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## **Research in UK universities: a tale of two subjects - Economics and Econometrics; and Business and Management Studies<sup>1</sup>**

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### **Abstract**

This paper explores the comparative performance of two subject areas in the UK national Research Assessment Exercises of 1992, 1996, 2001, 2008 and the Research Excellence Framework of 2014. The subject areas or Units of Assessment as they are called in the exercises are Economics and Econometrics, and Business and Management Studies. Given the wide range of disciplines in the Business and Management Studies unit universities have the choice of submitting their economics and econometrics research either to it or to the Economics and Econometrics unit. Over the period 1992 to 2014 the number of universities entering the Economics and Econometrics unit declined significantly in contrast to the growth in the number submitting in the Business and Management Studies unit. The reasons for this include the finding that university managers were more likely to tolerate poor performance (measured by internal and external gaps) in Business and Management Studies than in Economics and Econometrics. Considerable differences were found between old (pre-1992) and new (post-1992) universities, with Economics and Econometrics now solely the domain of old universities as new ones have withdrawn. In sharp contrast, Business and Management Studies has a good balance of old and new universities.

### **Key words**

Research evaluation, RAE/REF, gaps, stratification, UK universities, decision-making.

### **Introduction**

Senior university managers have the onerous task of allocating resources to the many activities carried out in their institutions, the two most important of these being teaching and research. Decisions on the broad direction of what to teach and research may be made by senior managers but those relating to research are often made by individual academics.

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Facing limited resources, even the largest and wealthiest universities have to make such decisions about teaching and research that can disappoint groups that do not receive support. To be most effective, universities should put resources into those areas of teaching and research where they have an absolute or comparative advantage over other universities.

The relationship between research and teaching in higher education has become an increasingly popular research topic over the last twenty years or so (Tight, 2016). The concerns are normally about how the two are linked, most often how research influences teaching but also, though much less often, how teaching influences research (Robertson, 2007). But here the interest is whether research and teaching programmes coexist. The evidence is that universities that submit research in a subject also teach it but it is not necessarily true that universities that teach a subject will do research in that subject.

One subject that has traditionally been taught in old universities is economics. In new universities, while economics may be available, business studies or business management are more likely to hold sway. In new universities, economics is more likely to be taught as a part of joint or minor degrees. In economics research, the picture is even more polarised with the vast bulk of economics research being done in old universities. In the Research Excellence Framework (REF) of 2014, twenty-eight old universities entered their research for evaluation in the Economics and Econometrics (E&E) unit of assessment (UOA) but there were no entries from new universities. This does not mean that economics research is not done in new universities but that any such research deemed to be of the requisite quality may be entered in a UOA such as Business and Management Studies (B&M). The REF of 2014 was the most recent example of the series of formal research evaluation exercises (REEs) that began formerly in the UK in 1992. Such exercises now regularly take place in many countries including Australia, Denmark, Italy, New Zealand, Norway, Poland and Spain (Geuna and Martin, 2003; Hicks, 2012). The UK Research Assessment Exercises of 1992, 1996, 2001, and 2008 and the Research Excellence Framework of 2014 have guided research funding bodies in awarding funds on the basis of the quality and quantity of research assessed in REEs. As a result, REEs have become a pervasive and permanent feature of the UK research landscape and, without doubt, they have had a profound effect on research activity in UK universities (Rebora and Turri, 2013). Universities are assessed every few years on their research quality by peer review with good results bringing continued funding and bad ones sometimes leading to programme closures and job losses (Johnston, Reeves and Talbot, 2014).

Before the advent of REEs, funds were distributed on an informal basis (Martin and Whitley, 2010). The regime where funding depends on the quality of research began in the early 1980s

and this theme has continued and been further reinforced with research excellence becoming the main determinant of the level of funding. In the REEs, research is submitted by universities in different UOAs and the number of UOAs remained pretty stable at around 70 over the period 1992 to 2008 until it was reduced in 2014 to 36, achieved by combining some UOAs and retitling many. As would be expected, large universities enter many more UOAs than small ones. Older, research intensive universities also tend to enter many more UOAs than new universities which were largely former polytechnics whose primary role was teaching and where research was hampered by heavy teaching loads that restricted the time and energy available to do research (Bessant et al. 2003).

There is very little research into the reasons why universities chose to enter particular UOAs (Broadbent, 2010) and why they pulled out once they are established in an area (Johnston and Reeves, 2017). Table 1 summarises the changes that took place between 1992 and 2014 revealing sharply contrasting experiences for the different UOAs. E&E and B&M are two of only thirteen UOAs to retain the same title and broadly the same content from 1992 to 2014. Table 1 shows the percentage change in the number entering the thirteen UOAs across all five REEs over the period.

**Table 1 here**

In all, nine of the thirteen UOAs saw falls in the number of universities submitting. All STEM subjects and most humanities fell. Much of the growth of the B&M UOA was the result of universities switching from the E&E UOA to the B&M UOA, by four universities entering B&M in 2014 as A&F was incorporated in B&M, and by the entry of the new universities after 1992 and when a large new wave of universities of former colleges of education, art colleges and so on was added to the list. Universities were able to switch from the E&E UOA to the B&M UOA because the latter had a very broad subject coverage including accounting and finance; business history; business and industrial economics; corporate governance and risk management; corporate social responsibility; employment relations; entrepreneurship and small firms; human resource management; information management and business systems; innovation and technology management; international business; management education and development; management science; marketing; operations and project management; organisational psychology; organisational studies; public sector management; public services and third sector; service management; strategic management; and any other field or sub-field aligned to B&M (REF 2014, 2012). The contrasting numbers of universities entering E&E and B&M over 1992 to 2014 is shown in Figure 1.

**Figure 1 here**

To place this in context, the falls in E&E entries occurred at a time of an unprecedented expansion in the number of institutions entitled to be called universities from under fifty before 1992 to around 130 currently. For many, along with the title came the ambition to do research and the ability to award post-graduate qualifications just as the old universities had done for many years. The question is why some UOAs such as E&E have seen large falls while others such as B&M have seen substantial rises? What kinds of universities have withdrawn from E&E and how do they differ from those that stayed?

Addressing this issue Johnston and Reeves (2017) devised a model to explain withdrawal from a UOA based on the performance of a university compared with other universities in the same UOA and with the performance in other UOAs in the same university. The first of these compares the score in a given university in a UOA with the mean score in all UOAs for that university. The difference between the two is called the *internal gap*. A positive internal gap for a given UOA arises when the score for that UOA exceeds the mean score for all UOAs in the same university and a negative internal gap when it is lower than the mean for all UOAs in that university. The second gap, the *external gap*, is the difference between the UOA score and the mean for all universities in that UOA. Gaps can be positive, zero or negative. The best outcome for a university is a double positive gap and the worst outcome a double negative gap. Focusing on E&E the authors found that a double negative gap was a good predictor of the withdrawal decision for many of the universities that withdrew from the E&E UOA over the period 1992 to 2014. A probit analysis of the gaps showed that the external gap was more important than the internal gap suggesting that how a university performs in a UOA relative to its rivals in other universities in that UOA is more important than how it performs compared with others in different UOAs in the same university. In a first specification only the internal gap was entered as an explanatory variable. It emerged as highly significant and indicated that a positive internal gap is associated with a higher probability of remaining in the UOA at the next REE. In a second specification both the internal and external gaps were entered. Interestingly, the effect of this was to reduce the size of the coefficient on the internal gap and make it statistically insignificant. In contrast, the external gap became strongly significant suggesting the need to take account of performance relative to that in other institutions. It appears to be the case that external competition is more important than internal competition in internal resource allocation decisions.

Before moving on it is necessary to understand that the gaps model assumes that the decision to submit or not submit to the next REE is influenced by sign of the internal and external gaps and is thus based on rational choice theory. This could be regarded as a bold step in view of fact that the history of research into how universities are organised and make decisions is

replete with stories of irrationality. However, the results of the studies by Johnston and Reeves (2017, 2108) suggest a strong connection between the gaps and the decision to enter a UOA at the next REE. The question addressed in this paper is does the model apply to B&M as it did to E&E? Before attempting to answer this question a brief review of the literature on university organisation and decision making will place the rational approach taken here in context.

### **University organisation and decision making**

The literature on organisation and decision making in universities in developed countries has grown substantially in recent years in the wake of fundamental and rapid changes in structure, organisation and behaviour that could never have been envisaged in the mainly sheltered, publicly funded, local and national market existence before the 1980s. Pressures facing UK universities include globalisation, massification, new financing regimes, digitisation, and increased competition for resources. These among many other factors have led to the corporatisation (changes to culture, governance, structure and operational focus) and commercialisation (changes to missions, objectives and operations) (Pilbeam, 2006; Kok, et. al., 2010; Parker, 2010). This has not been an isolated phenomenon confined to a few institutions or countries (see, for example, Lawless, 1982 and Lohmann, 2006 for a North America view, and Krücken and Meier, 2006; De Boer, Enders and Leisyte, 2007; Leisyte, Enders and De Boer, 2009; Bleikie, Enders and Lepori, 2017 for a European view). In the UK, it appears to have spread across the whole of the higher education sector as decision-making powers have been removed from academics and given to university managers. Major decisions in the areas of teaching and research are now imposed on academics that have no power to resist despite what might be good reasons based on past and previous experiences (DiMaggio and Powell 1983; Marginson and Considine, 2000; Lucas, 2006). This tendency to conformity and homogeneity in structures and processes, isomorphism in the neo-institutional sociology approach, can be coercive (imposed by external pressures), mimetic (where organisations intentionally imitate others) and normative (where key groups impose their will on institutions) (Huisman and Mampaey, 2018). Parker (2010) sees all types playing a role in the transformation of university to uniformity. One of the earliest views of universities was that they were in some senses fundamentally different from other organisations, that there was something that set them apart from the likes of for-profit businesses, that they were *specific* organisations. Cohen, March and Olsen (1972) saw universities as organised anarchies in which the 'garbage can' model of decision marking prevailed:

“The university-as-garbage-can collects problems, solutions, participants, and choice opportunities and mixes them together, with the result that problems become more or less randomly attached to solutions. Thus, in the organized anarchy that is the university absurd individual behavior flows from absurd collective decision-making processes.” (Lohmann, 2006, P.1)

Universities were thus not like other organisations that could not survive and prosper under this system. Yet, since the 1980s universities have been expected to behave like other organisations because before then they were often considered inefficient, chaotic and irrational. The belief was that introducing scientific management would transform universities into behaving like for-profit organisations capable of doing all of the things that such organisations do. But the assumption that universities lacked any elements of specificity, the very things that make them different has been challenged by a number of writers. Musselin (2006) argues that functional loose coupling (Weick, 1976; Orton and Weick, 1990) - a low level of cooperation and coordination between teaching and research activities and unclear technologies - teaching and research being complex and obscure activities, exhibiting difficult-to-describe and often immeasurable links between inputs and outputs make universities specific organisations. Meister-Scheytt and Scheytt (2005) develop a frame of reference for Austria with universities being considered as complex and self-referential organisations while Lohmann (2006) argues against the view that the university is a complex adaptive system not simply a business to be judged against standard business concepts such as incentives, managerialism, outsourcing, accountability, quantitative performance, profitability, and market competition. Are universities chaotic, irrational and inherently incapable of maximising income, improving teaching, enhancing research volume and quality, enhancing their reputations and so on or are they perfectly capable of adopting successful strategies to achieve all of these things and more? One way to view this is through the lens of neo-institutional sociology, where, because of external pressures, increased commercialisation and corporatisation within higher education, or uncertainty, organisations will become increasingly similar. In this environment the main goal of organizations is to survive and gain legitimacy. In order to do so, they need to do more than succeed economically, they need to establish legitimacy within the world of higher education institutions (Stensaker and Dahl Norgård, 2001). For UK polytechnics, central institutions and colleges that gained university status after 1992 and into the 2000s there was an urgent need to gain legitimacy and behave like universities, look like universities and do what universities are supposed to do. One of these must-dos was to become more heavily involved in research and the RAEs of 1992 and 1996 were the very places to show what they could do. But research is an area where, through experience, established universities have become highly accomplished. The UK research funding system now forces

universities to compete in producing world class outcomes in order to generate research income. Unfortunately many new universities failed to compete effectively and over the years have obtained relatively little in the way of funding. It might be argued that the need to build legitimacy has often been tempered by more immediate and pressing financial concerns. Research can be costly and if it not deemed good enough to attract funding it may also not bring legitimacy.

### **Research funding in UK universities**

UK university research funding is provided under a dual-support system consisting of a block grant from the relevant country funding body and research council funding for specific research projects and programmes. The majority of research funds are distributed on the basis of research quality, taking into account the volume of research and the relative costs of doing research in different disciplines. This is known as quality-related or mainstream QR funding. The results from the REF of 2014 determine funding for each year until the next REF scheduled for 2021. The REF produced quality profiles for each submission in the different UOAs based on 65% for research outputs, 20% for research impact and 15% for research environment. The volume of research was determined by the number of full-time equivalent (FTE) research staff submitted. With each research staff member submitting a maximum of four pieces of work (journal articles, books, book chapters, monographs, working papers, reports etc.) the volume of research output was closely related to the number of FTEs submitted. The output cost weights were 1.6 for high cost laboratory and clinically based research such as in the natural sciences and medicine, 1.3 for intermediate cost subjects where there may be an element of laboratory based research or fieldwork such as geography and psychology and 1.0 for others including business and economics reflecting the different costs of doing research in different disciplines. Over the years funding has become much more focused on supporting only the best research, that judged to be world class (4\*) and internationally excellent (3\*). Past REEs have funded research that was nationally excellent (2\*) and nationally recognised (1\*) but from 2014 anything less than 3\* received no funding and currently a unit of 4\* research receives four times as much as one of 3\*. There is also a London weighting of 12% for inner London and 8% for outer London.

Each year universities are informed of the amount of mainstream QR funding they will receive. The total amount of mainstream QR funding for 2018-19 for all 154 universities in all 36 UOAs was £1.58 billion, a slight fall from the previous year's figure of just over £1.6 billion. As a result of this funding regime research intensive universities such as those in the Russell Group and the single subject London Business School (LBS) that performed well in the 2014 REF receive the most funding. For example, 101 universities submitted in the B&M UOA, and because they



all had at least some research at 3\* level in one or more of the assessed components (outputs, impact and environment) they all received some funding. But the top five performing ones: LSE, Cambridge, Imperial, Oxford and LBS each received more than £1m in 2018-19 with LBS receiving over £3m. At the other end of the scale many received less than £20,000. The top twenty ranking universities in B&M submitted a mean number of FTEs of 63.9 while among the bottom thirty none was able to muster more than 30. Thus, the combination of many more research staff and a higher quality performance led to much higher funding for the elite group.

The picture for the E&E UOA is just as polarised despite the fact that 16 of the 28 entrants to the 2014 REF in the E&E UOA were from the Russell Group and there was a complete absence of pre-1992 universities. However, Russell Group universities were not always outstandingly good performers in E&E though admittedly the top six in the ranking were all Russell Group universities. The mean number of FTEs submitted by the top five performers in E&E was 48.2 and by the bottom five just 19.2. Thus, in both B&M and E&E size does matter in that more research intensive universities were able to submit more research of generally higher quality; and the combination of size and quality benefited the elite who receive much more funding.

## **Method**

The method used by Johnston and Reeves (2017) for E&E is applied to two UOAs E&E and B&M. This is the first attempt to compare UOAs and there has been little research into these areas aside from work on B&M (and Accounting and Finance) (see, for example, Bessant et al. 2003; Otley, 2010 and Pidd and Broadbent, 2014). As in Johnston and Reeves (2017), in calculating the gaps FTE-weighted means allowed the number of research staff submitted to be taken into account. Since universities with higher FTE counts tend to do better than ones with lower FTE counts this has the effect of making the FTE-weighted means larger than the simple arithmetic means. Universities with large numbers of research staff are in this position because in the past they have been more successful in securing funding to employ more staff.

For each university submitting to the UOAs, for all REEs, grade point averages or *GPA*s were obtained. *GPA*s are published in RAE results publications from 1992 to 2008; and for the REF in 2014. The *GPA* is calculated by multiplying the percentage of research in each category by its rating (1-4), summing and then dividing by 100. An *institutional FTE weighted GPA* is then calculated by multiplying the *GPA* for each UOA to which the institution submitted by the

number of *FTEs* submitted to that UOA, summing and dividing by the total number of *FTEs* submitted by the institution:

$$\text{Institutional FTE weighted GPA} = \frac{\sum_{i=1}^m \text{GPA}_{ij} * \text{FTE}_{ij}}{\sum_{i=1}^m \text{FTE}_{ij}}$$

where *m* is the number of UOAs, *GPA<sub>ij</sub>* is the REE score of the *i*th UOA (*i* = 1 ... *m*) for the *j*th university and *FTE<sub>ij</sub>* is the number of full-time equivalent research staff entered in the submission. A similar method is used to compute the *GPA*s for the UOAs, recognising the need to weight the scores by the number of *FTEs* submitted in each UOA by each university. This figure varies from more than eighty to under ten with means per university of 17.5 in 1992 rising to twenty-seven in 2014. With a few notable exceptions universities have submitted more staff to later REEs. Using the E&E UOA as an example the formula is:

$$\text{FTE weighted mean ECON GPA} = \frac{\sum_{j=1}^n \text{ECON GPA}_j * \text{ECON FTE}_j}{\sum_{j=1}^n \text{ECON FTE}_j}$$

where *n* is the number of universities, *ECON GPA<sub>j</sub>* is the *GPA* of E&E UOA for the *j*th university and *ECON FTE<sub>j</sub>* is the number of *FTEs* submitted to the E&E UOA in the *j*th university. As before, the sum of the products is divided by the number of *FTEs* to give the *FTE weighted mean ECON GPA*.

To compute the internal gaps the *institutional FTE weighted GPA* is subtracted from the *ECON GPA*.

$$\text{Internal Gap} = \text{ECON GPA}_j - \text{Institutional FTE weighted GPA}_j$$

The internal gap will be positive when the E&E score is higher than the overall university score, negative when it is lower and zero when is the same. The external gaps are found by subtracting the *mean FTE weighted ECON GPA* from the *ECON GPA*:

$$\text{External Gap} = \text{ECON GPA}_j - \text{FTE weighted mean ECON GPA}$$

A positive external gap signifies that a university is doing better than the average of all universities and a negative gap that it is doing worse.

The move from a five point scale (1, 2, 3, 4, 5) in 1992 to a seven point scale (1, 2, 3a, 3b, 4, 5, 5\*) in 1996 and 2001 was handled by using a five point scale for the 1992 data and a seven point scale for the 1996 and 2001 (as in Sharp, 2004). A weighted average of the quality profile was used for the 2008 RAE and the 2014 REF. In all cases the UOA scores could be compared directly with those in the university as a whole. It is hypothesised that the signs of the internal

and external gaps determine in part whether a university enters or withdraws from the UOA at the next REE. A double negative gap is more likely to lead to withdrawal from the next REE while a double positive gap is more likely to lead to entry in the next REE. There are also two other possibilities: (i) a negative internal gap and a positive external gap; and (ii) a positive internal gap and a negative internal gap. The outcome of a university having a single negative gap will depend on whether it is internal or external and whether it is more sensitive to internal or external gaps.

## **Results**

Table 2 gives the number of withdrawals of old and new universities, the numbers of negative gaps both internal and external and the numbers of double negative gaps (negative internal and negative external gaps) for E&E and B&M over all REEs from 1992 to 2008. It is instructive to do a quick comparison of both UOAs. Among the thirty-seven E&E withdrawals nineteen were old universities, while B&M had just two withdrawals (both old) out of a total of twenty-seven withdrawals. Thus, old universities were much more likely to withdraw from the E&E UOA than from the B&M UOA. As regards gaps, only twenty-seven of the thirty-seven withdrawals from E&E had a negative internal gap while B&M had twenty-five out of twenty-seven. In E&E, therefore the negative internal gap does not appear to have been as good a predictor of withdrawals as in B&M. The figures for the external gaps were much more consistent with all but one (in E&E) of the total of ninety-five withdrawals *not* having a negative external gap. The final column of Table 2 shows that eighty of the ninety-five withdrawals had a double negative gap, so just fifteen (nine from E&E and three from B&M) withdrew without a double negative gap. Negative gaps and especially negative external gaps then appear to be almost a necessary condition for withdrawal from a UOA, but is it also a sufficient condition? To answer this question we need to see how many universities with negative gaps did not withdraw. A related question is: what is the effect of multiple negative gaps over more than one REE? In other words, do universities completely ignore the negative gaps (and therefore poor performance) and continue to support relatively weak research areas by entering them in successive REEs contrary to the idea of maximising this measure of overall performance in research by concentrating resources in the most productive areas?

**Table 2 here**

**Economics and Econometrics**

Table 3 shows the number of double negative gaps for the twenty-five ever-present universities in the E&E UOA. Eight had none, five had one, seven had two and four had three one had four. Recall that all but eleven of these universities opted to continue in the REEs despite performing on occasion(s) worse than the average of their colleagues in other UOAs in the same university and worse than the average of their economics peers in other universities. It is surprising that the twelve universities with two or more double negative gaps continued in the REEs.

### **Table 3 here**

Table 3 also presents data on internal and external gaps. They show the number of negative internal and external gaps each had over the five REEs. The numbers range from none to five: at the extremes are universities with no internal or external negative gaps (UCL, LSE, Warwick and Essex) and those with five negative internal gaps (St Andrews) or external gaps (City). For St Andrews and City every REE brought a negative gap. In between are those within the range one to four negative gaps. Universities with no negative internal gaps occur less frequently than those with no negative external gaps. This is a reflection of the research power of major universities which tend to have many very strong subject areas; and to be better than their own university average is more difficult to achieve than being better than the average of all universities in E&E, some of which do not have the same all-round strengths and strength in E&E in particular. The clear conclusion is that in the top universities it is more difficult to be always better than your colleagues in other subject areas than those in the weaker universities.

### **Business & Management Studies**

In B&M the picture is very different. Table 4 shows that the distribution of double negative gaps is more even than in E&E. The first thing to notice is the existence of five double negative gaps for eight (seven of them, new) universities whereas in E&E there was none. Comparing the results of Table 4 and Table 3 shows that the distribution in B&M is much more even than in E&E and there are many more with a larger number of double negative gaps in B&M than in E&E. This suggests that numerous double negative gaps are less likely to lead to withdrawal from the B&M UOA than from the E&E UOA.

### **Table 4 here**

Table 4 also shows the numbers of negative internal and external gaps respectively. They can be compared with Table 3 for E&E. The number of negative internal gaps with the numbers of universities rising as the number of negative internal gaps rises. This suggests that for most

universities B&M did not do well as other UOAs in the same university. B&M therefore was out-performed by researchers in other areas in the same university. It is very revealing that at the extremes only two universities, City and Lancaster, had no negative internal gaps while 14 had five. Indeed, 42 out of 59 (71.2%) had three or more with the implication the B&M is not a strong UOA for most universities.

On the number of negative external gaps universities are concentrated at the extremes in the None and Five columns with forty-one out of sixty (68.3%) in these columns. In the None column are universities that were better than the average of all universities in B&M on all five occasions. There are seventeen of them and they are all old universities. In the Five column all but one (Newcastle) are new universities. More starkly there are no new universities with fewer than four negative external gaps. This is evidence that in B&M there is a sharp delineation between the performance of old and new universities. The difference between B&M and E&E in this respect may be due to different responses to negative gaps in the two UOAs. In E&E negative gaps were likely to lead to withdrawal from the E&E UOA but in B&M this does not appear to have been the case. Here, universities continued despite poor performance.

The continuous presence in a particular UOA over all five REEs from 1992 to 2014 despite relatively poor performance is a strong feature of B&M but not E&E. This is clearly apparent from Table 5 which shows for the ever-present universities in the two UOAs, the number of universities with zero double negative gaps (the best performers) and the number with four or more double negative gaps (the worst performers). It also does the same with the number of negative external gaps. For B&M, there was a higher percentage of universities (26.7) with zero double negative gaps than for E&E (12) and at the other end of the scale a much higher percentage of universities with four or more double negative gaps (25 vs 4). Furthermore, for the negative external gaps, a very large 48.3 percent of universities in B&M had four or more negative external gaps while the figure for E&E was just four percent suggesting again that relatively poor performance is tolerated more in B&M than in E&E. Judging by the high percentages of universities with no double negative gaps and high percentage with four or more double negative gaps B&M is to be more polarised than E&E. This reasons why universities in the B&M UOA were more tolerant of relatively poor performance are not fully understood but there are several factors that may play a part.

#### **Table 5 here**

The first is the *composition* of universities in the different UOAs, defined by the number of old and new universities entering the different UOAs. In E&E, the twenty-five ever-present

universities were all old, that is, there were no post-1992 universities. In fact, in the REF of 2014, E&E was the only one of the thirty-six UOAs that did not have any new universities. E&E thus has no ever-present new universities. B&M on the other hand is very different. Out of the total of sixty ever-present universities in the B&M UOA, twenty-four were new universities and twelve out of fifteen with four or more double negative gaps in B&M were new universities. This may suggest that new universities behave differently from old universities when it comes to the decision to withdraw from a UOA due to poor relative performance. Judging by the results here it suggests that new universities appear to be more tolerant of poor performance than old universities. They are more likely to continue despite doing worse than other universities in B&M. It is possible that their targets are lower than those of old universities, or, if E&E had the same proportion of new universities as B&M whether the outcomes would be similar or even close because there are other factors to be considered. Given the nature of QR research funding in the UK the inevitable outcome is to concentrate research funds into fewer and fewer elite universities that are capable of carrying out world leading research. With little or no QR funding it is no surprise that many new universities that do research in the B&M area cannot compete with the elite institutions.

The second reason why B&M seems to tolerate poorer performers for longer than E&E is connected to the increasing role of business schools in the UK. Concerns about the economics profession and the role of business schools have been voiced for some time. As long ago as 2004 a survey by CHUDE (Conference of Heads of University Departments in Economics) (CHUDE, 2004) explored the implications of an increasing number of economics departments being located within business schools. Bell (2004) suggested that it was leading to economists being squeezed out, especially as students choose 'softer' options in their degrees. According to The Complete University Guide 2017 the total number of single economics undergraduate degree courses was seventy-nine. The location of economics groupings in each university was obtained from university websites which contain descriptions of internal structures. It quickly became apparent that using the term 'department' to describe groupings of economists may in fact exaggerate their status. University websites show that in some universities economists do actually belong to what is actually called a department or even a school or faculty. Of course, as is their wont, universities are organised in ways that suit them (despite the isomorphic tendencies referred to earlier) and they use different terminologies to describe similar things so it is difficult to compare universities directly. Some have faculties that contain schools and departments, including business schools; others have colleges, units or divisions. Economists can be in departments of business, social sciences, management studies, politics or mathematics and statistics and so. In some universities economics is not even in the title of any grouping presumably because they are so few that they do not warrant a mention in a title

despite these universities offering an economics single degree programme. Currently there are more than forty UK business schools in which economists find themselves located. This is more than half of the universities that offer single economics undergraduate degrees. Why is this significant? One answer is that the B&M UOA is so broad in terms of subject coverage that (as reported earlier) it contains business and industrial economics along with about twenty other fields of study making it easy for economists' research to go into a B&M submission where, if necessary, it can be cross-referred to the E&E panel for assessment. In the 2104 REF, 1300 (11%) of more than 12000 outputs submitted to the B&M UOA were cross-referred to the E&E sub-panel (Pidd and Broadbent 2015). This is not to say that there has been a mass exit from E&E into B&M, as over all five REEs, only eight universities withdrew from the E&E UOA to enter subsequently the B&M UOA, having not previously been in the B&M UOA. Of the other twenty-seven universities that withdrew for the E&E UOA only one was not already, and had never been, in the B&M UOA. Thus, already having researchers in the B&M UOA and having the B&M UOA as a ready-made new home for economics researchers made it easy to withdraw them from the E&E UOA and enter them into the B&M UOA (Wakeling, 2008). Entering one rather than two UOAs may reduce the cost to a university of entering a REE so there will be economies of scale in squeezing economists into a B&M submission rather than have to prepare separate submissions for B&M and E&E. This is likely to appeal to many newly-created universities that have little experience in research and are new to REEs.

## **Conclusions**

The role of the internal and external gaps in determining which universities withdrew or did not withdraw from UOAs in the UK RAEs of 1992, 1996, 2001, 2008 and the REF of 2014 has received some attention in a recent paper by Johnston and Reeves (2017). The gaps, especially the external gap, were shown to be an important influence in whether universities submitted to or withdrew from subject areas. Johnston and Reeves focused exclusively on the E&E UOA. This paper extends their work by considering another UOA, Business and Management Studies (B&M) which attracts more submissions than any other UOA. B&M was selected because it is in the same cognate area as E&E and has a special relationship with E&E since universities that withdraw from the E&E UOA can submit their economics research in the B&M UOA. E&E can also be viewed as a traditional subject that has featured in university curriculums for many years, while B&M is a more recent addition.

The number of universities entering the E&E UOA has declined significantly over the period 1992 to 2014. There has been a big change in the balance of old and new universities in the E&E UOA with no new universities in the latest assessment the REF of 2014. Earlier REEs

boasted many more new universities in E&E but they withdrew after poor results. In contrast, the B&M UOA in REF 2014 had forty-three new out of a total of 101 universities, a much more evenly balanced composition. The existence of double negative gaps was much more likely to lead to withdrawal in E&E for both old and new universities, likewise for negative external gaps. In B&M persistent double negative and negative external gaps do not usually lead to withdrawal. Some fifteen (25%) of the sixty universities that submitted to all REEs (ever-presents) had at least four double negative gaps and twenty-nine (48.3%) had four or more negative external gaps. The upshot is that university managers appear to tolerate poor performance in B&M much more so than in E&E. It is not clear why this should have happened. Certainly most of the universities that did not withdraw despite less than average performance were new universities. It is possible that they have lower expectations than old universities and therefore are not overly concerned with performance. An explanation for the high withdrawal rate from the E&E UOA may be connected with the move of many economics groupings to business schools over recent decades. Currently more than forty of the seventy-nine universities offering single economics undergraduate degrees in economics have their economics sections located in business schools. Because the B&M UOA is broad enough to accommodate economics alongside many other areas of business and management, many economists have seen their work entered into the B&M UOA. In the REF of 2014, for example, economics had over 1300 items cross-referred to the E&E sub-panel representing some 11% of the total volume of submissions to the B&M UOA. There is no information on whether the kind of work done by economists in business schools was any different from what it would have been had they been in a separate economics department that then may have submitted to the E&E UOA. There is also no published information on whether economists had any influence on the decision about which UOA to enter. An analysis of the 101 submissions to the B&M UOA in the 2014 REF showed that all but one of them contained some papers in journals with economics in the title. The decline in the number of universities submitting to the E&E UOA is of concern because research in these subjects is becoming more and more concentrated in fewer and fewer elite institutions that garner the lion's share of research funds leaving others to make do with 'crumbs from the rich man's table'. The future is likely to bring more concentration as marginal performers withdraw from the E&E UOA and possibly from research altogether. The B&M UOA presents a much more diverse picture with a good balance of old and new universities.

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## TABLES (n=5 )

**Table 1: Percentage change in the number of universities entering the thirteen ever-present UOAs 1992-2014**

<b>UOA</b>	<b>Percentage change</b>
<b>English Language and Literature</b>	+25.3
<b><i>Business and Management Studies</i>**</b>	+21.7
<b>Law</b>	+11.7
<b>History</b>	+2.5
<b>Education</b>	-10.7
<b>Politics and International Studies</b>	-13.8
<b>Philosophy</b>	-15.2
<b>Physics</b>	-35.6
<b>Biological Sciences</b>	-37.1
<b>Sociology</b>	-43.3
<b>Chemistry</b>	-50.7
<b><i>Economics and Econometrics</i></b>	-53.3
<b>Civil Engineering*</b>	-69.6

\* Renamed Civil and Construction Engineering in 2014.

\*\*Included Accounting and Finance (A&F) in 2014 which was a separate UOA in previous REEs. Four of the five universities in A&F in 2008 that were not in B&M in that year (Essex, Huddersfield, Dundee and Bangor) subsequently entering B&M in 2014. Only Liverpool John Moores did not enter B&M in 2014.

**Table 2: Number of university withdrawals from a UOA and the number of negative internal and external gaps in the REE immediately preceding withdrawal**

	<b>E&amp;E</b>	<b>B&amp;M</b>
<b>Total number of withdrawals 1992-2008</b>	37	27
<b>Old universities</b>	19	2
<b>New universities</b>	18	25
<b>Number with a negative internal gap</b>	27	25
<b>Number with a negative external gap</b>	36	27
<b>Number with a double negative gap</b>	28	24

**Table 3: The twenty-five ever-present universities in the E&E UOA and the incidence of negative gaps 1992-2014**

<b>Double Negative Gaps</b>				
<b>None (n=8)</b>	<b>One (n=5)</b>	<b>Two (n=7)</b>	<b>Three (n=4)</b>	<b>Four/Five (n=1)</b>
UCL	Bristol	Edinburgh	Manchester	St Andrews
LSE	East Anglia	Surrey	Leicester	
Oxford	Exeter	York	City	
Cambridge	Southampton	Glasgow	Kent	
Warwick	Birkbeck	Sussex		
Essex		Birmingham		
Nottingham		Aberdeen		
Queen Mary				
<b>Negative Internal Gaps</b>				
<b>None (n=4)</b>	<b>One (n=7)</b>	<b>Two (n=5)</b>	<b>Three (n=7)</b>	<b>Four/Five (n=2)</b>
UCL	Oxford	Cambridge	Edinburgh	Manchester
LSE	Bristol	York	Surrey	St Andrews
Warwick	Nottingham	Glasgow	Sussex	
Essex	Queen Mary	Aberdeen	Birmingham	
	Exeter	East Anglia	Leicester	
	Southampton		City	
	Birkbeck		Kent	
<b>Negative External Gaps</b>				
<b>None (n=8)</b>	<b>One (n=3)</b>	<b>Two (n=5)</b>	<b>Three (n=8)</b>	<b>Four/Five (n=1)</b>
UCL	Bristol	Edinburgh	Surrey	City
LSE	Exeter	East Anglia	St Andrews	
Oxford	Southampton	York	Manchester	
Cambridge		Glasgow	Sussex	
Warwick		Birkbeck	Birmingham	
Essex			Leicester	
Nottingham			Aberdeen	
Queen Mary			Kent	

**Table 4: The sixty ever-present universities in the B&M UOA and the incidence of negative gaps 1992-2014\***

<b>Double Negative Gaps</b>					
<b>None (n=16)</b>	<b>One (n=6)</b>	<b>Two (n=10)</b>	<b>Three (n=12)</b>	<b>Four (n=7)</b>	<b>Five (n=8)</b>
Aston	Birmingham	Bournemouth	Brunel	Bristol UWE	Coventry
Bath	Bradford	Bucks New	Durham	Kent	Greenwich
City	Brighton	De Montfort	Hertfordshire	Portsmouth	Northampton
Cranfield	Leeds	Kingston	Hull	Sheffield Hallam	Newcastle
Lancaster	Loughborough	Kings	Lincoln	Westminster	Northumbria
Imperial	Edinburgh	Manchester Met.	Keele	Aberdeen	Oxford Brookes
LSE		Surrey	Middlesex	UWS	Plymouth
Manchester		Robert Gordon	Nottingham Trent		Glamorgan
Nottingham		Stirling	Ulster		
Oxford		Swansea	Glasgow Caledonian		
Sheffield			Glasgow		
Southampton			Heriot-Watt		
Warwick					
St Andrews					
Strathclyde					
Cardiff					
<b>Negative Internal Gaps</b>					
<b>None (n=2)</b>	<b>One (n=7)</b>	<b>Two (n=8)</b>	<b>Three (n=12)</b>	<b>Four (n=16)</b>	<b>Five (n=14)</b>
City	Aston	Bournemouth	Cranfield	Birmingham	Coventry
Lancaster	Bath	Bucks New	Hertfordshire	Bristol UWE	Durham
	Bradford	De Montfort	Imperial	Brunel	Greenwich
	Brighton	Kingston	Keele	Kings	Hull
	Warwick	Loughborough	Leeds	Manchester	Kent
	Strathclyde	Manchester Met.	Lincoln	Oxford	Newcastle
	Cardiff	Nottingham	LSE	Portsmouth	Northampton
		Robert Gordon	Middlesex	Sheffield Hallam	Northumbria
			Nottingham Trent	Westminster	Oxford Brookes
			Southampton	Glasgow	Plymouth
			Ulster	Heriot-Watt	Sheffield
			Glasgow Caledonian	UWS	Surrey
				St Andrews	Edinburgh
				Stirling	Glamorgan
				Swansea	
				Aberdeen	
<b>Negative External Gaps</b>					
<b>None (n=17)</b>	<b>One (n=4)</b>	<b>Two (n=5)</b>	<b>Three (n=5)</b>	<b>Four (n=5)</b>	<b>Five (n=24)</b>
Aston	Birmingham	Bradford	Durham	Brunel	Bournemouth
Bath	Leeds	Kings	Hull	Kent	Brighton
City	Loughborough	Surrey	Keele	Sheffield Hallam	Bristol UWE
Cranfield	Edinburgh	Stirling	Ulster	Aberdeen	Bucks New
Imperial		Swansea	Glasgow	Heriot-Watt	Coventry
Lancaster					De Montfort
LBS					Greenwich
LSE					Hertfordshire
Manchester					Kingston
Nottingham					Lincoln
Oxford					Manchester Met.
Sheffield					Middlesex
Southampton					Newcastle
Warwick					Northampton
St Andrews					Northumbria
Strathclyde					Nottingham Trent
Cardiff					Oxford Brookes
					Plymouth
					Portsmouth
					Westminster
					Glasgow Caledonian
					UWS
					Robert Gordon
					Glamorgan

\* London Business School (LBS) is a single subject university having no internal comparisons and it is therefore omitted from the top two sections of the table. London Metropolitan, a merger of Guildhall and North London in 2002 is excluded.





**Table 5: Numbers of double negative gaps and negative external gaps for ever-presents in the E&E UOA and the B&M UOA**

	<b>E&amp;E (n=25)</b>	<b>B&amp;M (n=60)</b>
<b>No. of universities with <i>no</i> double negative gaps</b>	8/25 (12%)	16/60 (26.7%)
<b>No. of universities with <i>four or more</i> double negative gaps</b>	1/25 (4%)	15/60 (25%)
<b>No. of universities with <i>no</i> negative external gaps</b>	8/25 (32%)	17/60 (28.3%)
<b>No. of universities with <i>four or more</i> negative external gaps</b>	1/25 (4%)	29/60 (48.3%)

**FIGURES (n=1)**

**Figure 1: The number of universities in the E&E and B&M UOAs 1992-2014**

