colleagues who have attained more than one promotion during the period (**Bensassi, Bandyopadhyay, Chidlow, Farag and Kerrigan**). 34% of promotions were women, while 22% were minority-ethnic; these figures are roughly in the same proportion as the percentage of women and minority-ethnic colleagues (see Table 1 and 2). While there is a small number effect at play, this does provide some reassurance that approaches to EDI are having some effect.

b. Research students

BBS's focus is on attracting high-quality doctoral students in line with the research strategy (1b): integrating new students into their home Departments/research clusters/Centres and providing support for their intellectual development and career planning. Research students are viewed as colleagues and are part of all research-focused activities, such as reading groups, methodology-focused discussion groups and research seminars. PGR students have dedicated study spaces to provide a conducive environment for their studies. In addition, each Department has a lead for post-graduate research students. Each student has two supervisors to provide different perspectives, and to ensure consistency of supervision should colleagues leave. This approach also supports the development of less experienced colleagues who are partnered with subject relevant senior colleagues. Each student also has a mentor (most usually the Departmental PGR lead).

Notwithstanding the focus on quality, the number of research students graduating has grown to 180.3 FTE.

Table 3: Number of research students graduating

| Year | PhD | DBA and other research-based professional doctorates | Total |
|---------|-------|--|-------|
| 2013/14 | 20 | 2 | 22 |
| 2014/15 | 17 | 1 | 18 |
| 2015/16 | 24.5 | 3 | 27.5 |
| 2016/17 | 23.5 | | 23.5 |
| 2017/18 | 33.65 | 1 | 34.65 |
| 2018/19 | 28.8 | | 28.8 |
| 2019/20 | 25.75 | 0.1 | 25.85 |

Current PGR student numbers, outlined in Table 3, total 123. (Additionally, four students are undertaking MSc. research degrees and one student is completing a DBA – this degree is now discontinued). The current cohort is gender balanced with 54% female students by FTEs.

Table 4: Post-Graduate Research Students (at end July 2020)

| Department | Students currently in programme | Number taking part-time study |
|-----------------------------------|--|--------------------------------------|
| Accounting | 8 | 3 |
| Economics | 40 | 2 |
| Finance | 22 | 0 |
| Marketing | 11 | 3 |
| Management | 34 | 1 |
| Strategy & International Business | 8 | 4 |
| Total | 123 | 13 |

For those students where we have career-destination statistics, approximately 75% of graduates go on to work in the higher-education sector. Destinations include UoB itself, as well as institutions in the UK (e.g. University of Oxford, London School of Economics), and across the globe (reflecting the international nature of this cohort). The remaining graduates are spread across business destinations and government roles (e.g. European Union, the Indonesian Government).

All supervisors complete PGR training at UoB, even if they join the institution as experienced supervisors (as well as an online refresher course on supervision every two years) [REF5a 3.2]. This ensures that PGR supervisors understand the importance placed on joint supervision, monthly meetings and supporting students to access training and resources available to them. In the last three years, colleagues from BBS have won the CoSS PGR supervision award (**Bryson** in 2018, **Kerrigan** in 2019 and **Saunders** in 2020). In addition, BBS students have won UoB's Michael K. O'Rourke Best Publication Award by a doctoral student in 2016 (Isaeva), 2017 (Zhu), 2018 (Tran) and in 2019 (Wu); they were supervised, respectively, by **Saunders**, **Elliott**, **Shui/Goulding** and **Dickinson**. Isaeva also was the Highly Commended winner of the 2020 Emerald/EFMD Outstanding Doctoral Research Award in Human Resource Management.

PhD students are funded by a mix of externally-awarded scholarships and their own funding. Internally, the BBS awards include scholarships linked to the Alan Turing Institute; to the UoB Institute for Global Innovation; and to the ESRC funded Midlands Doctorial Training Partnership. 2019-20 marked a step-change in research student support, with additional funding for eight studentships being made available from internal resources. These were allocated through a mix of strategic priorities, with about 50% of the topics focused on responsible business themes (e.g. forced labour and accounting; finance and climate change; and taxation policy and environmental goals), alongside topics linked to colleagues' expertise. In this way, the School's strategic orientation (see Section 1) translates through to training for the next generation of scholars.

The structure of the PhD student journey follows sector norms with a suite of taught modules supporting students in their first year of studies. All PGRs are enrolled on the Postgraduate Certificate in Advanced Research Methods and Skills. The Certificate requires 60 credits of advanced research training modules and, alongside this process, students have access to a wide range of CoSS social science training.

All students make presentations or prepare posters showcasing their work at the annual PGR conference. BBS also has hosted the Midland's Doctoral Colloquium three times since 2014, with students attending from Warwick, Loughborough, Aston and Nottingham. This allows BBS students to engage with their peers from across the Midlands, as well as associated faculty. Further, 2019 saw the first of what will become an annual joint PhD workshop between BBS and ESCP Paris (a European School of Management), which serves to enhance the international networks of our doctoral students and support in their development of collaborations post-graduation.

PGR students have access to up to £800 each per year through a combination of BBS and CoSS funding to undertake data collection and present at conferences. Additionally, the DoR allocates funding specifically to support PGRs presenting their work at the leading international conferences in order to develop their networks. PhD students are also eligible to apply for exchanges with other member of the Universitas 21 network (of which UoB is a member) in order to widen their horizons further still. Within the wider UoB environment, the Graduate School provides support for PGR students and encourages inter-disciplinary working across the University [REF5a 3.2]. PhD students have dedicated workspace (3 b and c, below).

c. Equality and Diversity

All leadership roles in BBS include a focus on EDI. At the same time, given the persistent and often hidden aspects of inequalities, BBS has specific means of addressing these issues. The School's EDI Committee's terms of reference are publicly available and include

- championing responsible business policy and procedures within BBS;
- raising awareness/disseminate information about new legislation and guidance;
- acting as a focal point for various initiatives across BBS;
- reporting on progress and activities to SMT;
- referring issues to BBS committees and groups; and
- encouraging activities on initiatives (including, but not limited to, Athena SWAN).

There is an aim to have a fair representation of diversity across the School, to include academic and professional colleagues in activities, and to regularly monitor if this has been attained. Current activities include the creation of a 'voice group' (to further enhance colleagues' willingness and ability to speak freely and influence decisions at work) and of a BBS inclusion policy (which reflects a more active understanding of diversity).

The School's approach aligns with CoSS and UoB work programmes which underpin EDI: **Duberley** is the Deputy Pro-Vice-Chancellor for this area, as well as being the Co-Director of the WIRC, and brings depth of academic rigour to that role; indeed, BBS research expertise directly informs policy (e.g. in shared parental leave). 'Branching Out' is a cross-University platform which brings together five networks focused on minority-ethnic staff (via the Race Equality Network), disabled staff (via the Enabling Network), parents/carers, LGBTQ+ colleagues (via the Rainbow Network) and women (via the Women's Network). These networks have joint terms of reference and are formally part of equality management structures. This work was supported by an Equality Scheme from 2016-2020; the current iteration of the scheme is being consulted on. The likely future objectives (2021-2024) include (1) increasing the recruitment, progression and retention of colleagues from minority-ethnic backgrounds; (2) increasing the recruitment, progression and retention of female academics at senior levels; (3) reducing the gender and ethnicity pay gaps; and (4) increasing the visibility of LGBTQ colleagues across the University. These objectives align with the EDI work streams currently underway at College and School levels. Past outcomes of EDI work include the HR system displaying preferred names in the staff directory to protect confidentiality of trans colleagues, developing a LGBTQ+ ally scheme (with training) as well as past presence in the Stonewall Workplace Equality Index (and ongoing Stonewall action plans).

Specific BBS initiatives also have been undertaken to support EDI. For example, members of the SMT have supported female colleagues by reviewing their promotion applications and offering mock interviews for those applying for promotion to Reader or Professor. At the close of the BBS promotion meeting, colleagues are asked to explicitly consider if any female colleagues or others from underrepresented groups should have been considered. In addition, colleagues returning from maternity or sick leave of six months or more may apply for a reduction in teaching or leadership allocation in order to focus on research. All but one colleague who has taken maternity leave in the current period has returned to work.

The drive to develop a more inclusive and equal workplace is supported by multiple other processes. For example, all colleagues who sit on recruitment panels and promotion committees must undertake unconscious bias training. Shortlisting for positions and interview panels are also gender balanced. In accordance with the University's REF Code of Practice, the unit's REF Output Selection Group monitored patterns of output submission by gender, age, ethnicity, and part/full time contract, and no patterns caused concern. Finally, colleagues who need to work in flexible ways have been supported to do so: the pandemic has increased BBS's experience with such working practices. Similarly, we have ensured that career paths exist for part-time (one colleague promoted during the period works part time) and fixed term (primarily RF) colleagues.

3. Income, infrastructure and facilities

a. Income

Table 4 provides a summary of BBS external grant capture by source (with an indication of average and largest awards) alongside comparative figures for the last REF period.

Table 4: Research income by source over the REF period

| Research funding source | Total for REF2021 | Total for REF2014 |
|--|--------------------------|--------------------------|
| UK Research Councils (UKRI) <ul style="list-style-type: none"> 44% of total funding in REF period | 5,018,096 | 1,771,601 |
| UK Industry <ul style="list-style-type: none"> 17% of total funding in REF period <p>The CfRB spend of £1,302,912 is included in this total and makes up 69% of total funding from this source. Excluding this grant, success in gaining funding from UK Industry increased in the period by almost 500%</p> | 1,935,623 | 106,282 |
| EU Bodies <ul style="list-style-type: none"> 13% of total funding in REF period | 1,436,158 | 1,486,364 |
| UK Central and Local Government and Health/Hospital Authorities <ul style="list-style-type: none"> 13% of total funding in REF period | 1,479,614 | 566,002 |
| UK-based Charities <ul style="list-style-type: none"> 7% of total funding in REF period | 778,122 | 68,830 |
| Other <ul style="list-style-type: none"> 6% of total funding in REF period | 650,511 | 279,150 |
| Total | £11,298,124 | £4,296,229 |

The Chartered Association of Business Schools published an analysis of HESA data from 2008/09 to 2018/19 that provides a point of comparison for BBS: BBS has outperformed the sector with 2018/19 funding being 150% higher than it was in 2013/14; in contrast, the sector-wide uplift was 15% over the same period. This analysis puts BBS into the top quartile of all UK institutions, and shows that it is improving more rapidly than general trends with a 163% increase in research income in this REF period.

Moreover, the benefits from a strategic focus on support for grant capture (e.g. supporting grant writing) are evident, with 53% of total income being obtained in the last two years. The sustainability of BBS in the forthcoming REF period has a strong foundation, as these grants yield benefits in terms of publications and impact. At the same time, the connections developed through past awards are likely to yield intellectual benefits (e.g. **De Propriis**, **Ghuri** and **Zhang** have been involved in large EU consortia grants). Funding has been critical to supporting research outputs and impact across the School, with **Bandyopadhyay's** work being a good example of how research funding underpins wider success.

Additionally, funding has been obtained by a large number of colleagues, across all levels of seniority. Specifically, 95 colleagues who have worked in BBS over the REF period have had research grant income and, of these colleagues, 66 remain in post (making up 47% of Category A staff). The knowledge and experience of obtaining grant funding, as well as managing the

work that comes with this success, provides a base of experience for others to draw from, as well as being available to shape BBS processes. Further, 63% of those colleagues who have been promoted during the REF period have obtained funding. While funding success is not the sole criteria for promotion, the number of promoted staff with funding indicates that the strategy to build a cohort of senior colleagues who have depth of experience with grant funding is also coming to pass.

The strategy to structure research around Centres has also supported grant success (above and beyond those grants that directly support Centres). For example, **Bryson** (a City-REDI associate) has obtained approximately £600K during the period; **Bandyopadhyay** (the Director of the CCJP) has £255K in funding; and **Ortega-Argiles** (linked to City-REDI) has attracted £236K of funding. At the same time, BBS' focus on challenge-led research is also evident in the funding profile, with **Elliott** receiving £244K for work in the circular economy. Finally, grants have also been attracted in a wide variety of research topics/themes that have salience for colleagues including those related to management in the creative industries (**Chapain**, with £83K and **Kerrigan** with £283K); gendered understandings in work environments (**Kenny**, with £300K); shadow banking in the Chinese economy (**Zhao**, with £134K) and the impact of Brexit on UK automotive firms strategies and industrial policy (**Bailey**, with £480K).

In addition to the HESA data contained in Table 4, UoB invested £4 million to support the creation of City-REDI, which has been critical to BBS activities and has created a centre of excellence in terms of research outputs, as well as in engagement and impact terms. The success of City-REDI formed the basis for the development in 2019 of the West Midlands Regional Economic Development Institute [WM REDI – REF5a 2.1.7] with a remit to support inclusive economic growth in the West Midlands. This was made possible by a major award from the Research England Development Fund of nearly £5 million as part of a £11.5 million package over four years, including matched funding from regional stakeholders (this funding is not reflected in Table 4, but increases the capacity of BBS colleagues to perform at the highest possible level).

Funding for Centres also underpinned a cohort of RFs who are not deemed to be independent researchers, but who enhance the sustainability of BBS's research environment. For example, three of the current City-REDI RFs were employed originally as policy and data analysts and have been successful in being awarded ESRC funding; two have held ESRC Postdoctoral Fellowships and one is currently a Co-I on an ESRC grant. Another City-REDI RF has been awarded ESRC funding to support part-time secondments to the Industrial Strategy Council (Department for Business, Energy and Industrial Strategy - BEIS). Indeed, the Centre structure underpins BBS funding performance. For example, CfRB has obtained funding from Procter and Gamble for research into (un)sustainable consumer practices and behaviour change catalysts (£151K), in addition to the £2.5m from the Lloyds Banking Group. CHASM has also remained a strong attractor of funding support from UK Research Councils, UK-based charities, and UK Government bodies, as well as from philanthropic funding totalling £703K in the current period.

b. & c. Infrastructure & facilities

In the Business School context, research infrastructure and facilities includes access to databases and associated computer power that support research investigations. At the same time, research infrastructure also means having the time and space to think and write (through

appropriate workload allocations), research leave schemes [REF5a 3.4.3] (especially to support larger scale work) and support for the process of writing up work (e.g. through writing workshops). To ensure these activities bear the greatest fruit, BBS provides time and space for lively research discussion (including but not limited to visitor seminars), as well as mentorship for research conceptualisation, design and publishing (senior colleagues are especially helpful in this context). These latter aspects of research infrastructure have been addressed in Sections 1 and 2; the focus here is on physical infrastructure, database provision, specialist analysis programmes and research facilities.

Late in 2019, UoB completed a £26 million extension to University House, with 108 individual offices, 8 dual-occupancy offices and breakout spaces on each floor for staff, so that all BBS colleagues can be located together, offering colleagues dedicated office space and more social spaces (providing opportunities for informal moments of interactions to support the 'loose coupling' dynamic identified in the first section) and reinforcing BBS collective identity [REF5a 4.2.1]. Once 'normal' working patterns resume post COVID-19, the benefits of co-location will become more apparent. In the meantime, the fact that investment was made to enable this to happen is the key point. Within the physical infrastructure, Research Centres also support RF co-location. For example, the CfRB provides a room (with a large meeting table) for its RFs to work in. This creates a hub where researchers can interact, creates a supportive team environment for these junior colleagues, and increases the possibility of productive interactions between projects (and enhanced research vitality). This facility also includes a hot-desk facility for visiting researchers and up to five places for RFs working on projects under the supervision of other BBS colleagues, so that these colleagues can also be made welcome and supported. There is also dedicated space for City-REDI colleagues and a space for WM-REDI is being prepared at a dedicated location (The Exchange) in Birmingham's city centre that will open in 2021 [REF5a 4.2.2].

An additional critical part of research infrastructure is the Behavioural, Experimental and Data Science (BEADS) network and laboratory, with 25 interconnected computer terminals separated into individual booths that allow researchers to conduct interactive experiments at the highest standards of the field. This facility (operating in line with international quality standards) supports fundamental and applied research aimed at understanding individual and group economic decision making at both cognitive and behavioural levels, contributing to the development of theoretical models and generation of practically applicable insights for stakeholders. A dedicated manager ensures the smooth conduct of the lab; currently there are 4,000 active participants. The lab hosts inter-disciplinary studies with other UK institutions (including Cardiff, Exeter, Newcastle, Nottingham, Oxford, Queen Mary, Southampton, Warwick, UCL) and international universities (such as Amsterdam, Bologna, DIW Berlin, Dijon, LUISS Rome, Hamburg, Heidelberg, Monash, Illinois, Vienna, Zurich). The BEADS lab also supports PhD students as they design, pilot and conduct their own lab experiments. This is an example of a strategic investment that has multiple benefits across the various elements of our research environment. Colleagues who are closely linked with this work include **Dickenson, Di Girolamo, Drouvelis, Li, Lohse, McDonald, Paiardini, Pogrebna, Scharf** and **Talavera**. The lab and network also underpin post-graduate student success and their future career paths.

Additionally, quantitative-focused research colleagues (including PhDs) use datasets to underpin their research activity (this resource has dedicated oversight from **Ramirez**). In line with areas of research focus, datasets focus on financial and economic information (e.g. Bloomberg,

Compustat, Datastream and Orbis), consumer survey databases (e.g. Mintel), advertising databases (e.g. Creative Club), and human resource practices (e.g. XpertHR) as well as specialist regional data (e.g. China Data Online). Additionally, BBS funds access to the *Financial Times*, a resource that is critical for many colleagues. The University Library provides a dedicated BBS link person who manages these resources in terms of access and training provision (especially relevant for PhD students). The Library also has a specialist team that notifies the School when new datasets are released, and supports dataset evaluation to ensure that the best possible resources are selected. The Library also negotiates package pricing so that value-for-money can be obtained. Within the School, proposals for database spending are managed through the SMT with the Head of Research (**Tuck**) and Director of Postgraduate Research (**McGowan**) being key decision makers. Access to data is essential for many research fields (especially finance and economics), as it underpins quality of outputs and is a strategic resource for the School. During the REF period, spending on access to data has risen to almost £400,000 p.a. from BBS resources. In some instances, the cost of data is shared with other parts of UoB (e.g. Geography), while in other cases, BBS extends access to materials to all University colleagues (e.g. for the *Financial Times*).

UoB also supports data storage and computational needs of BBS colleagues by way of BEAR (Birmingham Environment for Academic Research). BEAR is a collection of complementary IT resources managed by the Advance Research Computing Team (themselves part of IT Services; see REF5a 4.5). BEAR resources are free at point of use (except for those with exceptional needs) and are governed by the University's Research Computing Management Committee (membership includes **Jabbour** from the Department of Management representing CoSS). This group also serves as the University's Research Data Storage Management Board, who oversee policy and provision of centralised archive and 'working' data stores. For BBS colleagues, BEAR provides support for those with enhanced computing needs; research data storage; a 'Dropbox'-type facility to support on and off-site collaborations; a data transfer service; software coding support; as well as providing training for all colleagues. In addition to UoB-specific training, BEAR provides links to on-line training from a variety of providers.

Regardless of research methods used, finding time and focus for writing is central to individual and collective academic success and one of the hardest activities to sustain in the face of busy academic routines and competing demands. Given this, the R&KE Committee invest £9,000 per year to support and provide time and space for writing. For example, weekly writing sessions, which are open to all BBS colleagues (including PhD students), are run on campus. Additionally, Management and Marketing have run Departmental-level writing days. Four off-campus writing retreats have been funded by BBS. On average, one third of places have been taken up by PhD students and these sessions are also open to colleagues on teaching and scholarship contracts who are engaged in research. Writing retreats are structured processes which includes solo writing as well as communicating writing goals. Participants in the workshops have reflected on both the importance of these spaces for completing writing tasks, and on how they have helped them to better communicate their research. These retreats have also enhanced collegiality and collaboration across the School, as colleagues have opportunities to discuss their research with those from across the School and further integrated PhD students into the broader research culture.

On top of logistical support, there is also internal BBS and wider UoB support for colleagues to develop the capability to write and secure research grants, as well as to raise their work to the highest level possible. There are five sources of support in this context.

First, colleagues are encouraged to identify in their research leave applications what funding might be brought to their work. While not being a 'deal breaker' in terms of awarding research leave, this raises the expectations that seeking funding is a routine activity.

Second, the R&KE committee provides funding to support a variety of research activities and £650K of funds have been disbursed since its introduction in 2015. Funding is awarded on the strength of the application made, with priority given to ECRs and some calls focusing on responsible business-themed work. This funding has allowed colleagues to undertake scoping studies to support grant applications, new research projects and new impact pathways. Additionally, it has been used strategically to support output quality (e.g. additional data collection for papers under review and proof reading costs) as well as bringing international scholars to the School and hosting research-focused events to support research vitality.

Third, support for gaining funding is available across BBS, the College and University. For example, the College Research Support Office, the EU and International Research Support Team, Business Engagement and the Development and Alumni Relations Office provide information about funding, supporting the development of research links with private and public-sector organisations and supporting engagement activity. These bodies provide in-depth support to colleagues as required for identifying and preparing grants, and are critical underpinnings of the increase in funding success (see Table 4).

Fourth, projects involving BBS colleagues have also received funding from elsewhere in UoB. This includes funding related to inter-disciplinary work, as well as College funding to support further data collection, attend/present work at key international workshops, visit international research groups and gain short-term buy-out to focus on paper revisions. When accessing funding for short-term research assistance, research ethics dictate that if doctoral students are involved in this process then they must be included as co-authors, and this also enhances the opportunity for students to be involved in high quality research projects. Positions for short-term research assistance are distributed to all PGR students through the PGR admin team to ensure equality of access to these opportunities.

Finally, as noted previously, research conference funding is also available to support colleagues to present and receive feedback on their work ahead of submission to journals; to network and to develop collaborations in their fields as well as find out where the leading edge of research in their field is at.

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

a. Research collaborations, networks and partnerships

Beyond the extensive network of research collaborators that individual colleagues have, there are a number of existing and developing collaborations and partnerships that increase the vitality and sustainability of BBS's research environment and provide contributions to the wider discipline. The examples noted here are collaborations that have yet to be described elsewhere

(e.g. the BEADS Lab network of collaborators). BBS's strategy is "to increase international research collaborations to produce highly cited research outputs", and this is achieved through several means. BBS engages in selected UoB-facilitated collaborations, such as the strategic partnership with the University of Illinois, Urbana-Champaign (UIUC) [REF5a 2.1.8], with whom **Drouvelis** developed an experimental study on charitable donations. The Culture Group in the Department of Marketing received funding to run an international workshop on Cultural Branding and the Branding of Heritage with colleagues from UIUC. WIRC (**Birkett** and **Duberley**) similarly has built on UoB's relationship with the University of Amsterdam [REF5a 2.1.8]. These programmes, and other opportunities for exchange, are facilitated through funding offered by UoB's International Office, and this has supported colleagues to spend time working with co-authors in the US, Brazil, Japan, China and a number of European countries.

Other partnerships have been seeded by BBS itself. A key example of BBS's commitment to responsible business is the three-way partnership between BBS, Gordon Institute of Business and Science at the University of Pretoria and the University of Limpopo (a historically-black university), to develop the doctoral capacity of South African faculty members in Business and Management. This grant is supported by **Chizema** and **Saunders**, and its full value (£250K) has been passed to the South African partner institutions. Each year, this cohort of PGR students (who are simultaneously teaching faculty in South Africa) will attend the British Academy conference and doctoral colloquia, followed by a dedicated research summer school at BBS. Research collaborations are expected to emerge from this activity with a focus on supporting collaborators in South Africa.

An element of ongoing strategy is the development of additional formal international research collaborations, beyond those fostered through colleagues' personal networks. The first (supported by a 20% appointment of **Mol**, and under development) is with Copenhagen Business School, which shares a focus on responsible business. The collaboration should increase the scale and reach of BBS research (and vice versa). Another significant collaboration is with the Stockholm Resilience Centre (part of the University of Stockholm), focusing on corporate biosphere stewardship with **Bebbington** as a point of connection; this collaboration provides complementary expertise to BBS and builds on inter-disciplinary expertise in the School.

b. Wider Contributions to the Economy and Society

At the outset of this environment statement, we articulated that BBS has both a local and global focus reflecting UoB's civic university status. This orientation is mirrored by BBS and facilitated through the formal research infrastructure provided by Departments, Institutes, Centres and Clusters, as well as through colleagues' scholarship. Likewise, a commitment to not only describe, but also to create, change in the world means that the impact of scholarship is at the forefront of how the School conceives of its mission. As such, this section provides evidence of some of the contributions made by BBS to society and the economy.

CfRB and City-REDI collaboration and contributions

BBS's strategy to champion and draw together resources in responsible business has been highly successful with the CfRB (with the funding from Lloyds Banking Group and additional funding leveraged as outlined in Section 3) being central to this effort. At the same time, it is notable that the partnership between BBS and Lloyds Banking Group itself has proven influential

to the bank's own responsibility strategy, creating a further feedback loop back into practice from this partnership. The CfRB also ensures research findings influence society. For example, the Centre supports impact-oriented research projects and creates robust evidence/expert insights from research that influence business leaders, change-makers and innovative thinkers. In addition, the Centre supports the translation of research into toolkits, management techniques, educational materials and engagement programmes to enable businesses to contribute to a more equitable world, creating prosperity, resilient communities and a flourishing natural environment.

For example, **Thomson** partnered with Business in The Community (BiTC) on the design and implementation of their Responsible Business Tracker®, a tool to enable companies to monitor and evaluate their performance relative to the United Nations' Sustainable Development Goals (SDGs). BiTC is the oldest and largest business-led membership organisation dedicated to responsible business, created nearly 40 years ago by HRH, the Prince of Wales, to champion responsible business, with the ambition to make the UK a world-leader in responsible business (UOB is one of the few university members of this organisation). BiTC works with their members to design and deliver responsible business advisory support as either short-term, targeted interventions, training or on a longer-term strategic basis. CfRB worked with BiTC to further develop their benchmarking work in line with SDG framing. The conceptual design and performance-profile scoring supports benchmarking performance profiles to enable intra and inter-business learning and knowledge-sharing. In addition to the design work, CfRB produced two Annual Insights reports from the data gathered, identifying priority areas of concern, and are informing BiTC intervention policies and practices. Indeed, BiTC has restructured its operations around the conceptual model of the Responsible Business Tracker, and it was featured as a good-practice exemplar in the 2019 UK Government's Voluntary National Review of progress towards the SDGs (a formal report that is lodged with the United Nations).

The second area where a sustained collaboration with and contribution to society is evident is in the area of regional development. The establishment of City-REDI provided a critical mass of researchers with backgrounds in economics, geography, regional science, regional and local economic development, business/management, and planning to collaborate closely with the West Midlands Combined Authority and other city-regions, thereby creating a substantive impact on the economy and society. Examples of the standing of colleagues within this Centre include **Collinson's** membership of the West Midlands Mayor's Brexit Advisory Group; **Ortega-Argiles'** advisory work on Brexit impacts (in the West Midlands and internationally) and **Green's** membership of the West Midlands Combined Authority's Employment Support Framework Taskforce. **Green** is also leading the Evaluation of Connecting Communities (an innovative, place-based approach to tackling unemployment and low pay in the West Midlands) for UoB in partnership with the Institute for Employment Studies. Riley (City-REDI's Business Development Director) has a part-time secondment to the West Midlands Combined Authority, where she heads up the Office of Data Analytics and also leads the Midlands Engine Economic Observatory; the latter is a partnership between City-REDI, Nottingham Trent University and private-sector research specialists providing evidence and intelligence to shape Midlands Engine policy, strategy and delivery.

At the same time, 2021 will see the opening of The Exchange [REF 5a, 4.2.2], a showcase for UoB research in the heart of Birmingham City Centre and a hub for activities such as a new incubator for student and graduate start-up businesses. The Exchange also will provide a range

of collaborative working spaces for research, policy development and a new Leadership Institute. In addition, the Exchange will host work focused on driving regional growth by using data and evidence to support public and private organisations to make better strategic decisions, delivered by WM-REDI.

COVID-19: a case study of collaboration and contribution

The multiple impacts that the COVID-19 pandemic has had on society and the economy cannot be understated. BBS, through its existing collaborations and as an already trusted knowledge partner, has been able to quickly and effectively contribute insights into issues related to the pandemic in real time. For example, BBS colleagues (Riley, **Green** and **Collinson**) lead the production of the West Midlands Weekly Economic Impact Monitor for the COVID-19 Economic Impact Group chaired by the West Midlands Mayor (which also includes senior regional stakeholders working on an economic recovery framework for the region).

BBS colleagues are also providing input to high-level Government processes during the pandemic. For example, **Goenka** is a member of the COVID-19 International Best Practices Advisory Group (a body of the Cabinet Office), whose remit is to provide expert advice on international responses to the pandemic and to inform analysis supporting decisions taken by UK Government. This group responds to commissions by the Prime Minister's Office. There are approximately 30 members of the Committee (about half are Chief Scientific Officers of Government Departments) and the rest are academics. **Goenka** is the only economist on the committee. In this role, insights into issues such as non-pharmaceutical interventions, understanding transmission of COVID-19, and its effects are provided (e.g. through a behavioural economic perspective). The invitation to be involved in this manner is based on research published before the current crisis on the links between infectious diseases and economic growth in journals such as *Journal of Mathematical Economics*. Insights drawn from this work place **Goenka** at the forefront of his academic field, and he is currently co-editing a special issue of the *Journal of Mathematical Economics* on pandemics.

This pattern of contribution is also evident with the work of **Bryson**, who published material on how economic activities are interconnected through globalisation and how COVID-19 radically restructures these relationships and conceptions of risk in global value chains (this work generated considerable discussion in policy circles). In a similar way, existing strength in environmental economics allowed **Cole** to identify deaths prevented in China due to better air quality that arose through the COVID-19 lockdown. Moreover, and subsequent to the REF census date, and therefore not reflected in the data in Table 4, **Gortz** and **McGowan** have been awarded funding (£88K) to evaluate the effectiveness of the UK Government's Coronavirus Job Protection Scheme (furlough) and lenders' Mortgage Holidays in preventing mortgage default during the COVID-19 pandemic. This work is possible because of existing depth of research in economic modelling that will allow colleagues to construct counterfactual simulations of the rate of mortgage default had the policies not been implemented or tailored differently. **Forbes** and **Birkett's** Equal Parenting Project (initiated in 2017) aims to support equality in the workplace by identifying the barriers parents, and particularly fathers, face to using parental leave policies in their children's early years. A large bank of mixed-method data has been assembled that explain these barriers alongside extensive engagement with Government Departments (e.g. the Government Equalities Office and Department of Business Energy and Industrial Strategy), as well as NGOs and employers. In the wake of COVID-19, this stream of work has expanded to

explore (by way of two large-scale national surveys) homeworking from both employee and employer perspectives. The focus of **Forbes** and **Birkett's** work is on understanding the impact the pandemic has had on experiences of homeworking, and future attitudes to homeworking and flexible working more generally. The depth of insight developed through past scholarship, the existing relationships created through engaged research, and a strong impact orientation has allowed a rapid response to this crisis to emerge that is simultaneously of use to policy and practice but which also develops the research fields from which the work emerges.

Inter-disciplinary collaboration and contributions

BBS colleagues also contribute to society and the economy through inter-disciplinary engagements that link organisational and business dynamics to ecosystems changes. This includes work from **Bensassi**, who contributed trade modelling expertise to predict the economic benefits that might emerge from the opening up of the Northern Sea Route as patterns of Arctic ice shift. This work was undertaken with climate scientists who specialise in polar regions and modelling snow/ice dynamics. In a similar vein, **Bebbington** is working with marine scientists in a formal science-business collaboration called Seafood Business for Ocean Stewardship where the CEOs of the ten largest seafood companies globally seek to address concerns around illegal fishing, labour abuses, climate change, plastics in the ocean and the health impact of antibiotics in aquaculture. These companies were identified as being key actors in global marine ecosystems through ecological modelling; something that would be beyond the ability of organisational sciences to identify. Through this collaboration, **Bebbington** is able to contribute to discipline-focused understandings of how and why corporations engage in transformation change programmes and how the actions of such a powerful group translate across the industry over time, as well as how corporations affect global environmental change.

Similarly focusing on cross-scale translations and global environmental change, **Thomson** has partnered with Worldwide Generation (an organisation that seeks to unite Government, Business, civil society and citizens for the delivery of the SDGs) and the City of London Corporation (which seeks to make London the sustainable-development finance capital of the world) to develop the G17Eco Platform in July 2020. This AI-enabled data platform (underpinned by data bot, machine based learning and distributed ledger technology) allows users to map, monitor, measure and manage a business, organisation or nation's contribution to the SDGs. CfRB was the key partner in the design archetype of the platform. What these examples demonstrate is that the ecological dimension of responsible business includes the ability to work across disciplines and partners to illuminate the particular role that organisations and economic systems play in shaping the globe.

The work of **Beltran**, **Elliott** and **Maddison** spans and articulates the links between environmental change and financial/economic risks. With depth of expertise in the economic impacts of flooding (developed from 2013 onwards), their research has had several layers of influence. Their work contributed new analysis of existing problems and informed the UK Government's 25-year plan (published in 2018), as well as attracting interest from Department for Environment, Food and Rural Affairs and the Environment Agency. Their research also has been used by the Bank of England (through a consultation on enhancing banks and insurers approaches to managing financial risks from climate change) and the World Bank (looking at the impacts of climate change on poverty).

c. Contributions to the Sustainability of the Discipline

Contributions to the discipline/research base arises from two sources. First, colleagues in BBS make sustained contributions to their fields based on their depth and breadth of experience and scholarly reputations. Second, BBS itself creates the conditions where colleagues within it are able to promulgate ideas and contributions that are greater than the sum of their parts. Both elements are elaborated here.

BBS colleagues hold editorial roles across the full array of Business and Management journals, including those that are highly ranked, such as *Academy of Management Learning and Education* (Editorial Board Members **Cassell, Taylor**); *Accounting, Auditing and Accountability Journal* (Associate Editor **Bebbington**); *Annals of Tourism Research* (Associate Editor, **Goulding**); *British Journal of Management* (Editorial Board Members **Cassell, Tarba**); *European Accounting Review* (Editorial Board, **Bebbington**); *International Journal of Manufacturing Technology and Management* (Editor, **Zhang**); *International Tax and Public Finance* (Editor, **Scharf**); *Journal of Advertising Research* (Editorial Board Member, **Moraes**); *Journal of Consumer Research* (Associate Editor, **Goulding**); *Journal of International Business Studies* (Consulting Editor, **Ghauri**); *Journal of Management Studies* (Editorial Board Member **Tarba**); *Regional Studies* (Editorial Board members, **Ortega Argiles** and **de Propriis**); *Work, Employment and Society* (Editorial Board Members, **Hodder** and Associate Board Member, **Granter**).

The contribution to the discipline and research base is also evident through a number of colleagues being senior office-holders in scholarly associations such as the Academy of Marketing (**Kerrigan**), the British Accounting and Finance Association (**Bebbington, Smyth**), the British Academy of Management (**Cumming, Saunders, Tarba**), the Centre for Social and Environmental Accounting Research (**Bebbington, Thomson**), the Chartered Association of Business Schools (**Cassell, Collinson** and **Tuck**), the International Society of Markets and Development (**Kerrigan**) and the Tax Research Network (**Lymer, Tuck**).

These, and other, activities have resulted in colleagues being fellows of various bodies such as the Academy of Social Science (**Bebbington, Bryson, Cassell, Collinson, Duberley, Saunders, Szmigin** and **Tarba**); the British Academy (**Backhouse** and **Child**); the Chartered Institute of Personnel and Development (**Birkett, Cassell, Duberley** and **Kenny**); the Chartered Institute of Taxation (**Tuck**); the Academy of Marketing (**Goulding**); the British Academy of Management (**Cassell, Child** and **Saunders**); Institute of Chartered Accountants in England and Wales (**Tuck**); Royal Society for the Encouragement of Arts, Manufactures and Commerce (**Binner, Duberley, Kerrigan, Lymer, Ramirez**) and the Royal Scottish Geographical Society (**Bebbington**).

While field leadership is often focused around individuals, there is also a cohort effect around the concentration, longevity and criticality of the intellectual contributions made by colleagues in BBS. This effect is through hosting key conferences in academic fields, including the Academy of International Business Conference (2018); British Accounting and Finance Conference (2019); Tax Research Network Conference (2018); Critical Perspectives on Finance Conference (2019); Academy of Marketing International Colloquium on Arts, Heritage, Non-profit and Social Marketing (2018); and Academy of Marketing Entrepreneurial Marketing SIG/British Academy of Management Entrepreneurship SIG (2020).

The size of BBS and the strategic focus on responsible business alongside targeted recruitment has created Departments that make pivotal contributions to their respective disciplines. Given that space limitations preclude a full account of these contributions across all Departments, the Department of Accounting will be used as an example of the institutional capacity held in BBS, as well as the way a contribution to a discipline plays out.

The Department of Accounting contains the largest concentration of interpretive accounting researchers in any one place in the world. This did not happen by chance. Rather, it was the result of a purposeful recruitment strategy to create a scholarly community that was greater than the sum of its parts. Whilst the range and scope of our research is diverse, all 16 colleagues (15.4 FTE) returned to the REF have created a community of practice with shared values as to what constitutes leading accounting scholarship. These values allow for the emergences of synergies from research into topics normally considered as unconnected objects of study, such as tax, corporate governance, public-sector accountability, history, critical theory-informed studies of accounting and its functionality; and sustainability accounting. At the same time, colleagues in this Department on teaching-focused contracts (numbering an additional ten colleagues) also have interests in these areas, with 50% of them having research publications related to these topics. Critically, the capacity of a lively intellectual community in the Accounting Department is not limited to those that are formally on teaching and research contracts.

The influence of this community extends beyond its institutional setting in a number of ways. These include agenda-setting activities such as delivering plenaries; convening workshops/forums; editorial roles in journals; leadership roles in research networks; refereeing and reviewing in leading journal, grant applications and senior appointments in other institutions; and involvement in national and international research projects dealing with global challenges, as well as high-level engagement in professional institutions, policy setting and practice reforms. For example, colleagues in the Department are connected to and lead research networks such as the Tax Research Network (**Lymer** is its Director and **Tuck** is on its Executive Board) and the Centre for Social and Environmental Accounting Research (CSEAR). (**Thomson** is the Chair of its Council, **Bebbington** was a co-founder of the Centre in 1991 and past Director: a further nine colleagues are associated with the Centre.) These are field-shaping institutions that support PhD student training (through doctoral schools); numerous specialist conferences (in the case of CSEAR, these activities span the globe with eight regional conferences); and specialist publications (including special issues, the *Social and Environmental Accountability Journal* and being key contributors as well as holding editorial positions in journals central to this wider field).

Departmental contributions to the professional associations are also evident: **Bebbington** (Sustainability Committee) and **Tuck** (Research Committee) have formal roles in the Institute of Chartered Accountants of England and Wales. **Tuck** (Council) and **Lymer** (Education Committee) hold roles in the Chartered Institute of Taxation. In addition, post-holders in the overarching academic professional body (the British Accounting and Finance Association – BAFA) include **Bebbington** and **Smyth**: the Department hosted the BAFA annual conference in 2019. Furthermore, the contribution of **Thomson** was recognized in 2020 through the BAFA's Distinguished Academic Award. This is a prestigious annual award for an individual who has made substantial and direct contribution to UK academic accounting and finance life, with previous recipients including **Scapens** (2003), **Hoskin** (2010) and **Bebbington** (2013). The

Accounting Department is not unusual within BBS in make such wide-ranging contributions (space precludes doing justice in terms of depth for all Departments).

2020 was a year when many of our familiar understandings of what 'life' involves were disrupted. During the COVID-19 pandemic, new understandings of health and wellbeing emerged and different ways to work and live were adopted. At the same time, global climate-change effects are intensifying, with floods and forest fires dominating headlines alongside more recent scientific predictions that the Arctic is in a 'death spiral'. The robustness of the ecosystems on which we rely have been questioned in scientific and public spheres (e.g. David Attenborough's 'Extinction' series) and Extinction Rebellion and climate strikes have become a part of life for many, especially, young people. All of these fundamental economic, environmental and social drivers have ramifications for how organisations can and should operate in the current and future; that is, how they will be 'responsible businesses'.

BBS, through its past, present and future research endeavours, and utilising its research capability and wider networks, will continue to examine and understand these forces and links between them (which are often complex to detect). The relationships that BBS has developed with communities of practice and in policy domains are critical to this task, as this is where these pressures and trends will play out. Being a trusted partner (and possessing an extensive track-record in this role) will support new relationships in the future. BBS will continue to enhance its research environment to achieve these outcomes.