

Institution: The University of Edinburgh

Unit of Assessment: 19 Business and Management Studies

a. Overview

The University of Edinburgh Business School has transformed since 2008. In 2009-10 it became a separate School with its own devolved financial regime, and moved into new premises refurbished through a £17m University investment. Further investment has enabled a major expansion of faculty and the doctoral community. Only 40% of current faculty were present in the School at the 2008 RAE census date. These developments have enabled the School to expand research activity across its six core subject groups (Accounting and Finance, Entrepreneurship and Innovation, Management Science and Business Economics, Marketing, Organisation Studies, and Strategy and International Business). More recently, we have invested in the development of research and research leadership by focusing on cross-cutting themes that pose major challenges to organisations. The School's strategy for developing research has been further strengthened since the appointment of a new Dean (Clarke, ex-Newcastle and Lancaster) in September 2012.

b. Research strategy

The University of Edinburgh Business School's research mission is to produce theory-led, practically-relevant, research that addresses contemporary organisational and management challenges faced by businesses, public organisations, regulatory bodies and policy-makers. Our **research strategy** since 2008 has been focused on creating and sustaining a supportive, collaborative and vibrant research culture. Key actions and decisions have included:

- Negotiating a devolved financial regime that has enabled the School to increase the size of faculty, especially early career faculty, across all subject groups (Section c (i));
- Doubling the size of the doctoral community and increasing the numbers of completions from 7.14 graduates/year in RAE2008 full census period to 14.38 in the REF period (Section c (ii));
- Accumulating a major financial surplus (currently £6.8m) to enable the School to invest in future research development (Section b, future strategy);
- Securing a £17m investment in a new Business School building from the University to integrate faculty from three sites to one and facilitating fuller integration of our doctoral researchers (Section d(i));
- Investing in research-oriented early career faculty led by a strengthened professoriate (56 new faculty, a net increase of 27 since 2008) to increase research capacity and enhance vibrancy within our key disciplines (Section c (i));
- Increasing our research budget five-fold to provide financial support for stimulating research and impact (Section d) and to promote wider and deeper collaborations (Section e).

These actions have led to a step change in the quality and volume of research. Over the REF census period we have increased the annual average number of research council grants by 57% and EU grants by 30%. Over the same period 16 faculty published in journals featured in the FT45 list, compared to 8 between 2001-8. Success among early career faculty is demonstrated by the award of three ESRC seminar series and an AHRC grant in 2011-13.

In terms of themes, our strategy since 2008 has been to develop areas of established academic strength (e.g. interdisciplinary accounting and credit and risk research), in tandem with enhancing the wider impact of our research. Our approach is aligned with that of the University which emphasises academic excellence centred on discipline-based **Subject Groups**, while also encouraging a number of **Research Centres** and cross-cutting themes that reflect opportunities within the City of Edinburgh as a global business hub, alongside pre-eminent points of expertise across the University. Our centres provide mechanisms for capacity building, bringing together established and new researchers (including doctoral researchers) to develop and disseminate new knowledge, generate new funding, and enhance reputation. These roles are exemplified by our Credit Research Centre, which showcases the School's expertise on credit risk, runs the largest conference in the world bringing together leading researchers and industry stakeholders, and generates revenue to build capacity via funding doctoral students and new faculty.

Instrumental to the success of the School strategy is the attention devoted to **setting, managing and monitoring research standards**. Each Subject Group has a **Research Champion**, with operational and strategic responsibilities. Within the groups, the champions stimulate and facilitate research (e.g. by organising group seminars), mentor early career faculty, and promote the sharing of research and knowledge exchange. Their strategic role is realised via the **School Research Committee** that comprises the Dean, the Director of the PhD Programme, representatives from the Research Centres and a PhD student representative. The Committee is chaired by the Director of Research and meets monthly to review, revise and develop the School's research strategy in line with research developments across the University and the academy more generally. Key performance indicators have recently been established to better manage the development of research.

The following sections outline how our strategy of creating and sustaining a supportive, collaborative and vibrant research culture is enacted in the subject groups and centres to: (a) enhance theoretical and conceptual innovation within disciplines; (b) promote within-group and wider collaboration; (c) expand international and interdisciplinary collaboration in empirical research; and (d) strengthen and extend engagement with policy and practice.

Accounting and Finance (A&F) (Armitage, Danbolt, Eshraghi, Hagendorff, Hou, Ibikunle, Jeacle, Liang, Michou, Quattrone, Rees, Walker).

Research within the A&F group contributes to theoretical and practitioner debates in the fields of interdisciplinary accounting and corporate finance, as well as developing new approaches to carbon financial management. In 2012 the School took a strategic decision to strengthen further the group's long-standing expertise in interdisciplinary accounting by recruiting new high-calibre scholars. The group's contribution to cutting edge academic debates is illustrated by **Jeacle's** work on calculative practices and the construction of trust (*Accounting, Organizations and Society*, 2011). Similarly, **Quattrone's** study of the success of accounting as rhetorical machine (*Accounting, Organizations and Society*, 2009) opened up a new vista for exploring the semiotic power of accounting, while **Walker's** exploration of the socially intrinsic nature of accounting (*Accounting, Organizations and Society*, 2008) demonstrates accounting's capacity to reflect and solidify social categorisation and identity. The School's emphasis on realising wider research impact is evident in **Quattrone's** work on the significance of humanism to contemporary capitalism. He was invited to speak at the Harvard Humanities Centre (2011) and at the PwC Finance Leaders' Summit (June 2013). Equally **Walker's** contribution to historical accounting has resulted in an invitation to address the American Accounting Association's Doctoral Consortium (2008) and in his advisory role on the BBC4 Radio series 'A Brief Guide to Double-Entry Bookkeeping' (March, 2010).

Research within the Finance sub-group highlights the School's commitment to meeting the challenges faced by business and policy-makers. For example, **Hagendorff's** arguments that Basel capital requirements are insufficiently risk sensitive and that banks continue to hold too little capital has resulted in talks to senior policy-makers (the Federal Reserve Bank of Chicago, the Federal Deposit and Insurance Corporation in Washington DC, and the Bank of Spain) and at practitioner seminars organised by Royal Bank of Scotland, Scottish Widows and Chartered Financial Analysts Association. **Eshraghi's** innovative work in the emerging area of emotional finance has attracted attention from the business community in the form of a feature in the *Financial Times* (2013). The international reach of the group's activities in terms of research themes and funding sources is evident in **Hou's** work on income tax reform, funded by the Chinese government, which resulted in a plenary talk to Chinese state leaders (2011). Similarly, in the area of carbon finance **Liang's** work on developing novel financing and risk-transfer models for promoting Carbon Capture and Storage (CCS) technologies, led to the establishment of a CCS cost-reduction research centre, jointly funded by the UK and Chinese governments. The School has established the **Centre for Business and Climate Change** (CBCC), a centre for applied research on carbon benchmarking and performance measurement, in order to facilitate impact and to build research capacity, for example via the award of an ESRC/SAMS Business and Development Fellowship in 2012.

Entrepreneurship and Innovation (E&I) (Bunduchi, Bock, Cooper, Harrison, Harwood, Pollock, Osborne, Spigel)

Research within the E&I Group advances interdisciplinary understanding of the innovation and entrepreneurship that occurs around products, processes and services. Innovation research builds on a long term scholarly tradition in the School, forming part of the internationally renowned 'Edinburgh approach' to the study of technology and innovation which links to others across the School and University, notably Science, Technology and Society (STS) scholars in the Institute for the Study of Science, Technology and Innovation (ISSTI) and the sociology of finance, such as Donald Mackenzie. The cross-cutting nature of this research has resulted in novel theoretical, methodological and empirical insights to the study of innovation, as well as more high quality research outputs and research grant income. These outcomes are demonstrated by **Pollock's** studies of the new actors operating in innovation and procurement markets. His work, funded through an ESRC fellowship (£168k), has created an innovative empirical area of study by bridging ideas from Innovation (*MIS Quarterly*, 2013), Information Systems research (*Information Systems Research*, 2012) and Interdisciplinary Accounting (*Accounting, Organizations and Society*, 2013). The vitality and potential of this area is also demonstrated by **Harwood's** research on new online intermediaries such as TripAdvisor (*Information and Organization*, 2011) and through **Osborne's** involvement in a new €2.5m EU FP7 grant programme on social innovation in Europe.

The Entrepreneurship sub-group has extended its multi-disciplinary focus by appointing talented early career faculty alongside established academics. At the early-career level, **Spigel** has applied a sociological lens to study entrepreneurial cultures (*Entrepreneurship and Regional Development*, 2013) and **Bock**, has examined the role of culture and practice (*Journal of Management Studies*, 2012) in forging links between business models and opportunity enactment (*Entrepreneurship Theory and Practice*, 2011). More established scholars appointed include: **Harrison** who has focused on technology commercialisation (*Regional Studies*, 2010) and the development of entrepreneurial leadership (*British Journal of Management*, 2012); and **Bunduchi** who has applied notions of trust to understanding new product development (*Production Planning and Control*, 2013). The group's **Centre for Entrepreneurship Research (CER)** acts as a mechanism to liaise with industry, and has been instrumental in securing funding from research council and industry sources. Membership of the STEP Family Business Research Consortium, co-ordinated by Babson College, extends research in trans-generational issues to family businesses in Europe, Latin America, Asia and North America (**Cooper**, *International Small Business Journal*, 2009).

Management Science and Business Economics (MSBE) (Ansell, Archibald, Black, Crook, Glen, Mare, Martin-Barragan, Moreira, Ouenniche, Rossi, Tomasella, Voltes-Dorta, Wang)

Research in the MSBE group has a strong tradition of developing innovative methodologies and frameworks to analyse issues of importance to business and policy decision-making, with a particular focus on the management and understanding of risk. The impact of long-standing members of the group is illustrated by **Ouenniche's** research on designing effective heuristics to improve queuing systems in call centres and medical energy treatment (*Operations Research* 2009). Impactful research has changed the ways banks think about modelling default by conducting path-breaking work (funded by EPSRC) on the application of survival models to enable a lender to predict *when* a borrower will default given future states of the macro-economy (**Crook**, *Journal of the Operational Research Society*, 2009). Contributions from early career colleagues include **Rossi's** work on the management of uncertainty in customer demand and replenishment lead times (*INFORMS Journal on Computing*, 2012). Capacity building in the group is enhanced by a strong emphasis on collaborative working, such as **Archibald** and **Black's** EPSRC-funded research (in collaboration with McConnechy's Tyre Service Ltd) which showed how retailers can increase service levels and reduce costs through careful redistribution of inventory in their branch network (*European Journal of Operational Research*, 2009).

The policy relevance of the group's research is evidenced by **Ansell's** work examining the impact of changes in the economy on models for assessing the risk of lending to small firms (*Journal of the Operational Research Society*, 2013) and by **Moreira's** development of an innovative methodology to address the underestimation of bank capital requirements under the Basel Accords (*Financial Markets, Institutions and Instruments*, 2010). International collaboration is central to the group's approach. Examples include **Martin-Barragan's** research with colleagues at the

Universities of Oxford and Carlos III Madrid and **Voltes Dorta's** joint work with colleagues at the University of Maryland. This approach has facilitated innovative interdisciplinary research, as evidenced by **Rossi's** ongoing work with colleagues on an FP7-funded project on microbiological risk modelling in the supply chain.

MSBE hosts the **Credit Research Centre (CRC)**. Led by **Crook**, the CRC plays a pivotal role in practice and policy-making by engaging in theoretical and applied research with lenders, credit suppliers, credit scoring organisations, borrowers and government agencies. For the last 24 years it has organised the largest academic biennial conference in the world on consumer credit risk modelling. The conference and related journal special issues are a focus for cutting-edge research in the area. The CRC distributes income from the conference (approximately £75k per annum) to its members for research purposes, including purchasing commercial datasets, and visits to data providers. Key achievements since 2008 include: capacity-building in the area of credit risk by funding three PhD studentships and a post-doctoral research fellow; providing points of advice (e.g. on Office for Fair Trading policy reports); establishing the Joint Innovation Forum with specialists from a financial institution; and consultancy assignments from the banking industry. The international standing of the Centre attracts leading figures in the credit risk field (e.g. Michael Gordy, Federal Reserve Board and Nick Keifer, Cornell University), and its Visiting Scholar programme has attracted research visitors that include those from the Wharton School, University of Pennsylvania; the Federal Reserve Board; and Royal Bank of Scotland.

Marketing (El-Manstrly, Gilmore, Marshall, O'Donohoe, Tregear)

The principal expertise of the Marketing group is in marketing strategies and practices, consumer behaviour and consumption practices particularly in the food, advertising and creative industries sectors. Interdisciplinary and theoretically innovative work includes **Tregear's** agenda-setting critique of prior scholarship on alternative food networks (*Journal of Rural Studies*, 2011) and **O'Donohoe's** use of bereavement and consumer research literature to classify bereaved person-object relations in terms of emotional intensity, temporal range and agency locus (*Journal of Marketing Management*, 2012). Interdisciplinary research strengths are also demonstrated by **Gilmore's** 2013 Arts and Humanities Research Council award for a study on cultural values and taste-making within contemporary classical music. Policy-relevant research is exemplified by **Marshall's** Food Standards Agency-funded study on access to healthy food in Scotland, which found that price rather than availability was a barrier in deprived communities (*International Journal of Epidemiology*, 2010; *Journal of Marketing Management*, 2008). **Tregear's** research on origin as a marketing resource for regional food producers, and on the role of state intervention and inter-firm collaboration in regional food promotion, led to a report for the Scottish Government on origin labelling literature and practices (2008-09). Commitment to capacity building and mentoring early career researchers at group level has led to the award of an ESRC Seminar Series grant to **El-Manstrly** on Financial Services and Consumers, and to publications in leading journals arising from ongoing collaboration between former PhD student and supervisor (**McLeod/Gilmore** and **O'Donohoe**, *Human Relations*, 2009 which highlighted the challenges facing working class creatives seeking to build careers in the advertising industry).

Organisation Studies (OS) (Chaudhry, Loretto, Main, Murphy, Patel, Potocnik)

Research in the OS group provides insight into major human resource and public policy challenges in the fields of leadership, governance and diversity. Over the REF census period, the group has taken a strategic decision to focus on the inter-relations between the policies and practices of HRM and broader societal, political and demographic changes, producing research that exemplifies the School's approach to achieving impact. **Main's** detailed analysis of the workings of remuneration committees (funded by an ESRC award of £302k) has informed government thinking in the recent BIS reforms of executive pay reporting. His statistical analysis of boardroom appointments and remuneration (*Economic Journal*, 2013) has contributed to the policy debate initiated by the government's Davies Report on women in the boardroom. **Loretto's** research into understanding the complex interplay between age, employment and retirement has attracted £245k of funding (from ESRC, government, industry and trade unions). It has contributed to academic understanding of the changing nature of retirement and to older worker identity (*Human Relations* 2013, *Work, Employment and Society* 2009), and provided insights to help shape public policy surrounding extending working lives via publications for the Department for Work and Pensions

(2008, 2009, 2012) and the UK Houses of Parliament Parliamentary Office of Science and Technology's briefing (2011). The group has recruited talented early career faculty, such as **Potocnik**, whose work is contributing to Europe-wide debates about the role of work in active ageing (*Journal of Occupational and Organisational Psychology*, 2013). It has also appointed **Murphy** as an expert in leadership to broaden the group's methodological approaches through her application of social psychology to advancing understanding of gender stereotypes and leadership (*Leadership Quarterly* (2011, 2010, 2008) and *Organizational Behavior and Human Decision Processes* 2008). Integral to the group's strategy is the promotion of collaboration between its members, as demonstrated by **Chaudhry** and **Patel** who under **Loretto's** mentorship, have recently extended the group's research on age management to new contexts, such as into India and Pakistan.

Strategy and International Business (SIB) (Amaeshi, Amis, Carr, Carter, Clarke, Harris, Kontinen, MacKay, Mahnke)

Research in the SIB group provides key insights into the processes of strategic change and the practice of strategy. Specifically, the group draws heavily on organisation and management theories to frame the study of strategizing processes. In 2012 the School made a strategic decision to build a distinctive interdisciplinary strategy group and recruited three new chairs (**Amis**, **Carter**, and **Clarke**). **Amis** combines organisational and institutional theory to reveal how culture, discourse and power interplay (*Academy of Management Review*, 2013). **Carter** integrates interdisciplinary accounting and organisation theory to study the paradoxes of a strategic change programme in a Big Four accounting firm, highlighting the deeply entrenched nature of power relations (*Accounting, Organizations and Society*, 2010). Fusing linguistics with management theory, **Clarke** identified the micro-discursive strategies of interaction used within management teams of a multi-national aerospace company (*Journal of Management Studies*, 2013) that stimulate shared view formation around strategic issues. **MacKay** synthesises strategy and organisation theory to expose the unintended consequences of strategic change (*Academy of Management Journal*, 2013) in a Canadian automotive company.

Deep engagement with organisations is central to the SIB group's research approach. **Amis'** work with public health in Mississippi and Tennessee, funded by the Robert Wood Johnson Foundation, demonstrated the influence of environmental context on the efficacy of planned change (*American Journal of Public Health*, 2012). **Carter's** research (*Business History*, 2013) into the history of the BBC has opened up a dialogue with current executives in the corporation about the management of culture in a creative organisation. **Clarke's** pioneering research on perceptions of store choice at the neighbourhood level (*Environment & Planning A*, 2012), funded through an Advanced Institute for Management Research (AIM) Senior Fellowship, influenced Competition Commission thinking. Moreover, in the context of the uncertainty surrounding potential Scottish independence, **MacKay** was recently awarded an ESRC Fellowship (£150k) to examine influences on decision-making among business leaders.

Strategy for the future

The School will continue to strengthen research and enhance distinctiveness through themes that represent generic challenges to organisations. Through this strategy, we will continue to encourage research excellence within and across subjects, while making strategic investments in existing and emerging areas of strength (Interdisciplinary Accounting; Credit Research; Age and Work; Strategy and Organisation). In the last year we have identified a major cross-cutting theme around '**Strategic Leadership**', with the overarching aim of re-imagining the role of leadership for the 21st Century. In 2013 the School committed a significant amount of its accrued surplus, conducting an international search for scholars across relevant disciplines, and appointed four new chairs to lead the initiative (**Amis**, ex-Memphis and **Carter**, ex-Newcastle in Strategy; **Harrison**, ex-Queens Belfast in Entrepreneurship; and **Murphy**, ex-James Madison, Virginia in Leadership Development). These new colleagues are developing a **Centre for Strategic Leadership**. This has the explicit purpose of shaping public understanding of the role of organisational leadership, and producing and developing leaders who appreciate how organisations work to deal with complex problems by taking an integrated approach to shaping organisational responses to strategic imperatives. Research will be informed by close industry engagement. This strategic initiative will play a key role in continuing to raise the quality and profile of research across the

School by stimulating grant proposals, initiating research projects, mentoring early career faculty, making distinctive pedagogic contributions on masters and executive education programmes, and developing a rich multi-disciplinary research agenda to provide a holistic perspective on how innovation, organisational change and leadership are connected.

c. People, including:

i. Staffing strategy and staff development

A key aspect of the School's strategy has been our carefully-considered investment in 56 new academic faculty since 2008, all of whom have evidenced, or are capable of, internationally-excellent research and who, through teaching, will deliver a high-quality student experience and will engage with our non-academic users. This major strategic investment is driven by our dual aims of academic excellence and practically-engaged research themes. It has been enabled by investing a significant amount of our operating surplus of around £1.85m per year since 2010, generated primarily by the increases in taught postgraduate programmes and retained through the new financial regime. Twenty-nine faculty have retired or left over the past 5 years; some leavers have moved to take up prominent appointments (e.g. Schofield, Dean of York Business School; Findlay, Director of Scottish Centre for Employment Research). These changes have resulted in a very different staff profile in the School compared to 2008: currently 50% (n=45) of our faculty are early-career or lecturer-grade, compared to only 30% at the time of RAE2008. Our focus is on the long term, building an international, vibrant and sustainable faculty through supporting earlier career colleagues in achieving ambitious research goals. Although half of our early career faculty do not as yet have the volume of research publications to be entered into the current REF, all have evidenced their capacity to produce internationally-excellent research, and our investment in their development will bring distinct benefits to the School in the longer-term.

Over the REF period we introduced two innovative features in our approach to staffing. First, the School has been instrumental in developing an 'Early Career Fellow' (ECF) scheme which enables the recruitment of early career researchers with high potential, but who do not yet have an established track record of published outputs. The scheme has been very successful, making it possible for the School to hire ten high potential individuals at an earlier stage of their careers than would normally be the case, and has now been widely adopted across the University. Progress in research is a formal requirement for ECFs who typically join the School in the final stages of their doctoral work. In order to progress to Lecturer grade, they are required to obtain their PhD and publish at least one article of internationally excellent or world-leading quality. They are assisted in achieving these goals by a reduced (85%) workload in their first teaching year and by working closely with a senior member of faculty who acts as research mentor. ECFs also benefit from institutional courses and advice, for example on research-teaching linkages, offered by the University's Institute for Academic Development. Several ECFs are already making substantial contributions to the School's research base and, as they develop high-quality research outputs, have successfully applied for Lectureship positions (e.g. **Harwood** and **EI-Manstrly**) (Section d). Supplementing this focus on early career talent, the School secured three tenure track Chancellor's Fellows (**Gilmore**, **Spigel** and **Tomasella**), as part of a University initiative to recruit 150 internationally-advertised tenure-track fellows in 2013-2014. The School thus clearly reflects and benefits from the University's commitment to be the UK's leading institution supporting the development of early career academic staff.

Second, the School has strengthened interdisciplinary research leadership by recruiting six new chairs (**Amis**, **Carter**, **Harrison**, **Murphy**, **Quattrone** and **Walker**) in 2012-13, four of these around the theme of Strategic Leadership. In addition to developing an innovative cross-cutting research theme around Strategic Leadership (see Section b.), these faculty will help to stimulate interdisciplinary work across subject groups and will play a key role in inspiring, motivating and mentoring colleagues at earlier stages of their career to sustain and develop research vibrancy across the School. A crucial criterion in their selection was proven experience and success in research leadership. Research leadership capacity has also been strengthened by the appointment of a further three professors (**Danbolt**, **Mahnke** and **Rees**) and by internally promoting eight faculty (four women and four men) to personal chairs during the REF period.

Another key achievement of our staffing strategy has been a purposeful increase in the international diversity of faculty, which has enabled the School to build capacity in a challenging

marketplace. International faculty represented approximately a third of the School at the time of the REF 2008; this proportion has now increased to nearly 50% from 19 countries. A sustained programme of faculty development has been devised to support these initiatives. Faculty development takes place primarily at the Subject Group level. All new faculty to the School are appointed a research mentor who is responsible for discussing their research progress and plans and helping to identify their development needs. All faculty have Annual Reviews, conducted either by the subject Research Champion or the subject group head. The Director of Research and the Dean have oversight of these processes, and their insights feed into new School initiatives, such as: workshops on grant writing for Research Councils; how to deal with referees' comments; and widening research impact.

The School's workload model ring-fences 42% of academic time for research for all faculty. In addition, the School has a sabbatical system of one semester of sabbatical for every eight of service. Taken together, these provisions mean that most faculty have around 50% of time available for research. Practical support is provided through various 'research enabler' mechanisms (Section d) to encourage and support faculty in publishing their work in the strongest outlets. As part of our increased research expectations, we have recently (2012-13) introduced research key performance indicators at School and individual levels that will allow us to monitor and review our progress towards achieving our research aims. Our staffing strategy beyond 2014 is one of consolidation and modest growth. Our business model allows us to sustainably invest in the development of our new faculty, and retaining them by helping them to realise their potential is our key priority. We wish to ensure critical mass of approximately 15 faculty in each of our subject group areas and will seek to add expertise where needed through endogenous growth and via carefully-selected international collaborations which can complement our areas of focus and research expertise.

ii. Research students

The doctoral community is a central feature of the School research environment and is crucial in helping us attain our vision through research-led capacity-building. Since 2008 we have put in place strategies to grow the number of high quality students, encourage timely completion and develop the fuller integration of our doctoral community into the School's research community. During the REF census period, the School has graduated 72 PhD students (all PhDs, i.e. no professional doctorates), representing a doubling in the annual numbers of completions from 7.14 during the last RAE (2001-7) to 14.38 in the REF period. Around 50% of our graduates have entered academia across the world, and a significant number have taken up prestigious positions in leading financial institutions, including Royal Bank of Scotland (Salazar), Scottish Widows (Clunie) and Central Bank of China (Ma).

Currently, the School has 125 students enrolled on the PhD programme, the majority are full time, and 52% are female. The composition is internationally diverse (coming from 30 different countries) and evenly spread across the various Subject Groups. The objectives of the doctoral programme are twofold: firstly to increase the existing capacity for world-class research in Business and Management topics by providing our doctoral students with the required focus and resources that will allow them to conduct theoretical and empirical research on a topic of their choice; and secondly to help support and sustain our other research priorities. The School has developed a number of strategic and practical schemes to foster these objectives, as set out below.

Training and development

As one of several Business Schools connected through the ESRC **Scottish Graduate School of Social Science Doctoral Training Centre** (SGS-DTC) we have made extensive use of network opportunities afforded by this initiative. For example, as part of the SGS-DTC Summer School Business and Management pathway, in 2012, faculty from the School and elsewhere ran events on 'generic research skills' and methods attended by over 60 doctoral students from across Scotland. In 2013, the School hosted the Business and Management pathway Summer School. The School has invested £30k per year in improving research leadership skills within our doctoral cohort. We encourage the students, working together with their supervisors and other faculty, to set research agendas through workshop and mini-conference organisation. Two examples are: the annual PhD day at which students present their research to other doctoral students and faculty; and the

Research Poster conference which is part of students' first year assessment. They are required to prepare and present a poster of their embryonic research project and its possible contribution, and to answer questions from faculty and fellow students.

Networking and dissemination

The School has quadrupled the doctoral conference budget in recent years, and allocates additional conference funding to encourage collaborative writing with supervisors. Financial support is supplemented by practical help, such as workshops on how to write an abstract, how to develop a poster, or how to craft a contribution. The number of students presenting at leading international conferences has risen from 13 in 2007-08 to 37 in 2012-13. The David Hume writing prize was introduced in 2012. This competition is open to students who publish an article in a leading international journal, whether alone or in conjunction with their supervisors. PhD students are also eligible for the incentives awarded for publishing in a FT45 journal (see Section d(iii) for more details).

To further encourage doctoral students to build connections and collaborate with key scholars and institutions externally, the School funds 5-7 PhD mini-conferences annually. Students bid competitively for funds to run short conferences aimed at dissemination, network building, collaborative writing and generating future research opportunities. These conferences have attracted leading scholars (e.g. Andrew Pettigrew and Richard Whittington, Said Business School and Tor Hernes, Copenhagen Business School headlined a two-day conference in March 2013 on 'Expanding New Horizons for Strategy Process Research During Turbulent Times'). They have also stimulated further research, as in the case of Kowalski's event (June 2012) on linking research and practice around the topic of well-being at work which directly led to an ESRC seminar series award (Kowalski and Loretto) to further investigate the topic.

Community building

The Doctoral Society. This is an initiative set up and run by the School's doctoral students together with the Doctoral Programme Director, the idea being to organise events to better integrate the doctoral students into the research practices and culture of the School and wider academic circles. The events have included visits by students to academic centres of international excellence (e.g. attending summer schools at Oxford and Florence) as well as invitations to international and UK scholars to come to Edinburgh through the 'New Directions in Management' seminar series. Examples include sessions on advanced methods (Cathy Urquhart on Grounded Theory) and theory (Barbara Czarniawska on recent management philosophies).

PhD Champions: The School funds Doctoral Society office-holders (n=8) to spend time on organising and running initiatives within the PhD community, to help facilitate research interactions between faculty and students. These students are charged with taking the lead in the organisation and running of academic events, such as seminars or workshops, often in conjunction with the wider university. For example, in 2011-12 our PhD Champions ran workshops on transferable skills and writing skills involving the University's Institute for Academic Development (IAD).

The IAD is also involved in helping to deliver annual supervisor training: all supervisors must attend this at least once every five years. The PhD Programme Director has oversight of the supervision process. He also chairs the School Research Degrees Committee comprising Subject Group PhD and doctoral student representatives. This Committee oversees the recruitment of doctoral students, ensures all students have the appropriate supervisors, and monitors progression via organising annual assessment panels.

d. Income, infrastructure and facilities

(i) New building

Post RAE2008, the University invested £17m on completely refurbishing a key central campus building to provide bespoke designed accommodation with integrated teaching, office and administrative accommodation necessary for the further development of a research-led Business School. Faculty and doctoral students were formerly located in three separate sites. Bringing them together and providing professional office accommodation clustered within subject groups, high-quality conference facilities, a School information and resource centre with a dedicated librarian, and seminar and social space to encourage more informal interaction, have all been instrumental

in promoting and sustaining research vitality and improving the research environment.

(ii) Increased research administrative support

As part of its investment in research, the School has expanded its research administration capacity threefold, moving from 1.5 to 4.1 FTE. This figure encompasses a Research Support Manager, two research secretaries (research enablers and research impact), a research centres administrator, a research data and web manager, a PhD admissions administrator and a PhD programme administrator. Central support is complemented by a pool of Research Associates made up of doctoral students who help underpin research in the subject groups. These School RAs provide flexible assistance to academic faculty on a range of projects such as: external grant-funded projects; internal school projects; teaching programme initiatives. This pool is designed to overcome issues relating to recruiting casual assistance for short-term or ad-hoc projects.

(iii) Deployment of surplus funds to fund research excellence

A key aspect of the School's research investment aims to stimulate and reward high quality research amongst faculty at all stages of their career. As detailed below, we have funded a series of research enablers, prioritising the development of new and less experienced faculty and encouraging closer collaboration between faculty and our doctoral researchers:

- **Enhanced conference funding** to remove financial barriers to disseminating our research at major international conferences and to increase the profile of School research by guaranteeing funding for each faculty member to attend at least one main conference per year. This has increased international conference attendance from an annual average of 20% of faculty to over 60% in 2012-13. The number of papers presented at conferences rose from an annual average of 19 in 2010-11 to 92 in 2012-13.
- **Excellence Through Collaboration Fund** that provides additional conference funding to doctoral students for world-leading conferences to present papers co-authored with their supervisor(s). This new initiative is aimed at encouraging collaborative working between faculty and doctoral researchers and received seven applications in its first year of operation and 39 in Year 2 (2012-13).
- **FT45 List article prizes** to encourage publication in world-leading journals. Have incentivised faculty to increase their research ambitions and resulted in 13 awards since starting in 2010.
- **Thought leader seminars/ World-Class Early Career Faculty Research seminars** funding to bring world-leading academic colleagues to the School, to provide opportunities for new and early career faculty to gain experience in conference organisation and to strengthen international networks. We funded five seminars in 2012-13, inviting: Robert Ayres (INSEAD), Marjore Lyles (Indiana University), Dave Allen (Edith Cowan University, Australia), Arthur Frank (University of Calgary) and Harry Sapienza, (University of Minnesota).
- **Director of Research Venture Fund** provides seedcorn funding for new/pilot research. It is aimed at early career faculty to improve their chances of success in larger grants. Two awards were made in January 2013 and two more in July 2013. One has already led to success in obtaining external funding (Carnegie award to El-Manstrly).

We are closely monitoring the impact of these initiatives in increasing the volume and quality of our research. Early indicators demonstrate enhanced research vitality, as evidenced by an increase in grant applications and successes. For example, from January 2013 to date we have been successful in gaining five research council awards (four from ESRC and one from AHRC).

e. Collaboration or contribution to the discipline or research base

Collaboration and research contribution are integral to our School's research culture and strategy, and are evidenced by: (i) institutional, national and international collaboration; (ii) editorial activities; (iii) scholarly recognition; and (iv) agenda setting and capacity building.

i. Collaboration

Within the **University**, expertise on Carbon Management led to the launch in 2008 of a joint masters programme in Carbon Management in collaboration with the School of Geosciences and the School of Economics. Together with these same schools we hosted the Chevening Fellows

Programme on 'Finance and Investment in a Low Carbon Economy' for two years (2009 and 2010). The programme, financed by the UK Foreign Office, each year brought 14 'high-fliers' from around the globe for an intensive three months of study based at the University of Edinburgh. The Programme brought in approximately £200k per year for the university. Several members of the Entrepreneurship and Innovation Group (**Bock, Bundici, Harwood and Pollock**) are involved in collaboration with **ISSTI**. Achievements over the REF census period include £185k of EU research income for the School and the establishment of the International Knowledge Network to attract world-leading academics such as Wanda Orlikowski of MIT Sloan School of Management. **Amaeshi** is on the organising committee for the **Gifford Lectures**, which for a century has attracted leading international scholars contributing to the advancement of theological and philosophical thought. Recent contributors include the Rt Hon Gordon Brown and Bruno Latour.

Over the REF period, the School has engaged in **international collaboration** on research grants worth nearly £500k, funded mainly from the FP7 programme, involving collaborators from Norway, Germany, Lithuania, China, Australia, Hungary, France, Italy and Canada. These successes reflect the international reputation of our research and, in some cases, have led to longer-term collaboration. One example is **Cooper's** long-standing research collaboration with William Lucas of MIT that led to the establishment of the Education and High Growth Innovation research group, involving five UK universities (Edinburgh, Cambridge, Lancaster, Sheffield and York) along with MIT. The group explores the influence of educational programmes and other interventions on the motivation and capability of individuals to engage in entrepreneurial behaviour.

International collaboration has been further enhanced by several mechanisms, including the Thought Leader Seminars (see section d above) and prior to that by the prestigious Sen-ei-gen funded seminars. Twelve such seminars were organised in 2008-9, attracting renowned scholars across the sub-disciplines (e.g. Rosie Batt, Stewart Clegg, Michael Cusamano, Paula Jarzabkowski and Mike Power). In addition, over the period 2008-13, 108 visiting scholars, from 20 countries across the world have been accommodated in the School's dedicated visitor study facilities or hosted directly within Subject Groups. The School actively seeks to integrate research visits with specific seminars for Masters degree and doctoral students. Visits have led to further collaboration (e.g. between **Osborne** and Ricardo Gomes, Federal University of Vicosa, Brazil in organising the first ever major conference on public management in South America) and to enhancing academic contributions, as in the case of James Guthrie's (Macquarie University) visit in 2008 which resulted in **Jeacle** guest editing an edition of *Accounting, Auditing and Accountability Journal on Accounting and Popular Culture* (24, 4, 2012).

Collaboration has been extended via School faculty fulfilling visiting professorships at a range of leading international universities. These include **Armitage** (University of Sydney); **Danbolt** (Norwegian School of Management); **Quattrone** (Stanford, Copenhagen Business School, Bocconi, and University of Oxford); Rees (Baruch College); **Marshall** (University of Poitier); **Walker** (Paris Dauphine, University of Sydney). All of these invitations arose from the world-leading reputation of individuals in their subject areas, and several reflect longer-term and sustained collaborations, such as **Marshall's** involvement with Innes de la Ville (Head of Centre Européen Produits de L'Enfant, University of Poitier) which commenced at the first Child and Teen Conference (CTC) in 2004. This collaboration has resulted joint editorship of a special edition of *Journal of Consumer Behaviour* (2010), and in our School hosting the CTC conference in 2014.

In addition to the School Research Centres profiled in Section b, School faculty are active collaborators with several national and international research centres, including the **VOICE** Group (Voicing International Consumption Experiences) – **O'Donohoe** is one of the founders of this four-country network (UK, Ireland, Denmark and US) launched in 2006 to investigate cultural differences in transitions to motherhood and consumption. In addition to making a substantive contribution in the field, it has led to methodological advancement in understanding how interpersonal and cross-cultural dynamics influence the work of interpretive research teams.

ii. Editorial activities

Contributions to the research bases across the subject areas can be demonstrated by extensive editorial activity. During the REF period, School faculty were **main or associate editors** for the following journals: *Accounting and Business Research*, *Accounting History Review*, *Applied*

Statistics Series 3, British Accounting Review, Critical Perspectives on Accounting, Employee Relations, Environmental Modelling and Assessment, European Accounting Review, Financial Accountability and Management, Journal of Financial Services Marketing, Journal of the Operational Research Society, Organization, Public Management Review. Also during the REF census period, faculty served on 50 domestic and international **editorial boards** of international peer-reviewed journals. In addition, the research expertise and reputation of faculty has led to **Guest Editorial** contributions and collaborations across the range of subject areas, 17 special issues in Accounting and Finance, three in Entrepreneurship, two in Organisation Studies, four in Strategy and International Business and one in Management Science.

iii. Scholarly recognition

The research excellence of several faculty members has been recognised through prizes and awards: **Carter** (Winner of the Strategic Organization Journal So! Essay Award, 2013); **Danbolt** (Highly Commended Award Winner, Emerald Literati Network Awards for Excellence, 2013); **Eshraghi** (Highly Commended Award Winner, Emerald Literati Network Awards for Excellence, 2013); **Jeacle** (Highly Commended Award Winner, Emerald Literati Network Awards for Excellence, 2013 and Thomson Prize for best public research, University of Edinburgh, 2008); **Walker** - recipient of the Thomas J. Burns Biographical Research Award from The Academy of Accounting Historians, 2013 for outstanding biographical research in the discipline of accountancy. Sustained contributions to the research disciplines have been recognised by membership of learned societies. These include: **Carter** - appointed as Fellow of the Royal Society of the Arts (2011); **Clarke** – awarded academician status to the Academy of Social Sciences (2011) for his scholarly contributions, impact on policy thinking and leadership of BAM; **Crook** – elected a Fellow of the Royal Society of Edinburgh (2008); **Osborne** - award from the Public Management Research Association for his outstanding contribution to the field of Public Management (2011), and in 2012, he received an Honorary Fellowship from the International Research Society for Public Management; and **Quattrone** - appointed Fellow of the Bruce Initiative on Rethinking Capitalism at the University of California (2010). The academic significance and societal impact of research conducted by newer faculty has also been recognised through the appointment of **Bock** and **Hagendorff** as members of the RSE Young Academy of Scotland (2013).

iv. Agenda setting and capacity building

The School's focus on practically-relevant research has been recognised by requests to provide input into **employment and public policy** in the UK and beyond. Some examples include: **Bock** – advisory board member to the Scottish Institute for Enterprise (2010-13) and Expert Panel member of the Scottish Business Forum (2010-13); **Cooper** – sole academic panel member of the Queen's Award for Enterprise Promotion (2010-current); **Liang** - member of electricity pricing reform advisory panel of the National Development and Reform Commission in China; **Marshall** – member of Scottish Government's Food Security Think Tank (2009); **Tregear** – member of Expert Panel for DEFRA project 'Evidence to define the Sustainability of a Healthy Diet (2010-11). Building capacity in the business and management sector has been enhanced through **Clarke's** successful ESRC Researcher Development Initiative grant to BAM (£93k; 2007-10).

Expertise from faculty across all subject groups has also been instrumental in shaping future **national and international research agendas**, as illustrated by the following examples: **Archibald** - REF2014 sub-panel member for UoA19; **Clarke** – British Academy of Management Executive, President, Vice-President and Chair (2005-2010) and Association of Business Schools Executive Team Member and Chair of Research Steering Committee (2010-13); **Jeacle** and **Walker** – members of the peer review panel of the National Agency for the Evaluation of Universities and Research Institutes of Italy (the Italian equivalent of REF) (2004-10); **Harris** – Member of the Executive of the Academy of International Business, increased membership of UK and Ireland chapter from 160 to 300 between 2005-12); **Harrison** – ESRC seminar series commissioning panel (2011-12); ESRC evaluation panel member for Enterprise Research Centre Proposals (2012), ESRC Peer Review College Member (2009-); **Loretto** – invited contributor to MRC/ESRC Think Tank to shape Lifelong Health and Well-being programme call (2012); member of ESRC's advisory panel to evaluate European Joint Programme Initiative on 'More Years, Better Lives' (2013-15).