

**Institution: London Business School**

**Unit of Assessment: Business and Management (UoA19)**

**a. Overview**

The basic unit of faculty organisation is the subject area. There are seven subject areas, divided along natural disciplinary and functional boundaries widely recognised in the profession – Accounting, Economics, Finance, Marketing, Management Science & Operations, Organisational Behaviour and Strategy & Entrepreneurship. The subject area is the focus of faculty research activity: each has PhD students; organises a variety of research seminars, and puts on workshops and conferences, including some involving top-level practitioners. Members of a subject area, including PhD students from their 2<sup>nd</sup> year onwards, are located in close proximity to one another to encourage a collaborative research culture. Each area is chaired by a senior faculty member, normally on a three-year rotational basis. The chair is responsible *inter alia* for monitoring the research output of their faculty and takes a lead role in faculty recruitment. Subject area chairs are supported by a professional manager.

The School also has a number of research groupings – research institutes and centres – which provide a framework to facilitate collaboration between faculty within and across subject areas. They explore key global business issues and attract significant research funding from a variety of sources including Research Councils, Charitable Foundations, companies and philanthropists. They provide a way of supporting and showcasing our research in ways that capture the attention of and has an influence on business leaders and managers, public policy-makers and other researchers world-wide. These institutes and centres are designed to have a limited life span to reflect changing research priorities. Faculty may be members of one or more research institute or centre in addition to their subject area. There are currently four institutes and centres – the Aditya V Birla India Centre, the Centre for Corporate Governance, the Collier Institute for Private Equity and the Deloitte Institute of Innovation and Entrepreneurship.

**b. Research Strategy**

Since RAE2008 the School has undergone two changes of Dean and has re-articulated both its vision and research strategy. However, its fundamental research aims have not changed. The vision of London Business School is to have a profound impact on the way the world does business. In support of this vision, the School's research strategy is to undertake top quality research that will influence business leaders and managers, public policy-makers and other researchers worldwide. Thus the School (i) requires research to be oriented toward publication at the highest international level; (ii) requires findings to be disseminated effectively and (iii) expects its faculty to participate visibly in the wider community. Responsibility for achieving this strategy falls collectively on the School's faculty under the leadership of the Deputy Dean (Faculty) and the seven Subject Area Chairs.

The School's over-arching goal for the period under review was for each of its faculty groups to be among the world's leaders in terms of the quality and impact of their research. To achieve this it determined to: (a) focus on the retention and recruitment of faculty to attain critical mass in all subject areas; (b) keep its human resources policies under review with the aim of ensuring they were at least on a par with those of the world's other top business schools, with a particular emphasis on bringing teaching loads into line with those of our main competitors; and (c) actively continue to seek financial support for the School's research from both public and private sources, with an immediate focus on seeking private funds to support a number of endowed chairs.

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The School, in common with its main competitors, does not seek to impose a research agenda on the faculty: individual faculty are free to pursue their own research interests and set their own research agendas. The School, however, can and has established clear expectations of research performance, which it is able to influence through the research incentives and support it makes available to faculty. The research expectations of faculty at the School are very clear: all of the School's faculty are expected to be research-active; to publish their research in the top academic journals in their field and for their research to have impact on the relevant practitioner community.

The School can and does influence the overall research activity of the School through the organisation of the subject areas. At the time of RAE 2008, the School was on the point of some subject area reorganisation with the specific aim of creating research synergies. It had decided to transfer responsibility for the recruitment of tenured/tenure-track faculty in Entrepreneurship to related subject areas. Following a formal review of the Strategic & International Management subject area in 2010, it has been repositioned as the Strategy & Entrepreneurship Subject Area and now includes among its faculty a number who are actively engaged in the delivery of research in Entrepreneurship.

Throughout the review period trying to achieve and/or maintain critical mass within each of the subject areas has been a primary aim. We regard subject areas of less than eleven or twelve tenured and tenure-track faculty to be below critical mass: it makes it difficult to maintain a dynamic and diverse research environment, provide for the mentoring and development of junior faculty and also to attract new faculty. This is especially difficult where there are sub-groups within a subject area. The School has, through a combination of its best efforts and good fortune, been successful in recruiting a number of faculty with "tenure" to some of our smaller faculty groups. In particular, through the recruitment of senior faculty in both Accounting and Economics, the areas have been strengthened significantly. Three of the seven subject areas - Accounting, Marketing and Management Science & Operations - remain just below the critical mass threshold we have set and are therefore going to be a focus of our recruitment efforts going forward.

While the School has continued to be very active in the recruitment of faculty throughout the assessment period, we have not grown the faculty as fast as anticipated in our RAE 2008 submission. There are a number of reasons for this. The financial downturn of 2008 resulted in slower programme growth, which reduced the need to grow the faculty and, from a recruitment perspective, the sudden fall in the value of the pound against the US dollar at that time had a serious effect on our ability to recruit faculty, especially from the US. The risk associated with exchange rate fluctuations is somewhat mitigated by benchmarking the fees for the School's degree programmes against the dollar rates of our US competitors. Similarly, faculty salaries are benchmarked against those of leading US business schools. It nevertheless created a sense of uncertainty which impacted our success in recruitment. Our faculty have also continued to be attractive targets for other business schools so that retention has continued to be an issue. During the period since RAE 2008 several of our senior faculty were attracted elsewhere, including to other European and US institutions as well as to new or emerging business schools in other parts of the world such as INSEAD Singapore and Australia. Part of the reason for the loss of faculty is their research productivity: we do expect to lose faculty to other schools and see it as an inevitable consequence of our human resources policies for faculty which are geared up to incentivise research. It is also partly a consequence of our having a very international faculty. There are over thirty nationalities represented on the faculty, of which 47% are non-EU nationals. Many of these individuals do not have strong ties to the UK and some are therefore susceptible to attractive offers

made by other schools outside the UK.

To help both recruit and retain top faculty it has been essential to keep our human resources policies under constant review and ensure that the research environment of the School is on a par with those of our main competitors world-wide. Since RAE 2008 chief among these has been a reduction in teaching loads for all faculty. In the last assessment period we drew attention to a number of measures that had been taken to reduce the teaching loads of untenured faculty. However, benchmarking data and information obtained from prospective hires showed there was a need to review teaching loads at the School as a whole. However, partly on grounds of cost and partly because we have wanted to reduce the teaching loads of those who would benefit the most, the largest reductions have been made to the teaching loads of untenured faculty. Thus in 2009/10, the teaching loads of all research-active faculty were reduced by 5% and in 2011/12 the teaching loads of research-active untenured faculty were reduced further so that they were 15% lower than in 2008/9. This remains an important element of our HR policy and the School will continue to make further reductions in teaching loads as and when it can afford to do so.

During the period under review the School has had appreciable success in raising financial support for the School's research. At the time of the last review, we anticipated that the School would receive a number of endowed chairs and in the event it has received funding for three of these in the past six years: the Tony and Maureen Wheeler Chair in Entrepreneurship, the Sir Donald Gordon Associate Professorship of Entrepreneurship and Innovation and the Deloitte Chair of Innovation and Entrepreneurship. In addition, the Faculty Directors of the Research Institutes and Centres have worked successfully with the School's Advancement department to obtain research funding from individual philanthropists. Both the Aditya V. Birla India Centre and the Collier Institute for Private Equity have received significant funds in this way. The School has also established a new Institute in Entrepreneurship and Innovation, funded by a multi-million pound sponsorship arrangement and gift from Deloitte. In total the School's Institutes and Centres have received income of just over £8.5 million in the review period. These funds have bought out faculty time for research and have been used to support individual research projects. Given the challenges of recruiting and retaining top faculty, and our aim of reducing teaching loads, the ability to obtain private funding to support faculty's research has been very valuable in the period under review.

Looking forward, the School will be maintaining its focus on recruiting and retaining a top quality faculty, with a view to achieving critical mass in each of its subject areas, who can deliver both teaching and research. We are currently reassessing our faculty growth plan in the context of the School's overall corporate plan, the needs of our programme portfolio and the need to further enhance the School's research environment in order to remain competitive for world-class scholars. We are therefore revisiting the current balance between core (tenure, tenure-track and management practice faculty) and non-core faculty (adjuncts, teaching fellows, visiting faculty and bought-in teachers) in the delivery of teaching, especially on executive programmes.

The subject areas will continue to be the main organisational unit, complemented by the research institutes and centres, as described above. The subject areas are monitored (a) on an annual basis by the Dean, the Deputy Dean (Faculty) and the Director of the Research & Faculty Office and (b) as part of a rolling programme of 5-6 yearly reviews involving an internal committee of senior faculty, chaired by the Deputy Dean (Faculty) as well as two external assessors. The Research Institutes and Centres are monitored regularly by the Research Centre Review Committee, chaired by the Deputy Dean (Faculty).

In regards to priority funding areas for the School moving forward we intend to continue to build on our success in European Research Council grants by supporting our faculty in obtaining awards under the new Horizon 2020 Work Programme which will support our faculty in reducing their teaching loads to focus on their research. In addition we aim to increase our funding from the UK Research Councils by focusing on submitting proposals with emphasis on behavioural research. The recent newly created Behavioural Research Lab will also support this strategy from an infrastructure perspective.

Through the School's Institutes and Centres we will continue to support interdisciplinary research and seek to identify new funding options. We are currently in the very early stages of developing a small number of new research institutes including one in Leadership and another in Asset Management. Both reflect the research interests of a number of faculty across two or more subject areas. Faculty champions have been identified to take the lead in formulating a research and outreach agenda for each of them and to work with the School's Advancement department to develop a case for support with a view to raising external funds to support their activities.

### **c. People**

#### **(i) Staffing strategy and staff development**

The School seeks to grow and maintain a faculty of international standing and it is willing to recruit faculty at all levels. However, its main focus is on the recruitment of junior faculty (i.e. untenured Assistant Professors) into all subject areas who have been trained on the PhD programmes of other leading schools and from which the School aims to "grow its own" senior faculty. This is supplemented by opportunistic hiring of senior faculty (i.e. tenured Associate Professors and full Professors) as and when occasion presents or when a need is identified through the formal review processes which all subject areas undergo periodically.

Top-quality faculty are a scarce resource and the School competes with other top business schools world-wide for the best faculty. In 2013 the core faculty (tenure-track, tenured and management practice faculty) stands at 98.83 full-time equivalents. This compares with a faculty of 89.83 full-time equivalents at the census date for RAE2008. With faculty turnover in the range of 8-9 per cent per year, the School needs to hire 8-9 faculty each year just to remain at a constant size, and more than that if it is to grow. As stated in 2008, the intention was to continue on a growth trajectory to achieve critical mass in all subject areas. However given the comparatively slow growth in recent years, we have yet to achieve this in each area.

During the period under review the School has recruited 57 new faculty. Of these the following 17 were appointed with tenure: Scott Richardson and Irem Tuna in Accounting; Emre Ozdenoren, David Myatt and Lucrezia Reichlin in Economics; Joao Gomes, Christopher Hennessy, Ralph Koijen and Alex Edmans in Finance; Rajesh Chandy and Oded Koenigsberg in Marketing; Kamalini Ramdas, Jeremie Gallien and Sergei Savin in Management Science & Operations; Daniel Cable in Organisational Behaviour and Gary Dushnitsky and Sendil Ethiraj in Strategy & Entrepreneurship. We also recruited 40 Assistant Professors/untenured Associate Professors.

There have been 44 departures during the period under review and 24 of these have been at the assistant professor rank. Most of this turnover is either because of a failure to achieve the high standards for tenure at the School or because they have moved to another institution before they have had to come up for tenure so they could extend or re-start their tenure clock.

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The on-going recruitment of new faculty has allowed the School to continue to raise the quality of each of its faculty groups. In the period under review, all the “rookie” assistant professors have been recruited from other top business schools and many have already begun to publish successfully in the top academic journals in their field. Thus, some 40% of the junior faculty who are counted as “early-career researchers” are able to exceed the minimum research output requirements of REF14.

All of the School's current core faculty (tenure-track, tenured and management practice faculty) have either standard contracts of employment or contracts “with tenure”. The School only uses fixed-term contracts in very limited circumstances, i.e. when first recruiting management practice faculty and when recruiting research assistants/research fellows whose positions are funded by external research grants. As at 31 October 2013, the School has only 4 research assistants/research fellows on fixed term contracts, none of whom are eligible for inclusion in the School's REF submission. Subject areas do not normally recruit researchers on fixed term contracts unless they are required by a faculty member to collect and/or manipulate large amounts of research data, choosing instead to focus on the recruitment of tenure-track faculty able to pursue their own research independently. The School has only one faculty member who holds a joint appointment with another institution: Professor John Roberts, who is employed one-third time by London Business School and two-thirds time by the University of New South Wales in Australia. The School has no category C staff.

The demographic profile of the faculty against the diversity criteria on which data is currently collected is as follows:

- (i) Age: approximately 70% of the faculty are below the age of 45 and only about 15% are aged 56 or older, including more than 5% who are over the age of 65;
- (ii) Gender: approximately 77% of the faculty are men;
- (iii) Ethnicity: 20% of faculty are from ethnic minority groups.
- (iv) Disability: None of the faculty have declared themselves disabled.

The School therefore has a relatively young faculty who are highly research-active. In addition there are a small number of older faculty who, following the withdrawal of a statutory retirement age, have chosen to continue to work beyond the age of 65. They, too, are incentivised by the School's HR policies, to continue to conduct and publish high-quality research. In terms of the overall balance of the faculty between Assistant, Associate and full Professors, the ratio between these groups has remained roughly constant since RAE 2008. At the census date it is 41:18:42. While the School still has a considerable way to go to achieve parity in the employment of men and women, a recent benchmarking exercise has confirmed that its current gender balance compares favourably with its main competitor schools world-wide.

The Diversity Working Group drives the continuing development and recognition of diversity within the School and reports directly to Management Board which has overall responsibility for diversity issues at the School. A number of diversity objectives have recently been agreed. Two of these focus on encouraging subject areas to identify top quality recruits who are either women or from black and ethnic minority groups.

The School has a distinct set of human resource policies for its faculty which are designed to support and reinforce its research culture. Faculty are assessed against four performance criteria: research, teaching, internal contribution and external visibility. These four criteria are used in each

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of the reviews conducted of faculty: annual/salary reviews, periodic performance reviews and promotional reviews. Of the four, research has the greatest importance. The School amended the criteria for the award of tenure with effect from the 2011/12 academic year so that to achieve promotion to Associate Professor with tenure, faculty have had to be assessed as being very good in research and at least good on the other three criteria. Previously faculty had been required to be assessed as very good in either research or teaching. To be promoted from Associate to full Professor, faculty have to be assessed as being excellent in research. It has recently been agreed that in making promotions to full professor, while consideration will be given to a candidate's entire research record, a special emphasis will be given to both what the candidate has achieved post-tenure and to the impact of the candidate's pre-tenure work.

The research expectations of faculty are clear: they are expected to conduct high quality, original research of international standing on issues with a strong managerial focus, relevant to the School's objective of raising the standards of management and adding to knowledge about business and management. Faculty are expected to be output oriented and to disseminate their findings internationally through traditional academic outlets, especially top refereed journals. Research output must satisfy the rigorous standards of the international peer review system, be broadly disseminated and have real impact and influence on other researchers, public policy and the business community world-wide.

Faculty are strongly encouraged and also incentivised financially via a research active salary supplement (worth 2/9<sup>th</sup> of base salary for Assistant and Associate Professors and 1/9<sup>th</sup> of base salary for Professors) to publish in the highest quality and impact outlets than go for a higher volume in lesser journals. Each subject area has a small number of world-class high-impact academic journals (usually no more than 4) which are designated as A journals. Each also nominates a short list of practitioner (P) journals and a number of top quality specialist field journals (S journals) that are also considered top journals for its scholars. Award of the research active salary supplement is dependent upon publication in these journals. Publication in the A and S journals is also a prerequisite for faculty seeking to obtain tenure at the School.

Assistant professors recruited from other Schools' PhD programmes have seven years in which to come up for tenure. They have only one opportunity to do so and if they fail, they are required to leave the School. They are permitted one further year for job search. In considering individuals for promotion to tenure, the School requires eight external letters of reference from senior faculty of international standing in their field. There are very limited grounds for allowing extensions of the tenure clock, the main ones being family or health grounds. Roughly 40 per cent of the untenured faculty who join the School achieve tenure. The other 60 per cent will either fail to achieve tenure or will leave the School prior to the tenure decision. The tenure system gives faculty clear guidance about the School's research expectations and provides reassurance that the School is permanently committed to giving high priority to world-class research.

The School provides a framework, opportunities and funding to help all faculty actively steer their own professional development. This consists of a wide-range of in-house and external activities supporting research, teaching and overall career development. The activities supporting research include:

- Mentoring: all new untenured faculty are assigned a mentor within their subject area, nominated by the subject area chair, to provide advice and support in the delivery of both

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teaching and research. An important role of the mentor, in terms of research, is to help guide them through the process of journal selection, manuscript submission, review, revision and acceptance.

- Professional Development Plans: All Assistant and Associate Professors are expected to devise formal professional development plans with their area chair as part of the annual review process and to report on progress at their next annual review.
- Induction Day: all new faculty are required to attend an annual induction programme, led by the Deputy Dean (Faculty) and focussing on teaching and research.
- In-House Professional Development Seminar Series: these are usually led by a small panel of senior faculty and focus on teaching (e.g. an introduction to executive teaching) or research (e.g. ERC funding and how to apply, PhD supervision).

An important feature of this portfolio is that it is not imposed on individual faculty: they are encouraged to avail themselves of those opportunities which they and/or their mentor/ subject area chair consider to be valuable for them. Equally, if individuals have needs that are not being met through the portfolio, they can raise this with the Research & Faculty Office which will endeavour to source something suitable. The School spends about £70,000 per annum on these activities.

Early-career faculty are given the time and space to focus their energies primarily on teaching and research. Those recruited straight from PhD programmes elsewhere are given significantly reduced teaching loads in their first two years in the School. Subject area chairs are also encouraged to construct efficient and flexible teaching timetables for all faculty so they are able to devote significant blocks of time to research. The School has also embarked on a long-term plan to reduce the teaching loads of all faculty to 75% of what they were in 2008; and in the case of untenured faculty has already reduced their loads to 85% of what they were previously. Moreover, few demands are placed on the untenured faculty by way of internal contribution, such activity normally being confined to engaging with faculty recruitment in their subject areas, attending area research seminars, attending Faculty Board and a small number of annual events in the School. Faculty are only expected to engage more fully on this criterion post-tenure.

The School does not have a formal sabbatical policy. However, faculty are permitted to take a leave of absence on full pay for a term if they are able to deliver their annual teaching load in the other two terms of the year. Faculty can also over-teach to fund a sabbatical of up to one year in later years. Over the period since RAE2008, a total of 38 faculty have taken a term's paid leave on this basis. The take-up has been split evenly between tenured and tenure-track faculty. 16% of those opting for a period of leave have been women.

The School permits untenured women faculty a one-year extension of their tenure clock for each period of maternity leave taken. In 2011 with the introduction of additional paternity leave for men, it was agreed to consider requests for extensions of the clock for men who choose to take a period of additional paternity leave of between 18 and 26 weeks. The School does not extend the tenure clock for a leave of absence.

The following are among the prestigious/competitive personal research fellowships that have been held during the period:

**Economics:** Malherbe, the Lamfalussy Fellowship of the European Central Bank, 2013; Pappaionnou, Young Economist Prize, European Investment Bank 2013; Portes, appointed to Comite d'Honneur, Centre des Professions Financieres, France, 2008; Rey, Fellow of the British Academy, 2011, Inaugural 2012 Birgit Grodal Award and 2013 Yrjo Jahnsson Prize; Surico, Philip

Leverhulme Economics Prize 2011.

**Finance:** Hennessy, Finance Rising Star Award, 2010 by Rensselaer and Stern Business School;

**Strategy & Entrepreneurship:** Julian Birkinshaw, Fellow, Academy of International Business 2008 and Fellow, British Academy, 2012; Gary Dushnitsky, Strategic Management Society Emerging Scholar Award 2013.

### **(ii) Research students**

The mission of the School's PhD Programme is to educate excellent researchers who will be sought after in the world's leading business schools, universities and research institutions.

The programme enhances the intellectual life of the School and our faculty are committed to providing and participating in a full range of intellectual activities, including seminars, workshops and informal discussion about research. A thriving PhD Programme is of paramount importance to our faculty and a major factor for many in choosing to work at the School. There are currently around 70 students at various stages of completion and this number may increase in line with faculty growth. We emphasise quality over quantity. From an applicant pool of around 400, 15-17 students are admitted each year across our seven subject areas. The programme constitutes a major investment in the future of management teaching and research, costing the School around £3m per annum of general funds, most of which is spent on student scholarships and research training.

The PhD Programme at London Business School is led by a senior member of faculty who acts as Chair of the PhD Committee, consisting of PhD Coordinators from each of the seven subject areas, and the administrative director of the Programme. The PhD Committee maintains the academic quality of the programme by overseeing admissions, approving student transfers from MPhil to PhD status, appointing thesis examiners, guiding policy and curriculum, and reviewing completion and attrition rates and placement outcomes. The programme has a Code of Practice prescribing both formal and informal processes for selecting, monitoring and supporting students, overseen by a centralised PhD Programme Office. The PhD Programme Office has an open door policy, offering pastoral and administrative support to the students, guiding them through their key milestones.

During the first two years of the PhD Programme students pursue rigorous coursework in qualitative and quantitative methodologies as well as discipline-specific pedagogy. Students who successfully complete the coursework component and a second year research paper are awarded a Masters of Research degree. Within a further nine-month period students are then required to transfer from MPhil status to PhD on the basis of a panel examination of their thesis proposal. Successful students go on to complete their thesis within 18-24 months. Students typically take around five years to complete the degree.

Throughout the programme students are provided with opportunities to develop a range of skills. Due to the small size of our classes non-academic skills training is integrated into many of the core courses (critiquing, giving and receiving feedback, presenting, and leading discussions are assessed components). We have introduced an annual presentation skills workshop, and students also have access to a professional coach for 1-1 feedback on their presentations. All new students take an Inter-Cultural workshop at Orientation. We also provide resources for students to take courses for improving their writing skills (e.g. at UCL).

In 2011 the PhD Programme was accredited by the ESRC as a Doctoral Training Centre (DTC), and is the only small, specialist institution of the 21 DTCs. The research undertaken at London

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Business School encompasses a broad range of social science. This is reflected in the diverse academic backgrounds of our faculty, and although they are not grouped under traditional social science disciplines, our subject area structure facilitates and encourages collaboration and interdisciplinary research. The PhD Programme is fully integrated into the School's subject areas and research centres, allowing students to move freely between different types of research and receive a broad training that extends beyond the limits of their own specialism. The School is committed to conducting relevant research which will have impact on the practice of business and management world-wide and influence policy makers, strategists and leaders.

Our students have also been successful in winning competitive scholarships from AXA. In each of 2009, 2010 and 2011 an LBS student was among the 20% of applicants awarded one of these generous scholarships (the competition has since been disbanded).

The School hosts the highly successful Trans-Atlantic Doctoral Annual Conference, now in its 14th year, and attended by approximately 120 PhD students from leading UK, European and US institutions. This is a student-led initiative and the conference has regularly received sponsorship from the Society for the Advancement of Management Studies. During the conference, students present their work to this unique audience, meet faculty and discuss current research ideas, methodologies, and career issues. The informal networks they promote are often a prelude to collaborative research relationships with other scholars.

Our placement record is the ultimate test of success and in the past five years, students have obtained positions at leading business schools, including: Columbia Business School, Columbia University; Darden School of Business, University of Virginia; Rotterdam School of Management, Erasmus University; HEC (Paris and Lausanne); INSEAD; London School of Economics and Political Science; Maryland Business School; Stockholm School of Economics; Tilburg School of Economics and Management; University College London; Warwick Business School; Yale School of Management.

We have returned a total of 47 graduates from the PhD programme to HESA for the five academic years 2008/9 to 2012/13 (the same number as has been submitted to REF2014). However, due to an administrative error, only 5 of the 12 graduates in 2011/12 were reported to HESA for that year. The 7 missing graduates were therefore added to our HESA return for 2012/13 (showing their original 2011/12 graduation dates).

**d. Income, infrastructure and facilities****(i) Research Funding**

The School invests a significant amount of its own funds directly in the support of faculty research as follows:

**Individual Faculty Budgets:** The School positively encourages collaborative research and all tenure-track, tenured and management practice faculty receive an individual faculty budget, currently worth £7,350 per annum, which can be used to cover research collaboration costs (i.e. travel and accommodation expenses), conference attendance, research assistance and IT resources. Faculty are strongly encouraged to use these funds to support conference attendance and to work with their co-authors, and a significant proportion of the funds are spent in this way.

**Research & Materials Development Fund:** The School sets aside funds to support individual

awards to help stimulate faculty's research. The budget has increased from £350,000 in 2006/7 to £525,000 today. Faculty are invited to submit bids for up to £15,000 of research funding each year. It is designed to help junior faculty in particular who, in many other universities are forced to spend considerable amounts of their time writing grant applications with uncertain outcomes. Priority is given to new and early career faculty, and to applications that are interdisciplinary, international or technologically innovative. The awards provide seed corn funding for projects at an early stage of development or where there are no obvious alternative funding opportunities.

In addition, the research institutes and centres provide a further source of internal research funding for faculty. During the period under review, the M-Lab (folded into the Deloitte Institute in 2011), the Deloitte Institute for Innovation and Entrepreneurship and the Collier Institute for Private Equity awarded more than £500,000 of internal research grants to faculty. Bids for these funds have to fit with the research interests of the relevant institute or centre, and be of high quality. Some institutes require the research to be judged to have a high probability of being published in a top academic journal. Awards range in value from as little as £100 to £25,000 but most will be in the range £10,000-£12,000. Most of the awards cover direct research expenses (e.g. data, casual RA, reasonable travel costs). The bid processes, although relatively light touch, are competitive and a number get rejected. The Directors of the Institutes and Centres consider the funds to be well-utilised, and they have frequently helped faculty achieve publication in top journals. From the faculty perspective the application process is simple and assured of a relatively speedy outcome.

Faculty - mainly more senior faculty - who require significantly larger amounts of research funding are encouraged to work with the School's research support team in the Research & Faculty Office to identify suitable external grant funding opportunities and develop their research grant applications. During the period under review only two faculty who were untenured at the time, (Vasvari from AXA and Boudreau from CIGREF (see below)) received grants from an external award-making body

The European Research Council grants have proved particularly attractive to our faculty because of the opportunity they provide to buy out some of their teaching time for research. Six awards have been made during the review period to a total value of €5,557,831 as follows: (i) Rey was awarded €1.34 million for a five-year programme entitled "Countries' external balance sheets, dynamics of international adjustment and capital flows"; Puranam received €378,000 for a three-year programme "The Foundations of Organization Design"; (iii) Pavlova was awarded €925,910 for a five-year programme on "Institutional Frictions in International Finance and Asset pricing"; (iv) Surico was awarded €698,945 for a four-year programme on "Macroeconomic Dynamics with Heterogeneous Agents"; (v) Tuna was awarded €1,110,980 for a five-year programme on "Corporate Governance"; (vi) Hennessy was awarded €1,103,996 for a four-year programme on "Dynamic Structural Corporate Finance: linking Theory and Empirical Testing". In July this year Koijen was awarded €1,077,765.32 for a five-year programme on "Empirical Macro-Finance and the Financial Economics of Insurance Markets" to begin this autumn.

Research grants have also been received during the period under review as follows: (i) Bunn was awarded £129,966 from the UKERC under its collaboration programme for a project on "An Options Approach to UK Energy Futures" with Siddiqui of University College London; (ii) Bunn was awarded £338,644 from the ESRC, with additional support from the Department for Business, Enterprise & Regulatory Reform and the department for the Environment, Food and Rural Affairs for a two-year programme on "Modelling the Evolution of Climate Change Policy Uncertainty on

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Electricity Investment Incentives and Risk”; (iii) Bunn was awarded €209,000 via the Marie Curie European Fellowship Scheme for a programme on “Auction and Day-Ahead market Spikes”; (iv) Ramdas was awarded £40,248 under the ‘Innovation Research Initiative’ scheme co-funded by the Department for Innovation, universities and Skills, the ESRC, NESTA and the technology Strategy Board; (v) Scott was awarded £329,320 by the ESRC for a three-year programme on “Government Debt Management”; (vi) Franks was awarded £63,573 from the ESRC’s Follow-On Fund for his work on Corporate Governance; (vii) Jacobides was awarded two grants totalling £45,200 from the Advanced Institute of Management Research for his work on business turnarounds during the economic crisis; (viii) Vasvari was awarded €82,000 from the AXA Research Fund for a project on “Covenants in Private and public Debt Contracts and Their Effects on Corporate Performance”; (ix) Boudreau was awarded €70,000 from CIGREF.

In line with the School’s strategy for supporting institutes and centres, the School’s Advancement department has been working pro-actively with faculty to secure philanthropic donations to support their research. The School has established a small committee – the Academic Fundraising Priorities Committee, comprising senior faculty and staff to help identify and prioritise the School’s fundraising activities in the context of its overall strategic objectives. As noted earlier, the institutes and centres have received more than £8.5 million for research in the period under review.

Faculty are required to publish their work in the top academic journals irrespective of the source of the research funding, i.e. whether it has been funded by R&MD monies, funds from the School’s research centres and institutes or external grant-awarding bodies and the research outputs submitted to REF14 attest to this.

**(ii) Infrastructure and facilities**

There are three main elements of physical infrastructure support of the research environment: the Library, IT infrastructure and the Behavioural Research Laboratory.

The School has received £3,000,000 from HEFCE to support capital investment in the period under review. These funds have been used to support:

- A new Behavioural Lab creating a cutting-edge facility which offers a combination of open space computer lab; flexible rooms for computer studies, discussion room and cubicles.
- Renovation of several floors in the A-Wing and Sainsbury building to create individual faculty offices and open plan offices for Research Centres to provide optimum facilities for their work.
- The upgrade of the school’s core network to deploy a resilient 10G core network upon a standard core–distribution–edge model to support the School’s growing requirements for high bandwidth and scalable network infrastructure.

The School’s Library is one of the best business libraries in Europe. Whilst continuing to offer a large business and management book collection of 25,000 titles and a dedicated financial dataset lab on site, the Library is now implementing a move to e-only strategy. A major digitization project of its significant corporate annual reports collection is nearing completion offering enhanced researcher access as part of a growing and well used e-Library of 22,000 e-journals, 5,000 e-books and 69 datasets with associated search systems. The Library has an annual information resources budget of just under £1 million which places it in the upper quartile of North American

**Environment template (REF5)**

and European business school libraries in terms of resource expenditure. The latest library TRAC return for 2011/12 shows that 65% of library staff time is allocated to the support of faculty research and 75% of the Library budget is spent providing resources for faculty research.

Maintaining an up-to-date IT infrastructure is very important to the School's research, particularly in facilitating collaboration with researchers at other leading schools. To help ensure a closer alignment between their needs and the IT department a new IT faculty group was set up in 2012/13 with a primary focus on identifying how new technologies provide opportunities for enhancing our teaching and research.

In the 2012/13 academic year, in direct response to demand from the growing number of behavioural researchers employed by the School, the Behavioural Research Laboratory was relocated and its capacity significantly increased. The new Lab is now able to accommodate 100 + participants a day, while previously the maximum number of participants was 30. The equipment in the Lab has also been up-dated and now includes an eye tracker and physiological measurements. In addition the staffing of the lab has increased to three full-time employees; a lab manager and two lab assistants.

In 2010 the School also established its own Research Ethics Committee (prior to that it had had an arrangement with the London School of Economics) in response to the growth in the number of behavioural researchers which necessitated its own apparatus for ethical reviews and approvals to ensure that research involving human participants or the use of personal data at the School – whether undertaken by faculty, staff or student researchers - was undertaken in conformity with the law and in accordance with best practice. At the same time the School reviewed and updated its research ethics policy, code of practice for research and procedures for the investigation into allegations of research misconduct. The Research Ethics Committee and the associated policies and procedures conform to ESRC and UKRIO guidelines for the establishment of research ethics committees within a university setting and the practice of good research conduct.

The School provides dedicated office space and communal areas for its PhD students, which support their integration, mutual support and interdisciplinary awareness. In the first year of the programme the students are located together, close to the PhD programme office. In later years they are located within their subject areas to enhance regular contact with their supervisors and other faculty so they can participate fully in the life of their subject area.

**(iii) Other support for the research environment**

The School allocates a small sum of money to subject areas each year (about £25,000 in total) so that they can run seminar series. They invite leading scholars from other top business schools to present their research and to spend time with the area's faculty discussing their latest work.

The School has also created a Research Fund, built up from the School's fundraising activities, to which subject areas are able to bid for funds primarily for the following three main purposes: (i) support for visiting faculty; (ii) support for academic conferences being hosted at the School and (iii) the award of internal faculty chairs/associate- and assistant- professorships. The ability to bring in distinguished academics as visiting faculty is positively encouraged, as is the hosting of some of the top academic conferences. For example, the annual Accounting Symposium has played a key role in raising the profile of the Accounting group and in bringing potential recruits into the School. The Marketing subject area is similarly currently planning to host a number of top-level conferences at the School in the next 6-18 months.

### e. Collaboration and contribution to the discipline or research base

#### (i) Interdisciplinary research and arrangements to support interdisciplinary or collaborative research

The School's research institutes and centres foster and support interdisciplinary and collaborative research across faculty in different subject areas as well as networking with national and international researchers and organisations and promoting links with governments, business leaders and industry world-wide. Examples include:

- (i) Ramdas, under the auspices of the Deloitte Institute for Innovation and Entrepreneurship, together with the Centre for Health Leadership & Enterprise and the Judge School, Cambridge, and funded by ESRC/UK-IRC, hosted a high-profile invitation-only conference in 2010 on innovation in healthcare delivery which brought together senior healthcare professionals and academics at an international level. It focussed on the role of healthcare leaders in stimulating and implementing innovation in the delivery of healthcare, including a new framework for identifying such innovations based on new research carried out by faculty at the School;
- (ii) Franks, under the auspices of the Centre for Corporate Governance, has hosted a wide range of events featuring his research on corporate governance.
- (iii) Cornelli, under the auspices of the Collier Institute for Private Equity, co-hosted a symposium with the Hong Kong Venture Capital and Private Equity Association in Hong Kong.

#### (ii) Evidence of national and international academic collaborations including indicators of their success

Almost every faculty member at the School has one or more international research collaborators. Evidence of the success of these collaborations can be found in the many high-quality co-authored research outputs listed in the School's submission, a significant number of which have been awarded best paper awards and other accolades. Faculty are able to use their individual faculty budgets, their awards from the School's Research & Materials budget and funds from external grants to facilitate on-going collaboration with their co-authors.

Faculty collaboration with scholars from other schools, both nationally and internationally, is also facilitated by vibrant seminar series where distinguished speakers present their work and form associations with our faculty. These seminar series are typically arranged at the subject area level but sometimes they are organised on a joint basis, e.g. by OB and Marketing areas or Economics and Finance. Annual conferences organised by different subject areas (such as the annual Accounting Symposium and the Finance Summer Symposium) also facilitate international collaboration.

As mentioned above, the School supports these seminar series by providing funding for short visits by distinguished scholars, a number of which have resulted in successful collaborations with members of our faculty (e.g. Tory Higgins, the distinguished social psychologist from Columbia university with Xi Zou of the Organisational Behaviour Subject Area).

On a larger scale, the Global Entrepreneurship Monitor (GEM) (Hay is Director) is the largest entrepreneurship research project in the world. It currently comprises 150+ researchers working in 55 countries. It has had a major impact on public policy in a number of countries. E.g. In the UK GEM's key indicator "total early-stage entrepreneurial activity" is now one of the Government's competitive indicators and is included as a target in the public sector service agreements for the regional Development Agencies.

### **Journal editorships and conferences**

A number of faculty hold or have held senior editorial roles at some of the top journals including the following during the review period: *Review of Accounting Studies* - Richardson and Shivakumar; *Journal of Applied Econometrics* –Reichlin; *AEJ: Macroeconomics* – Rey; *Economic Policy* – Portes; *International Journal of Central Banking* – Rey; *International Journal of Finance and Economics* – Rey; *Economic Journal* – Myatt, Scott; *Journal of Economic Theory* – Myatt; *Journal of Finance* - Servaes, *Review of Corporate Finance Studies* – Hennessy; *Management Science* – Ramdas; *Manufacturing and Service Operations Management* – Gallien; *Organization Science* – Dushnitsky; *Organizational Behaviour and Human Decision Processes* – Pillutla; *Strategic Entrepreneurship Journal* – Dushnitsky; *Strategic Management Journal* - Ethiraj.

The School supports faculty who take on senior editorial roles at top academic journals by the award of £7,500 per annum into their individual faculty budgets. The funds are intended to support faculty members in carrying out their editorial duties and may be used to purchase casual research assistance or for other research purposes.

In addition our faculty are represented on the editorial boards of many of the top journals and a number have received excellence awards for the work they do on these boards (e.g. *American Economic Review* – Ozdenoren; Referee of the year; *Review of Financial Studies* – Gomes; Academy of Management, Outstanding Reviewer Award, 2009 and 2012 – Vermeulen.)

### **Contribution to professional association, learned societies and funding bodies**

Most faculty are in membership of their professional association and some will take on organisational roles within them (e.g. council members, executive committee membership). In addition most of the faculty have served on programme committees, scientific committees, best paper committees, and session chairs in conferences held by these associations. For example:

- (i) Officers in professional associations: Gallien, Vice-President of Meetings and Communications for the Manufacturing & Service Operations Management Society of INFORMS, 2012/13; Pavlova, Director, European Finance Association, 2012 - present; Scott, Royal Economic Society Executive Committee and Council, 2004 to date.
- (ii) Awards Committees: Pillutla, Best Paper Committee, Chair, Administrative Science Quarterly, 2012; Cable, Association of Management innovative student paper award committee, 2011; Cornelli, FARFE Committee member for 2011 Ross prize.
- (iii) Chair of Programme Committee: Basak, American Finance Association Meetings track chair, 2009-12; Hardie, EMAC Conference, Co-Chair, marketing Research and Research methodology in 2010 and 2012; Surico, Royal Economic Society Annual Conference, deputy Chair, 2013. .

Pavlova and Vilcassim have served as members of the ERC's starting grants panel and Rey has served on the ERC's advanced grants panel.