Accounting for Research Quality:
Research Audits and the Journal Rankings Debate

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Abstract

The question of whether and how research quality should be measured, and the consequences of research audits such as the UK's Research Excellence Framework (REF) – formerly the RAE - are considered in relation to the role of journal ratings such as the *Association of Business Schools Academic Journal Quality Guide* (the *ABS Guide*). Criticism of the *ABS Guide* has distracted attention from the results of successive RAEs, where the panel for Business and Management has been one of the most selective in its allocation of the highest grades, especially when compared with the neighbouring field of Economics. If the *ABS Guide* had been used to grade outputs submitted for Business and Management in the RAE

Rowlinson, M., Harvey, C., Kelly, A., Morris, H. and Todeva, E. (2015) *Accounting for Research Quality: Research Audits and the Journal Rankings Debate, Critical Perspectives on Accounting* , Vol. 26, (2015): pp. 2-22.

2008 then many more outputs would have received the highest grades, especially in accounting where outputs from journals such as *Critical Perspectives on Accounting*, which are highly rated in the *ABS Guide*, appear to have been downgraded by the RAE panel. The alleged bias against accounting in the *ABS Guide* rests on a particular interpretation of citation impact factors for journals, and a narrow definition of subject fields. Critics of the *ABS Guide* would be better advised to direct their attention to scrutinizing the results of the REF and considering whether it provides an adequate research ranking for UK business schools. 15% of all full time students in the UK study business and management, including accounting and finance, but only 6.7% of the full time equivalent research active staff submitted in the RAE 2008 were in business and management, or accounting and finance. Research audits are therefore forcing the separation of teaching from research in UK business schools. With an estimated ratio of 71 full time students per research active faculty member in UK business schools, it may be time to consider a more appropriate, inclusive, and economical form of ranking for research in business and management.

1 Introduction

There is an important debate to be had over whether and how to measure research quality, and the consequences of research audits such as the UK's Research Excellence Framework (REF), formerly known as the Research Assessment Exercise (RAE). The debate in UK business schools has focused on the use of a particular journal ratings list in preparation for the REF, namely the *Association of Business Schools Academic Journal Quality Guide* (Harvey, Kelly, Morris, & Rowlinson, 2010: henceforth the *ABS Guide*). The purpose of this paper is to use the debate over journal ratings as the starting point for considering the possible effects of using alternative measures of research quality and the overall effect of the REF and RAE research audits on research selectivity and teaching in UK business schools.

The first part of the paper sets out the UK context for the development of the *ABS Guide* in relation to the RAE. The next part of the paper gives an overview of the journal rankings debate, and the third part identifies four main critiques of journal lists: first, critics maintain that expert peer reviewers are able to discern the quality of journal articles without reference to citation metrics or journal rankings; second, critics argue that variations in the level of citations for articles in leading journals mean that citation based rankings are unreliable as a guide to the quality of individual articles; third, according to critics subject field bias in the *ABS Guide* suggests that an overall rating list for journals in business and management is problematic; and finally, the critics believe that the construction of journal lists leads to an obsession rankings which distorts the REF as a research audit whose primary purpose is resource allocation rather than ranking. The fourth part of the paper briefly sets out the nature of the data available from the RAE 2008 and the feasibility of comparing the journal ratings in the *ABS Guide* with the gradings for journal outputs by the RAE. The data is then used to consider a series of propositions that follow from the critiques of journal lists. In the discussion three alternative measures of research quality are assessed: individual citation metrics; journal ratings; and peer review. In conclusion it is argued that since research audits in the UK have become more important as institutional rankings for business schools rather than resource allocation, it is likely that the REF will lead to increased selectivity and a detrimental detachment of research from teaching.

1.1 Background to the UK REF/RAE

The proliferation of journal rankings and ratings needs to be understood in the context of increasing pressure from research audits and accreditation. The United Kingdom's Research Assessment Exercise (RAE) is by far the most institutionalised research audit in OECD economies (Barker, 2007), and it provides a template for considering alternative forms of research audit. There have been six RAEs in the UK so far, in 1986, 1989, 1992, 1996, 2001,

and finally in 2008. The RAE 2008 was officially described as "a peer review exercise to evaluate the quality of research in UK higher education institutions." The 2008 assessment informs "the selective distribution of funds for research by the UK higher education funding bodies" until the results of the next assessment, renamed the Research Excellence Framework (REF), which is due in 2014, with the final submissions to be made in 2013.

For each subject area, known as a Unit of Assessment (UoA), there was a separate panel of peer assessors in the RAE 2008. There were 67 Units of Assessment in the RAE2008, each with a panel of experts nominated by relevant subject associations and other stakeholders. These Units of Assessment were grouped into fifteen Main Panels to ensure consistency between them. The Business and Management Studies Unit of Assessment was grouped in a Main Panel with Economics and Econometrics, Accounting and Finance, and Library and Information Management. Every government funded Higher Education Institution (HEI) in the UK, which includes almost all universities, is eligible to make submissions to any of the Units of Assessment.

To give some idea of the scale of the exercise, there were 2,344 submissions from 159 Higher Education Institutions for the RAE 2008. Each submission listed the 'research active' staff selected for assessment by the institution. It should be noted that institutions could decide how many research active staff to submit, and the proportions of staff submitted varied widely between institutions and departments. Extreme selectivity could therefore make it appear as if only the highest quality research was carried out an institution.

The "primary purpose of the RAE 2008" was "to produce quality profiles for each submission of research activity made by institutions" (HEFCE, 2009a). The research profile consisted of three elements: research outputs, which accounted for 70% of the overall quality profile; with 20% made up from the research environment; and 10% from evidence of esteem, such as editorships of major journals and policy advice. The most important part of

each submission was therefore the list of up to four of the best research outputs produced by each 'research active' member of staff during the relevant period, from the beginning of 2001 to the end of 2007. It should be noted that these outputs were selected by the institution, not the individual research active academic. Every output submitted was graded by the RAE 2008 panel according to one of four quality levels unless it was unclassified, as set out in Table 1, but these individual gradings were not published. Instead they were aggregated to produce a graded profile for all Research Outputs in each submission. Table 2 shows the overall profile and its components for Warwick Business School, the third largest submission with 130.7 full time equivalent (FTE) staff submitted. The Table also shows the so-called GPA, or average ranking, which is the figure that was used to rank institutions when the RAE 2008 results were published. The REF will operate along similar lines to the last RAE 2008, with each submission given a quality profile (hefce, 2009b).

Table 1 about here

Table 2 about here

The 1996 and 2001 RAEs worked differently, with panels awarding each submission a single numerical rating on a seven-point scale, from 1, the lowest rating, through 2, 3b, 3a, 4, 5, and 5*, the highest, according to how much of the work submitted was "judged to reach national or international levels of excellence". This single rating then determined the level of funding in the subsequent period. In the RAE in 2001 the Business and Management panel had the largest number of submissions, 97, and it had the largest number of research active staff submitted, with 2,555 full time equivalent staff (FTEs). But it was the most selective in terms of its ratings, with only three institutions getting a 5* rating, and only 36% of research active staff in submissions rated 5* or 5, compared to 62% in History, 80% in Accounting and Finance, 83% in Law, and even with the economists' mantra of "no grade inflation," 50% in Economics. In other words, compared to other units of assessment, in the RAE in 2001

Business and Management was dominated by a relatively small number of submissions from large elite schools, which then received the bulk of the funds available.

Business and Management was by far the largest Unit of Assessment again in RAE2008, with 3,338 academic staff in 90 submissions. By contrast, for the RAE2008 there were only 159 FTEs in 14 submissions for Accounting and Finance, and 838 FTEs in 35 submissions for Economics and Econometrics. The eighteen members of the Business and Management Studies RAE panel were faced with the prospect of assessing 12,575 outputs, or 700 each, most of which, as Table 3 shows, were journal articles. As Table 4 shows, there was also a big increase in the number and proportion of ftes in the highest rating, up from 280 ftes in the 5* departments in 2001 to the equivalent of 554 ftes in the 4* category in 2008.

Table 3 about here

Table 4 about here

Business and Management was no longer the most selective panel in RAE 2008. With an overall GPA of 2.55 it was ranked 42nd out of 67 UoAs, just below the average overall GPA of 2.58, as can be seen from Table 5. Even so this was a long way behind Economics and Econometrics, the highest ranked UoA with a GPA of 3.01. To put this into perspective, the GPA for the Economics UoA as a whole was higher than all but three submissions in Business and Management, Cambridge, Imperial, and London Business School. Only four out of 35 submissions in Economics and Econometrics had a GPA lower than the overall GPA for Business and Management.

Table 5 about here

On the face of it UK research in Economics and Econometrics could be said to be of a much higher quality than research in Business and Management, with 27% reaching the grade 4 quality level in Economics, and 49% reaching the grade 3 quality level of "originality, significance and rigour," as opposed to only 17% at the grade 4 level in Business and

Management, and 37% at the grade 3 level. Or else the panel members in Economics and Econometrics had a better understanding of measurement and the social construction of quality than their counterparts in other panels, especially the neighbouring field of Business and Management. As a result Economics and Econometrics enjoyed an average level of Hefce funding for 2012-13 of £20,598 per FTE submitted in the RAE 2008, even higher than the overall average funding per FTE, which includes the better funded science, technology, engineering and medicine subjects (STEM). Business and Management received £12,857 per FTE in 2012-13, and will have to settle for a lower level of funding than Economics and Econometrics until the REF. By that time hopefully the quality of research in Business and Management will have improved relative to Economics and Econometrics, or else the Business and Management panel members' grasp of quality will be enhanced.

Even if Business and Management was well behind Economics and Econometrics in the RAE 2008, the outcome was a significant improvement on RAE 2001. It could be argued that the proliferation of journal quality lists was partly responsible for this improvement. From the various analyses of RAE 2001 submissions (Beattie & Goodacre, 2006; Easton & Easton, 2003; Mingers & Harzing, 2007; Geary, Marriott, & Rowlinson, 2004), individuals and institutions could easily see which journals the elite 5 and 5* schools had submitted outputs from in the RAE 2001. They might also have believed that with the profiling system they were more likely to receive the same funding as the elite schools if they submitted outputs from the same journals. It was obvious from the RAE 2001 that the elite schools did not publish in a discrete set of elite journals. This meant that the RAE 2008 panel could no longer sample outputs from institutions to produce the profiles, as they had done for the single numerical ratings in RAE 2001 (Bessant et al., 2003). They would either have to use a proxy measure of quality, such as citation metrics or journal ratings, or else claim to have read just about everything.

2 The Debate on Journal Rankings

There have been calls for "a moratorium on journal-ranking lists" (Tourish, 2010), on the grounds that they are detrimental to scholarship (Mingers & Willmott, 2012). As the most widely used journal rating list in the UK, the *ABS Guide* (2010) has been singled out for criticism, with Mingers and Willmott (2012: 15) calling for "an agreement amongst self-regulating peers to suspend, and so effectively abolish, its use". The editors of the *ABS Guide* have been denounced as self-appointed gerontocrats, who know they could never recognize academic excellence for themselves (Burrell, 2011). According to Willmott (2011: 438), one of the business and management REF panel members, the auto-asphyxation fetishists who produce the *ABS Guide* are illiterate wankers with no passion for ideas, who can find time to endlessly revise their list but not "for the critical task of reading." The Association of Business Schools has been dismissed as a "moribund organization" desperate to find "a marketing tool" (Parker & Thomas, 2011). Less amusing are allegations that the editors of the *ABS Guide* have abused their "privileged position" to raise the ratings of journals they are associated with (Hoepner & Unerman, 2012: 5). Many critics of the *ABS Guide* share a view that if only their academic "leaders," such as the deans of business schools and REF panel members, "actually read lots of material" then they would be able to "recognize quality itself" (Burrell, 2011), but the availability of lists distracts them from the necessary academic task of critical reading.

There is little chance of a moratorium on journal lists. It is difficult to keep track of the number of lists in circulation, but to give some idea it is worth considering the *Journal Quality List* compiled and edited by Harzing (2013) at the University of Melbourne. The *Journal Quality List* first appeared in 2000 and was followed by 48 revised editions up to February 2013, with five editions during 2012. The *Journal Quality List* (Harzing, 2013) gives rankings for more than 900 journals from about twenty other lists, including the *ABS*

Guide and the *Australian Business Deans Council Journal Quality List* (ABDC, 2010). This in turn is a much larger list of 2,671 journals that covers wider fields than the *ABS Guide*, including a large number of commercial and contract law journals. Even if there was an "agreement amongst self-regulating peers" to effectively abolish the *ABS Guide* in the UK (Mingers & Willmott, 2012), which is unlikely and undesirable, it is difficult to see how their remit could run as far as Australia or the rest of the world. If these "self-regulating peers" were indeed successful in abolishing journal lists perhaps they could turn their attention to the abolition of nuclear weapons next.

The most influential journal ranking lists are not produced by academics but by multinational corporations, in particular the *Journal Citation Reports* from Thomson Reuter's *ISI Web of Knowledge*. These are the lists that publishers are most interested in, and editors of journals are expected to make every effort to ensure their journal is listed by *ISI Web of Knowledge*, which only accepts journals that meet certain standards such as regular publication and a sufficient number of citations. It is worth noting that *Critical Perspectives on Accounting* is not currently listed by *ISI Web of Knowledge.* 56 lists for separate subject categories in the social sciences are currently produced by *ISI Web of Knowledge*, with journals in each list ranked by their citation impact factor. These include Business, with 113 journals in the 2011 Journal Citation Reports, Economics with 321 journals, and Management with 168 journals.

Even critics of the *ABS Guide* seem to accept citation impact rankings as if they are an unavoidable fact of life. For example, Parker and Thomas (2011) complain that one of the obstacles they faced in making *Organization* a critical journal was that as soon as it started the journal "became a source of comparative data for Thompson Scientific, who publish the journal citation reports." But journals do not have to be listed by *ISI Web of Knowledge*. An application has to be made and a lot of journals are turned down. So if Parker and Thomas

really wanted to be explicit about their refusal to engage in the gerrymandering of citation metrics, as they put it, they could ask for *Organization* to be withdrawn from the *ISI Web of Knowledge*. Then of course the homepage for *Organization* could not continue to inform its readers and, perhaps more importantly, potential authors, that the journal has an Impact Factor of 1.671, and is ranked 52 out of 168 in the Management list from Thomson Reuters Journal Citation Reports.

The *Financial Times* also produces an influential list of 45 elite journals, which is used to rank business schools for the research component in its annual *Global MBA* rankings. Again, although critics of the *ABS Guide* maintain that their "criticism applies to all journal lists" (Willmott, 2011), they are less vocal when considering the possible distortions that might result if research is subordinated to MBA rankings, although these are more akin to the media rankings of law schools (Espeland & Sauder, 2007) that the critics have likened to the *ABS Guide* (Willmott, 2011).

The lists produced by powerful multinationals and media corporations might be considered a more appropriate target for critical management studies and critical perspectives on accounting rather than lists produced by fellow academics. But the centrality of the *ABS Guide* in the UK debate makes it useful as the basis for comparing alternative measures of research quality, especially as previous research on the outcome of the RAE 2008 in business and management has also used the *ABS Guide* as the basis for comparison (Taylor, 2011; Mingers, Watson, & Scaparra, 2012).

3 Critiques of Journal Ratings

From the rancorous debate on journal rankings it is possible to identify at least four major critiques of journal lists, some of which appear to be contradictory. As a starting point it is worth quoting the feedback from the RAE 2008 Main Panel that included business and management in relation to journal rankings:

> The sub-panels assessed virtually all the submitted work by examining it, and did not use its place of publication as an evaluative criterion. It is worthy of note that there was not a perfect correlation between the quality of a piece of work and its place of publication. Although much top-quality work was indeed published in what are generally regarded as leading journals, top quality work could also be found in journals occupying a lower position in conventional rankings. Similarly, some of the work considered that had been published in so-called leading journals was thought to be of less than top quality. The proportions in each of these categories also varied across sub-disciplines. There was also a considerable amount of work published in books or other formats, some of which was of world-leading quality. It would therefore be inappropriate in the future to use assessments of journal quality alone to assign quality ratings to individual items of work (RAE2008, 2009).

Although there may not have been "a perfect correlation," it is generally accepted, following Taylor's (2011) analysis, that the actual research output scores for RAE 2008 submissions in Business and Management were "highly correlated" with the predicted scores from the *ABS Guide*, which in turn is highly consistent with other rating schemes (Harvey et al., 2010). Even given this degree of correlation at the aggregate level, Mingers et al (2012; Mingers & Willmott, 2012) have shown that there were sufficient differences at the grade levels of individual journals for a meaningful discussion of the discrepancies between the *ABS Guide* and the judgment of the RAE 2008 business and management panel as the basis for considering critiques of journal rankings.

3.1 Reliability of expert peer review

The business and management panel in the RAE 2008 claims to have read virtually all of the 12,575 outputs that were submitted to it "in considerable detail," with discussion to ensure consistency between panel members (RAE2008, 2009: 5). Panel members acknowledge that

the expectation that they would not be able to read all the outputs in detail led to a view that they would resort to using journal lists (Mingers & Willmott, 2012). But since they did manage to read all the outputs they take it as self-evident that they would be able to determine what constitutes, "Quality that is world-leading in terms of originality, significance and rigour." This reinforces the view of critics of the *ABS Guide* who argue that the best way to select publications for submission in the REF is for subject field experts within a school to "read and re-read the work" (Tourish, 2012). The implication is that these critics share the expertise of the panel members in being able to "recognize quality" for themselves when they see it (Burrell, 2011). The obvious objection to this view is that research quality is likely to be judged from different paradigms. For critical scholars, for example, almost all of the articles appearing in the leading mainstream American management journals could be seen as "worthless" (Dunne, Harney, & Parker, 2008; Harney & Dunne, forthcoming).

Mingers and Willmott (2010: 15, 2012: 13) have consistently maintained that the RAE 2008 Business and Management panel "was more positive or generous in its assessments than the ABS list at the upper 4* end", and this is a view that appears to be shared by RAE panel members and critics of the *ABS Guide* (Willmott, Edwards, & Parker, 2011; Mingers et al., 2012). Taken in conjunction with the feedback from the RAE Main Panel, these suggestions are open to several interpretations. For example, it could be taken to mean that whereas the focus of the *ABS Guide* on journals in effect downgrades books, book chapters, or conference contributions, the panel treated all forms of publication equally. However, the most obvious reassuring inference for faculty members is that if only those managing REF submissions were suitably qualified and prepared to put in the effort of reading they would recognize the quality of research outputs, as they were recognized in the RAE2008 and will be recognized by the REF panel members, whether or not they are published in highly rated journals in the *ABS Guide*.

In order to clarify the disagreement over whether the process of peer review in the RAE 2008 was more inclusive than the *ABS Guide* three possible propositions can be made:

Proposition 1. Outputs from more journals received the highest grades, 3 and 4, from the Business and Management RAE2008 panel than would be the case if the *ABS Guide* is used to rate outputs;

Proposition 2. More journal outputs received the highest grades, 3 and 4, from the Business and Management RAE2008 panel than would be the case if the *ABS Guide* is used to rate outputs;

Proposition 3. Outputs from more research active staff received the highest grades, 3 and 4, from the Business and Management RAE2008 panel than would be the case if the *ABS Guide* is used to rate outputs.

3.2 Variation in citations for articles in the same journal

Many journal rankings and ratings, such as the various lists generated by the *ISI Web of Knowledge* journal citation reports, are solely derived from some permutation of the citation impact of a journal. Critics of journal rankings argue that the citation impact is skewed by a small number of highly cited articles, which means that a large number of articles which have few if any citations are in effect free riding on the citations of the small minority of highly cited articles (Baum, 2011). This represents an argument against the aggregation of citations for the purpose of ranking, either for journals or for institutions (Adler & Harzing, 2009).

The variation in citations also forms part of Starbuck's (2005) case for questioning the reliability of the peer review process for academic journals. While highly ranked journals do publish more highly cited articles, many articles are not highly cited, and articles in lower ranked journals can also be highly cited. The journal is therefore not necessarily a good proxy for the quality of an article. Starbuck (2005) also cites research which shows that journal editors and reviewers are often inconsistent, and can be influenced in their decision to publish

articles by factors such as the prestige of authors and their institutions. Starbuck's main concern is with the effect of journal rankings in academic hiring decisions. He concludes that journal rankings may reinforce existing institutional hierarchies and norms of research. He argues that academic selectors should use a variety of criteria rather than relying on journal rankings.

The argument against the reliability of any one measure of research quality, especially one that is reliant on peer review, can also be applied to the REF. Following this argument the REF panels would be ill advised to rely solely on either citation metrics or journal ratings, and they would probably be redundant if they did. But the refusal of the business and management REF panel to take any account citation metrics or journal rankings, means that their judgments are likely to be just as unreliable as any other expert peer reviewers, such as journal editors and referees, or even more so given that the outputs assessed in the REF are already published and therefore the REF reviewers are fully aware of the authors' identities, academic reputations, and institutional affiliations. Although it probably cannot be formalized as a testable proposition, it could be suggested that if the gradings by the RAE 2008 panel reflected the variability in citations for articles in the same journal as a measure of quality, then there would be a high dispersion of gradings for articles from the same journal.

3.3 Subject Field Bias in Journal Ratings

One of the major problems for journal rankings and ratings based on journal citation impact factors is that citation patterns vary between subject fields. The *ABS Guide* has been subject to a series of critiques which allege that its subject field normalization has inherent biases in relation to subject fields, with a particular bias against journals in accounting (Hoepner & Unerman, 2012), operations research (Mingers, 2008; Mingers & Willmott, 2012), and inter-disciplinary research (Rafols, Leydesdorff, O'Hare, Nightingale, & Stirling, 2012). These critiques rely on sophisticated analyses of citation data. Rafols and his colleagues at SPRU

(2012) also draw on insights from extensive network analysis of citation data. However, they are all predicated on assumptions that research quality can be inferred from citations, and that subject fields, such as those specified in the *ABS Guide*, are sufficiently self-contained to be compared. While the citation data can be contested, especially in relation to the alleged bias against accounting journals, it remains the case that subject field construction and normalization are problematic.

The twenty two so-called subject fields in the *ABS Guide* are an eclectic mix of categories consisting of: academic disciplines (Business History; Economics; Organization Studies; Operations Research and Management Science; and Psychology); business functions (Accounting; Finance; Human Resource Management and Employment Studies; Information Management; Marketing; Operations and Technology Management; and Business Strategy); industries (Tourism and Hospitality Management); sectors (Entrepreneurship and Small Business; International Business and Area Studies; Public Sector Policy, Management and Administration; and Sector Studies, covering a wide range of specialisms that includes health and education); issues or interests (Ethics and Governance; Innovation and Technology Management; Management and Education); as well as more or less residual categories (General Management, which includes many of the leading business and management journals; and Social Sciences).

It is quite conceivable that an economist, or a psychologist, or an organization theorist, could carry out research on, say, the ethics of accounting in a publicly owned hospital. The economist would then be faced with a decision as to whether to send an article to a journal in economics, accounting, public sector management, the health sector, ethics and governance, or general management. The choice could well be informed by an assessment of the relative reputation of various journals and the likelihood of reaching interested readers

who might then cite the article. So the subject field categories in the *ABS Guide* are obviously not mutually exclusive.

In order to demonstrate a bias against a particular subject field in the *ABS Guide* it would be necessary to show that the subject field is relatively self-contained so that subject field specialists are restricted in their choice of journals to publish in. Only then would it make sense to provide a detailed analysis of the, "Statistical distribution of journal rankings across subject areas" in the ABS Guide (Hoepner & Unerman, 2012), and to pose the question of exactly how many 3 or 4 rated journals should accounting have? Furthermore, the propositions set out in relation to the reliability of peer review can be extended to particular subject fields. So for example for accounting the following propositions could be made:

> **Proposition 1a.** Outputs from more accounting journals received the highest grades, 3 and 4, from the Business and Management RAE2008 panel than would be the case if the *ABS Guide* is used to rate outputs;
>
> **Proposition 2a.** More accounting journal outputs received the highest grades, 3 and 4, from the Business and Management RAE2008 panel than would be the case if the *ABS Guide* is used to rate outputs;

3.4 Distortion of research audits through journal rankings

The critique of journals rankings has deflected criticism from the RAE and the REF, which have become accepted and institutionalized with the implication that were it not for the proliferation of rankings they would function well as research audits. It is true that the RAE 2008 did not actually rank institutions, and neither will the REF, as the profiles are intended for determining the allocation of resources, which means that smaller, more selective submissions could be highly ranked but receive less funding than larger more inclusive submissions. But the RAE 2008 profiles were immediately turned into rankings, based on the

GPA, as the REF profiles will be. Some assessment of the relative importance of the resource allocation function of the research audits and their role in institutional rankings can be inferred from examining the level of research funding received by institutions as a proportion of their income, especially compared to their level of income from teaching.

4 Examining the data for journal outputs from the RAE 2008

As previous researchers have noted (Geary et al., 2004; Mingers et al., 2012), the data from the submissions published by the RAE 2001 and RAE 2008 is messy, with numerous inconsistencies in the spelling of journal titles for example, which necessitates a laborious process of cleaning the data. One problem this creates is that there is not a common shared clean data set, which makes comparisons between different researchers difficult. The data for this paper has been supplied by from the data analysis conducted in the process of producing the *ABS Guide* (Harvey et al., 2010).

The main comparison is with the data produced by Mingers, Watson, and Scaparra (2012), who have estimated the actual rating of journal outputs in the RAE2008 using linear programming to analyse the published data. From this procedure they have given an estimated rating for all 695 journals from which 3 or more outputs were submitted. These journals account for 10,430 outputs, 83% of the total outputs submitted in Business and Management. In effect they have produced a quality profile for each journal, with an estimation of the percentage of outputs in each grade, and an overall modal grade assigned to each journal. The Appendix shows the grading for the forty journals with the most outputs submitted in the RAE 2008. Helpfully Mingers et al also include the ratings from a previous version of the *ABS Guide* (Kelly, Morris, Rowlinson, & Harvey, 2009) for each journal, along with its ABS subject field. So for example they estimate that 47% of the 144 outputs submitted from *Organization Studies* were graded 4*, with 53% graded 3*, which gives *Organization Studies* a modal 3 rating, the same as *Journal of Management Studies*, for

which they estimate that 100% of the 219 outputs submitted were graded 3*. This means that the gradings from Mingers et al. are a useful corrective in relation to more optimistic assessments of prospective REF submissions.

4.1 Comparing the rating of journals and outputs in the RAE 2008 and the ABS Guide

A straightforward comparison between the RAE2008 grading of outputs and the *ABS Guide* ratings is possible if the estimate of Mingers et al. (2012) is taken as corresponding to the ratings of outputs by the business and management panel. It should of course be acknowledged that the actual ratings of outputs in the RAE 2008 cannot be known, and the estimated gradings produced by Mingers et al. (2012) need to be used with caution. According to Mingers et al.'s estimate, in the RAE 2008 there were 175 journals with one or more outputs graded four, and even on the stricter modal rating used by Mingers et al, 121 journals were in effect 4 rated, 17% of the 695 journals given a rating, and 200 journals, 29%, were 3 rated. By comparison only 94 journals are 4 rated in the current *ABS Guide*, 11% of the total 825 journals listed (Harvey et al., 2010). As Chart 1 shows, if a comparison is made within the set of 695 journals used by Mingers et al, which uses a previous version of the *ABS Guide*, only 84 journals from the *ABS Guide* were 4 rated, and 180 journals were 3 rated. The *ABS Guide* does not have an unclassified category, so the 121 journals that are shown as unclassified are simply not listed in the *ABS Guide*, and in many cases this can be explained by the inevitable discrepancies between the two lists. Overall this comparison supports **proposition 1,** that outputs from more journals received the highest grades, 3 and 4, from the Business and Management RAE2008 panel than would be the case if the *ABS Guide* is used to rate outputs;

Chart 1 about here

The number of outputs with a higher rating should also be compared, along with the number of journals. Here it is clear that even within the list compiled by Mingers et al, only

1,567 journal outputs were graded 4 by the RAE 2008 panel, whereas 2,374 outputs were in ABS 4 rated journals, as shown by Chart 2. The explanation for this would appear to be that the RAE panel awarded higher gradings than the *ABS Guide* for outputs from journals with low ratings but with relatively few outputs submitted. Again, the 505 unclassified outputs in the *ABS Guide* can be largely explained by discrepancies between the two lists.

Chart 2 about here

As shown in Chart 3, even if the outputs submitted for the RAE 2008 are run through the more recent *ABS Guide* (Harvey et al., 2010), which has fewer journals listed than previous versions, 18% of total outputs are from 4 rated journals, whereas only 14% of outputs were 4 rated in the actual RAE profiles. According to Mingers et al's (2012) estimate, 12% of the 4 rated outputs were from journals with more than 3 outputs submitted, with the rest coming from other journals or other forms of output. There is no implication in the *ABS Guide* that outputs from non-listed journals or non-journal outputs such as books, book chapters, or conference papers cannot be highly rated. But even if it is assumed that if the *ABS Guide* (Harvey et al., 2010) is used to rate the outputs submitted in RAE 2008 only outputs from ABS listed journals can be graded higher than 1, the proportion of outputs in ABS 3 or 4 rated journals still actually exceeds the proportion of total outputs graded 3 or 4 by the RAE panel. This contradicts **proposition 2,** that more journal outputs received the highest grades, 3 and 4, from the Business and Management RAE2008 panel than would be the case if the *ABS Guide* is used to rate outputs.

Chart 3 about here

The explanation for the higher number of outputs rated 3 or 4 by the *ABS Guide* as opposed to the higher number of journals with outputs graded 3 or 4 in the RAE 2008 would seem to be that the RAE panel upgraded outputs from low rated journals with a smaller number of outputs submitted, and downgraded outputs from high rated journals with a large

number of outputs submitted. This is indicated in Chart 4, where the slopes for the RAE 3 and 4 gradings, as estimated by Mingers et al. (2012), rise more slowly than the ABS slope for the journals with a large number of outputs submitted. But the RAE slopes continue to rise for journals with a small number of outputs submitted, whereas the ABS slopes flatten out. So, for example, the *Review of Industrial Organization* is rated 2 in both the 2009 and 2010 versions of the *ABS Guide*, but Mingers et al. (2012) estimate that all three outputs submitted from the journal in the RAE 2008 were graded 4 by the panel. Similarly the *Journal of Economics and Business* is rated 1 in the *ABS Guide*, but Mingers et al. estimate that all five outputs submitted from the journal in the RAE 2008 were graded 3 by the panel.

Chart 4 about here

The forty journals with the most outputs submitted (see Appendix) accounted for 3,659 outputs in the RAE 2008, 30% of the total outputs submitted. Of these forty journals Mingers et al. estimate that only two have a higher modal grade from the RAE panel than their rating in the 2010 *ABS Guide*, namely the *European Journal of Information Systems*, and the *Industrial Relations Journal*. By contrast 19 journals out of the 40 have a lower modal grade from the RAE panel than their rating in the *ABS Guide* (Harvey et al., 2010), including *Critical Perspectives on Accounting*, for which, according to Mingers et al.'s estimate, all 89 outputs submitted were graded 2 by the RAE 2008 panel.

Another interpretation of the suggestion that the RAE panel was more generous in its assessment than the *ABS Guide* is in relation to their inclusivity of research active staff. Since the grading of outputs was not individualized in the RAE it is not possible to calculate the overall grading of outputs from each individual research active staff member submitted. However, it is possible to show how their outputs would be rated by the *ABS Guide*. As can be seen from Table 5, only 118 individuals submitted four outputs from 4 rated journals in the current *ABS Guide*, 3.3% of the total 3,540 staff submitted. But 1,262 staff submitted at

least one output from an ABS 4 rated journal, and 2,776 staff, 78.5% of the total, submitted at least one output from an ABS 3 or 4 rated journal. Only 172 staff, less than 5% of the total, did not submit any outputs from ABS rated journals, which could be taken as an indication of the inclusivity of the *ABS Guide*. **Proposition 3**, that outputs from more research active staff received the highest grades, 3 and 4, from the Business and Management RAE2008 panel than would be the case if the *ABS Guide* is used to rate outputs, must at least be questioned. The claims of inclusivity on the part of Business and Management panel members from RAE 2008 are based on inside knowledge which they know they cannot share and therefore cannot be tested.

Table 6 about here

Since the *ABS Guide* is commonly used to calculate total scores for individual staff in potential REF submissions, it is also worth considering the distribution of scores from ABS listed journals in the last RAE, as in Chart 5. As outlined above, only 118 staff scored the maximum possible 16, and only 102 more scored 15. Only 905 staff, 26%, scored 12 or more. Interestingly if the rating for *Journal of Management Studies* is downgraded from 4 to 3 then only 81 staff score 16, and only 89 more score 15. In fact 169 outputs from *Journal of Management Studies* were submitted for staff with an ABS score of 12 or more, which gives some idea of its status.

Chart 5 about here

4.2 Comparing the variation in RAE 2008 gradings and citations for articles in the same journal

As the journal with the most outputs submitted in the RAE 2008 the *Journal of Management Studies* (*JMS*) provides a useful example for comparing the citation counts for articles with the gradings from the RAE 2008. According to the estimate by Mingers et al (2012), all 219 articles submitted from *JMS* were graded 3 by the RAE 2008. However, the citation counts

for articles published in *JMS* are as skewed as for other leading journals, with a small number of articles receiving a large share of the citations for the journal (Baum, 2011). It might be expected that the consistency in the grading of articles in the RAE 2008 can be explained by the selection of articles for submission. At the higher end it has been argued that European journals rely on attracting articles from highly cited North American authors in order to boost their citation impact factors (Battilana, Anteby, & Sengul, 2010). If that were the case then the most highly cited articles, even from European journals with high citation impact factors, would not be available for submission in the UK RAE. At the lower end it might be expected that fewer articles with a low number of citations would be selected for submission in the RAE. The combined effect of these two tendencies would mean that articles submitted to the RAE from the *JMS* might be expected to cluster in the middle, and therefore be graded 3.

There are 438 outputs listed in Web of Knowledge from *JMS* for the period January 1st 2001 to December 31st 2007, corresponding to the RAE 2008 period. This includes all articles and reviews but excludes book reviews and editorial material. Two of the outputs submitted from *JMS* for the RAE 2008 were editorial introductions to special issues, but the remaining 217 were all articles or reviews, making up nearly half of the articles and reviews published in the journal. As Chart 6 shows (data downloaded from Web of Knowledge on October 8th 2012), the outputs submitted reflected the spread of citations for outputs in the journal, where only 83 articles account for 50% of the total 12,453 citations. The articles submitted for the RAE 2008 account for 6,056 citations, nearly half of the total, and four of the nine outputs with more than 100 citations were submitted in the RAE, including the three most highly cited outputs. In other words the consistency in the grading of outputs from *JMS* in the RAE 2008 is not reflected in the citation counts for those articles, which suggests that quality as determined by the business and management panel RAE does not correspond to the citations for individual articles, even if there is some correlation with journal impact factors.

Chart 6 about here

4.3 Comparing journal ratings and the separability of subject fields

The alleged subject field bias in the *ABS Guide* can be assessed in relation to accounting (Hoepner & Unerman, 2012), which according to Mingers et al.'s (2012) estimates scored highly in the RAE 2008 compared to other subject fields. Only 25 of the 35 journals that are listed as Accounting in the current *ABS Guide* appear in Mingers et al.'s estimates, but according to Mingers et al.'s strict modal rating the RAE 2008 panel gave a four rating to one more journal than the *ABS Guide*, as shown in Table 6. This could be construed as modest support for **proposition 1a,** that outputs from more accounting journals received the highest grades, 3 and 4, from the Business and Management RAE2008 panel than would be the case if the *ABS Guide* is used to rate outputs.

Table 7 about here

When it comes to considering the ratings for outputs the picture is more mixed. According to Mingers et al.'s (2012) estimate, more outputs from accounting journals were graded 4 in the RAE than would be if the *ABS Guide* were used to grade outputs. But as Chart 7 shows, many more outputs would be given a 3 rating if the *ABS Guide* was used than were graded 3 by the panel in RAE 2008, which graded all 89 outputs from *Critical Perspectives on Accounting* at 2, whereas the journal is rated 3 in the *ABS Guide*. This leaves open **proposition 2a**, that more accounting journal outputs received the highest grades, 3 and 4, from the Business and Management RAE2008 panel than would be the case if the *ABS Guide* is used to rate outputs.

Chart 7 about here

Both these propositions in relation to accounting journals and outputs from those journals rest on an implicit assumption that subject fields are more or less hermetically sealed off from each other, as if accounting outputs are readily identifiable and only appear in

accounting journals. But this is a questionable assumption. To illustrate the point it is worth considering the 116 researchers who submitted outputs from either *Critical Perspectives on Accounting* or *Accounting, Organizations and Society*, the two accounting journals with the highest number of outputs submitted in the RAE 2008, with 89 and 82 outputs submitted respectively. These 116 researchers submitted 234 outputs from 84 other journals, and by no means all of them were accounting journals, including many of the journals with a large number of outputs submitted in the RAE, such as: *Human Relations* (9 outputs submitted from researchers who also submitted outputs from either *Critical Perspectives on Accounting* or *Accounting, Organizations and Society*); *Organization Studies* (9 outputs); *Journal of Management Studies* (8 outputs); *Organization* (8 outputs); *Business History* (7 outputs); and *Human Resource Management Journal* (4 outputs).

The wide variety of journals available for accounting researchers supports a view that researchers in business and management are able to publish across a range of journals, which means that subject fields are somewhat artificial, as are references to biases against them. This point has been illustrated in relation to Business History (Rowlinson, Harvey, Kelly, Kestinova, Morris, & Todeva, 2010), which is one of the smallest subject fields in the *ABS Guide*. Chart 8 represents a network for all 32 authors with at least one output from *Business History* submitted to the Business and Management Studies panel in RAE2008. Each node represents a journal from which an article was also submitted for one or more of these 32 authors. The size of the nodes represents the total number of articles submitted from a journal, and the thickness of the lines represents how many of the 32 authors had articles submitted from both journals. The node for *Journal of Management Studies* is largest as it was the journal with the most articles submitted. Most of the forty journals represented in the network are not historical journals, and the quality of the journals varies widely, with only eight being 4 rated in the current *ABS Guide*. This suggests that business and management

authors in *Business History* have a broad orientation, rather than a narrow specialist interest in business history, and publish across a wide range of journals.

Chart 8 about here

In their critique of the *ABS Guide* for its alleged "prejudices … against areas within accounting and finance," specifically accounting education and accounting history, Hoepner and Unerman (2012) cite various sources of citation data, as well as several other journal ratings lists such as the more generous Australian Business Deans Council list. But they ignore Taylor's (2011) finding of a strong correlation between the ratings of outputs in the *ABS Guide* and actual research output scores for RAE 2008 submissions in Business and Management, as well as the estimated grading of outputs in the RAE 2008 by Mingers et al. (2012). Hussain (2011, 2012), another critic of the alleged bias against accounting in the *ABS Guide*, also ignores Mingers et al.'s estimates, but acknowledges Taylor's (2011) findings of a correlation, while highlighting "some significant deviations between predicted and actual RAE performance" for particular submissions (Hussain, 2011: 550). As Table 8 shows, with the exception of the *Accounting Historians Journal* and *Accounting History*, from which only eight and three outputs respectively were submitted to the Business and Management panel in RAE 2008, accounting education and business history journals are not treated harshly in the *ABS Guide* by comparison with Mingers et al.'s estimated gradings of their outputs by the panel in RAE 2008.

Table 8 about here

Hoepner and Unerman (2012) seem to assume that research in accounting history and accounting education can only be published in the specialist journals. Their argument is supported by Sangster's (2011) personal experience of having accounting education and accounting history papers rejected by "mainstream education journals, business history journals, and accounting journals." However, a cursory look at the 82 outputs submitted to

the RAE 2008 business and management panel from *Accounting, Organizations and Society*, which is 4 rated in the *ABS Guide*, suggests that it is by no means closed to historical research. On the face of it from reading the titles and abstracts at least a dozen of these articles, 15% of the total, could be counted as historical, including: Bryer's "Marxist Accounting History of The British Industrial Revolution"; Edwards' "case of the Incorporated Institute of Accountants, Victoria (1886)"; Napier's "30 years of historical accounting research"; Quattrone's "Accounting and Accountability Practices in the Society of Jesus (Italy, 16th - 17th centuries)"; Suzuki's "History of Japanese Accounting Reforms"; and Toms' "Lancashire Cotton Mills 1870-1914."

From their outputs submitted in the RAE 2008 it appears that leading researchers associated with accounting history are able to publish historical articles in a range of journals, including: *Accounting & Business Research* (Boyns, Maltby); *Accounting, Business & Financial History* (Batiz-Lazo); *Accounting, Auditing, and Accountability Journal* (Boyns, McCartney); *Accounting, Organizations & Society* (Toms x 2); *British Accounting Review* (Maltby); *Business History* (Batiz-Lazo); *Critical Perspectives on Accounting* (Maltby, McCartney); *European Accounting Review* (Boyns); *Financial History* (Batiz-Lazo); *International Journal of Bank Marketing* (Batiz-Lazo); *Journal of Management Studies* (Toms); *Management Accounting Research* (Boyns); and *Organization Studies* (Toms). The range of these journals with publications from just five researchers submitted in RAE 2008 suggests that accounting historians are by no means restricted to publishing in specialist accounting history journals, and given that several of these journals are 3 or 4 rated in the *ABS Guide* it is difficult to argue that they are disadvantaged by the *ABS Guide*.

4.4 Resource allocation and institutional rankings from the RAE/REF

The increase in the number of FTE research active staff submitted in RAE2008 and the improvement in the quality gradings by the panel resulted in an increase in research funding

for Business and Management Studies, with funding in England (excluding Scotland, Wales, and Northern Ireland which have their own funding arrangements) up from £29.2m in 2008-09 to £53m in 2009-10. Across the whole UK there was a 48% increase in research funding for business and management, up from £44.5million in 08-09 to £65.5 million in 2009-10.

When it was announced that the RAE in 2008 was going to introduce institutional profiles rather than single ratings, it was obvious that it would mean a radical redistribution of funds in business and management. As Chart 9 shows, after the RAE in 2001 the top 40% of ftes received over 80% of the funding, and the bottom 30% received nothing. The redistribution of funds from the RAE in 2008 was drastic, with the top 40% of ftes receiving only just over 50% of the funds, and the bottom 30% getting about 20%. In the context of an overall increase in funding of nearly 50%, several leading business schools, such as Aston, Bath, Lancaster, London Business School, and Warwick, actually suffered a cut in their research funding from 08-09 to 09-10, much to the consternation of their supporters (Saunders, Wong, & Saunders, 2011: 402).

Chart 9 about here

Even with the overall increase, research funding still represents a small proportion of income for most business schools. Warwick is one of the few business schools within a major university that publishes its own financial information. According to these accounts, Warwick Business School's turnover was £45.7 million in 2010/11, made up of £5.7m (12%) in research income, and £38.1m from teaching, with about £2m of the teaching income funded by the UK government (WarwickBusinessSchool, 2012).

Warwick's Hefce research funding allocation for 2012/13, based on its RAE 2008 profile, was nearly £3million, making it the third largest recipient. But that is only just under 7% of the school's likely total income. So the REF result will probably be just as important for Warwick in terms of maintaining its profile so that it can attract the best international

postgraduate students as it is for research income. That means it is very likely that teaching income is being used to cross-subsidize research outputs, as it is in most business schools, in order to maintain a respectable research profile in the REF and, in the case of Warwick and other leading business schools, to ensure it is highly ranked in the league tables produced from the REF.

To put this into perspective it is worth considering the figures for student numbers in the UK. The subject fields used in the figures for student numbers from the Higher Education Statistics Agency (HESA) do not correspond exactly to the RAE units of assessment, but nevertheless some comparisons can be made and the disparities are striking. As Table 9 shows, Business and Management, in combination with Accounting and Finance, is far larger than any other subject area, with 15% of all full time students. This includes 66,915 full time postgraduates, 22% of the total number of full time postgraduates in the UK. Business and management attracts roughly one in four international students, making an estimated contribution of £2billion to UK export earnings, but combined with Accounting and Finance it has only 6.7% of research active faculty, as measured by the RAE 2008.

Table 9 about here

Virtually all business schools in the UK have decided that they need to be able to claim to have some research activity, and that claim is only credible if they make a respectable submission in the periodic research audits, the RAE and now the REF. One inference that could be drawn from this is that research activity validated by the research audit is seen as important in terms of teaching and accreditation. But as can be seen from Table 9, the ratio of 71 full time students for every research active member of staff is much higher in business and management than in every other subject. In fact the figures tend to exaggerate the number of students in some other subjects. So for example the figure for 65,195 students in history is actually the total for "historical and philosophical studies,"

which includes archaeology, philosophy, and theology, but the research active FTEs from these subjects are not included in table 9. This makes it appear as history has more full time students per research active member of staff than it actually does have, underestimating the disparity with business and management.

Business schools make a selection of staff and publications, often using the *ABS Guide* as well as external advisers, in order to try to get the best possible GPA profile in the rankings that will be published the day after the REF results come out. The paradox of UK research audits, the RAE and the REF, is that they are intended to distribute valuable funds for research, but in Business and Management, research activity is cross-subsidised by teaching in order to compete in the rankings that are a by-product of the research audits. An assumption underlying this is that teaching will be enhanced if there is research activity within a business school. Therefore, if there is increasing selectivity in REF submissions, with fewer research active faculty submitted overall than in RAE 2008, this must have negative implications for the student experience, especially for the international postgraduates that business schools have been so successful in attracting to the UK.

As Power (1997: 99) noted, RAEs were regarded as a way of creating pressures to separate teaching from research, but this was seen mainly in terms of encouraging a minority of elite institutions to concentrate on research while others abandoned it. If this was the case, then RAEs have had the opposite and unintended effect of encouraging more institutions to submit more research active faculty for assessment in business and management, and this was reinforced by the profiling system adopted for RAE 2008 and in operation for the REF. At the same time research becomes increasingly ceremonial, as predicted by Power (1997), with business schools hiring high profile research active faculty on research-only contracts in the lead up to the REF like Christmas tree baubles before Christmas, with little idea of what they will do with them after the decorations come down, and asking them to teach is not an option.

It is possible to envisage alternative forms of research audit that might mitigate the negative effects on teaching.

Instead of requiring all business schools to produce research that conforms to the same standards, as the RAE/REF does, the AACSB only asks that intellectual contributions should be appropriate to the stated mission of a school (AACSB, 2010: 20). Arguably if business schools were required to account for research in relation to their mission there would be greater accountability for research funding and no need for outputs to be assessed according to artificial predefined quality levels of "originality, significance and rigour." The outcome of research audits might also be less susceptible to rankings and the inevitable gaming that results. But such an audit would be as arduous and time consuming as accreditation visits usually are.

Another alternative that is not difficult to envisage would be the displacement of institutional rankings derived from time-consuming peer review research audits by online rankings using an algorithm to analyse publicly available data. Jeacle and Carter (2011) have demonstrated how the user-generated online ratings from Trip Adviser have increasingly displaced expert social measures for accountability in travel and tourism. Google's *My Citations* demonstrates how publicly available data from Google Scholar could be used to construct research rankings that would displace institutional rankings from expert reviews such as the REF as well as journal ratings such as the *ABS Guide*. As Burrows (2012) points out, in his critique of metrics, the *Times Higher Education (THE)* has already invested heavily in producing institutional rankings and even apps that allow users to construct their own bespoke rankings from citation data. The take up of dynamic online research rankings is likely to be facilitated by user generated content, with accredited academics commenting on rankings and ratings. The question is whether academics can develop online platforms for themselves, possibly as an extension of the *ABS Guide*, allowing for a degree of transparency

and accountability with regard to the algorithms for generating institutional and journal rankings. Otherwise it will be left to governments, university administrators, or media and internet corporations to come up with rankings over which academics will have little or no control.

5 Discussion; comparing citation metrics, journal ratings, and peer review

Critics of journal ratings have tended to conflate the critiques coming from advocates of very different alternatives. Adler and Harzing (2009) have been cited as if they are mainly critics of "journal lists" (Willmott, 2011: 437; Tourish, 2011), such as the *ABS Guide*, whereas in fact Adler and Harzing actually recommend "an immediate, temporary moratorium on *institutional rankings*" (2009: 84 emphasis added). They single out the UK's RAE as a form of national institutional ranking that has "eclipsed scholarly purpose" and distorted the UK's academic job market. According to Adler and Harzing:

> It is not just that ranking systems are inconsistent, volatile, and in many ways inherently unfair; it is also that the motivation systems they engender—including encouraging blatant individual self-interest and a consequent lack of loyalty to any particular university or broader societal mission—undermine the very essence of good scholarship. In addition, such motivation systems lead universities to systematically and corrosively undervalue the importance of teaching and learning (Adler & Harzing, 2009: 84).

Adler and Harzing's (2009) criticism of institutional and journal rankings based on aggregated citation impact factors is associated with an endorsement of individualized citation metrics. They call for "a more robust system", using a "wider array of appropriate approaches to recognize quality". But they favour use of Harzing's *Publish or Perish* software to provide individualized citation indices from Google scholar, such as the individual h-index. It should be noted that this more robust system would have to use *Publish*

or Perish because Google's own more stable and reliable software, *My Citations*, does not make individualized citation indices public unless the individuals choose to make them public. In other words Adler and Harzing favour a level of individual surveillance which so far Google has decided not to facilitate.

Adler and Harzing (2009: 90) specifically endorse the request from the French National Centre for Scientific Research (CNRS) that "all academic researchers provide Google-Scholar-based impact data (using Publish or Perish) in addition to impact data based on Thomson Reuters Web of Knowledge data." The collection of such data makes it possible to produce individualized national ranking of all researchers, as has already been done for business scholars in the island of Ireland (Tol, 2010).

It seems doubtful whether many critics of the *ABS Guide* would favour individualized citation metrics. Citation counting is at least as questionable as a measure of quality for individual articles as the citation impact factor is for ranking journals (Macdonald & Kam, 2011). Journal ratings are not necessarily reliant on citation impact factors. The *ABS Guide* uses citation impact factors as one indicator, and attempts subject field normalization to moderate the effect of differing citation practices in different disciplines. The use of unmoderated citation metrics, whether for individuals or journals, would have the effect of favouring business and management subfields that are more like science in their practices, with strong dominant paradigms and predominantly quantitative methods, at the expense of more qualitative subfields that border the humanities, such as business history.

Journal ratings, as opposed to rankings, attempt to construct some sort of equivalence between journals, often in very different subject fields, and to acknowledge that articles published in journals with comparable peer review processes can be said to have some sort of equivalence, whether or not they are subsequently highly cited, and whether or not capricious reviewers in research audits such as the REF like the articles. So, for example, the *ABS Guide*

recognizes that articles published in the *Journal of Management Studies* have been through a rigorous double blind review process, with three expert reviewers writing extensive reviews through two or even three rounds of reviews. The advocates of individualized citation metrics, in common with the advocates of audits by expert peer review alone, appear to believe that this journal peer review process, which is arduous for authors, editors, and reviewers, can and should be disregarded by research audits such as the REF.

Given that the *ABS Guide* is demonstrably more generous in its grading of journal outputs from the last RAE 2008 than the business and management panel actually was, it is puzzling that criticism has focused on the *ABS Guide* rather than the RAE and REF research audits. One explanation would obviously be that the *ABS Guide* is an easy target for the adherents of critical management studies, so that they can get away with saying, yet again, "Oh look at me! Look how radical I am!" (Parker, 2005). Criticizing the *ABS Guide* conveniently leaves the legitimacy of the research audit itself unchallenged and affirms the elitist assumptions of the REF panel that as experts they can be trusted to know what constitutes quality.

More seriously, the implications of Mingers et al.'s (2012) modelling of the actual grading for journal outputs in the RAE 2008 have been ignored, or else used selectively. When it comes to the RAE results, critics of the *ABS Guide* tend to look for some sugar in the shit to make it more palatable, as Cook (2012: 4) puts it. So for example, Tourish (2011), writing in the journal *Leadership*, cites the estimate from Mingers et al. that all fourteen articles from that journal submitted in the RAE 2008 were graded 3, even though it is only rated 1 in the *ABS Guide*. This is a prelude to the usual litany of complaints about the *ABS Guide*, including its alleged unfair treatment of so-called sub-disciplines such as sustainability that do not even merit their own listing as a separate subfield.

The consequence of the downgrading in RAE2008, as implied by Mingers et al. (2012), of all outputs from the *Journal of Management Studies*, arguably one of the few elite UK-based general management journals, is rarely mentioned. When the matter is raised RAE panel members hide behind the fact that the actual gradings can never be known and the estimate by Mingers et al. (2012) is just that, an estimate, with a hint that in the case of *Journal of Management Studies* the estimate must be wrong. But they cannot have it both ways. Either the outputs from lower rated journals such as *Leadership* were not upgraded, or the outputs from *Journal of Management Studies* were downgraded, because as the straightforward descriptive statistics in this paper show, there were not enough 4 rated outputs in the overall RAE 2008 profile to accommodate both.

This suggests that one of the advantages of the peer review system in UK research audits is that unlike New Zealand's Performance-Based Research Fund (PBRF), individualized profiles are not produced. As long as some outputs were graded 3 or 4 in any RAE submission, any and every faculty member in the submission can claim that it might have been their outputs that were graded 3 or 4, and the same will apply to the REF. The estimated gradings by Mingers et al. (2012) can be cited if they support such claims in relation to the last RAE, and disregarded if they do not. Thus attempts to hold the research audit to account through journal lists are feared lest the panel is forced to reveal its actual gradings. In effect the critics of the *ABS Guide* prefer the anonymity of the aggregate gradings in the RAE profiles, even if it means accepting a lower aggregate profile, to the transparency of individualized gradings being revealed. As long as the correlation correlation between the REF results and the predicted scores from the *ABS Guide*, or any other list, is not perfect, there is at least the possibility of resistance to the kind of surveillance and assessment of individual staff that results from the PBRF in New Zealand (Curtis, 2007).

Critics of journal ratings, along with the REF panel and previous RAE panels, have set up citation metrics and journal ratings as if they are an alternative to critical reading. The implication is that as experts they spend their time reading everything in order to decide what to read. But citation metrics and journal ratings are merely more explicit proxies for the tacit practices that most researchers use to select the most appropriate literature for critical reading and review. Of course in their everyday research practice active researchers are not selecting literature for the purpose of deciding whether it meets artificially predefined quality levels of "originality, significance and rigour." The criteria for selecting literature to be read for research are relevance and interest, which as often as not should lead all but the most instrumental researchers away from the mainstream journals.

The task of the REF panel is therefore not the same as reading for research, which means that citation metrics and journal ratings could be used to decide which outputs probably do not need to be read since their quality has already been recognized through a rigorous process of expert peer review. So, for example, there should be no need to read an article published in the *Journal of Management Studies* that has already been favourably cited say half a dozen times in the short period before it comes to be assessed in the REF because it can already be taken as meeting the criteria for being graded 4. If the REF panel maintains that such an article does need to be read, then they should have been more explicit about the mystery of what constitutes "originality, significance and rigour" instead of expecting the business and management research community to trust that the panel will know it when they see it.

It should be remembered that the proliferation of journal lists is obviously a *response* to the increased pressures from audits, such as the REF, and accreditation bodies such as AACSB. The uncertainty created by the working methods of the auditors on the REF panel is obviously a powerful force for mimetic isomorphism (DiMaggio & Powell, 1991).

Decision makers in business schools will inevitably try to avoid any risk in their REF submissions by imitating what they believe other business schools, and the public adherence to the *ABS Guide* by a few prominent schools reinforces its mimetic role. Criticism of the *ABS Guide* then deflects attention from the REF and the business and management panel members who have the power to vary the level uncertainty. The audit culture created by the REF (Power, 1997) has become institutionalized in the neoliberal academy to such an extent that a single number is increasingly used "as a measure of relative academic worth" (Burrows, 2012: 361). The individualized h-index citation metric is the number that is increasingly preferred by universities:

> to inform the short-listing of candidates for new posts; as an academic 'marketing device' on CVs; as a 'bargaining chip' in professorial salary negotiations; as a variable in statistical models designed to predict RAE outcomes; to rank colleagues in REF 'preparedness' exercises; in decisions about institutional restructuring; and to inform decisions about whether or not to accept papers written by particular authors in journals (Burrows, 2012: 362).

The "ABS score," i.e. the total "score" from the ratings for four articles from the highest ABS rated journals for any individual, represents an alternative to the h-index within business schools, where the ABS score can easily be used as part of a workload allocation model. It is unclear whether critics of the *ABS Guide* (e.g. Hoepner & Unerman, 2012) would prefer it if academics in business schools were subordinated to so-called "objective" citation metrics such as the h-index.

6 Conclusion

The REF panel in business and management faces conflicting pressures. On one side elitist critics argue that the improvement in gradings for business and management in successive RAEs has been illusory. Added to which it has diverted funds from the few internationally

oriented business schools, such as London Business School, whose faculty publish in the small number of internationally recognized A-list journals (Saunders & Wong, 2011; Saunders et al., 2011). From this perspective it would probably be preferable if the REF panel restricted its 4* gradings to a restricted list of journals, such as the 22 "World Elite Journals" in the *ABS Guide*, or more likely the *Financial Times* list of 45 journals, which are almost by definition predominantly quantitative American journals.

On the other side most critics of the *ABS Guide* seem to agree that it is too restrictive in its quality ratings. This is associated with a belief, or a hope, that the REF panel will rectify the deficiencies in the *ABS Guide* by upgrading the outputs from journals that are underrated (Willmott et al., 2011). It is surprising that these critics have not realized that if the *ABS Guide* had been used to rate outputs in the last RAE 2008 then there would have been a higher proportion of outputs graded 3 or 4, even if the ludicrous assumption is made that all outputs from non-ABS listed journals, and all non-journal outputs would be graded no higher than 1. It will be disappointing if the REF panel dashes these hopes and allocates a smaller proportion of 3 and 4 grades than would be allocated if the *ABS Guide* were used to rate the outputs submitted for the REF. This is not to say that the *ABS Guide* should be used by the REF panel, or that 3 and 4 grades should be restricted to outputs from journals that are 3 or 4 rated in the *ABS Guide*. It is only to say that the REF results should be scrutinized bearing in mind that in the lead up to the REF panel members have been happy to play the role of Father Christmas who will bring all the presents that the children want, while letting the children think the editors of the *ABS Guide* are a bunch of Scrooges.

To facilitate closer scrutiny of the REF results it would be helpful if a clean data set of all outputs could be produced as soon as possible after the actual submissions are published, along with descriptive statistics. This would save multiple researchers from the chore of cleaning the data from the REF submissions and allow for analyses using a common data set.

While journal editors have been falling over themselves to publish criticisms of the *ABS Guide*, analyses of the results from the RAE 2008 have taken longer to publish, with Taylor's (2011) correlations with the *ABS Guide* appearing in 2011 and Mingers et al.'s (2012) modelling of the RAE 2008 grades not coming out as a journal article until 2012, even though it was available as a working paper from 2009 (Mingers, Watson, & Scaparra, 2009). Both Taylor's (2011) and Mingers et al.'s (2012) analyses would be well worth repeating for the REF, along with a discussion of any significant changes in the results. That would be more likely if a reputable business and management journal would commit to publishing a special issue devoted to analysis of the REF results and discussion of their implications.

Even with the increase in research active business and management faculty submitted between RAE 2001 and RAE 2008, the ratio of students to research active faculty is far higher than for any other subject field. From HESA data from 2010-11 it can be calculated that there were 71 full time students for every research active fte in business and management submitted in RAE 2008, compared to 52 in education, the next highest, 44 in law, 41 in economics, 37 in history, and 26 in English. Unless the REF is more inclusive, with more research active faculty submitted, which seems unlikely, the ratio of students to research active faculty, as counted by the REF, will continue to rise. The leads to an inexorable logic for research to be separated from teaching, with an increase in research only contracts to enable research active faculty to publish at the highest levels required for the research audits, and teaching only contracts to deal with the increasing volume of students.

For the purpose of teaching audits by the UK Quality Assurance Agency for Higher Education, there is an expectation that research should be "incorporated in teaching activity" (QAA, 2012: 29). If this is taken to mean the involvement in teaching of research active faculty as defined by submission in the REF, then it is an expectation that will become harder to meet. If it can be met by faculty who are not submitted in the REF, then it suggests that the

REF is only auditing a fraction of the research carried out in UK business schools. Instead of mindlessly reading every output submitted to them, the REF panel might be better advised to consider the broader implications of the selectivity they have at least acquiesced in, if not encouraged, by their refusal to make quality criteria more explicit.

Business and management is likely to be the largest Unit of Assessment in the UK REF, and currently has about 15% of all full time UK students, more than any other subject field. Business schools need to consider whether the REF is meeting their need for an inclusive research audit that can validate the range of research that is incorporated in teaching activity and helps to make the UK an attractive destination for international postgraduates. Unfortunately it has to be said that business schools have been punching below their weight in terms of influencing government higher education policy. Partly that is because too many business school faculty, encouraged by REF panel members, have been distracted by a dispute over the use of citation metrics and journal ratings instead of considering the broader context.

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Acknowledgement.

We would like to thank John Mingers for his helpful comments on a draft of this article as well as for permission to reproduce his data in our Appendix.

Table 1. Definitions of quality levels for RAE submission profiles

4*	world-leading in terms of originality, significance and rigour
3*	internationally excellent in terms of originality, significance and rigour but which nonetheless falls short of the highest standards of excellence
2*	recognised internationally in terms of originality, significance and rigour
1*	recognised nationally in terms of originality, significance and rigour
Unclassified	falls below the standard of nationally recognised work. Or … does not meet the published definition of research for the purposes of this assessment

Table 2 RAE2008 Business and Management Quality Profile for Warwick

Warwick	4*	3*	2*	1*	U/C	GPA
Overall quality profile	25	50	20	5	0	2.95
Research outputs 70%	16	50	28	6	0	2.74
Research environment 20%	50	40	10	0	0	3.40
Esteem 10%	60	30	10	0	0	3.50

Table 3 Output types submitted for Business and Management Studies in RAE2008

Description	No.	%
Authored book	285	2.3%
Edited book	60	0.5%
Chapter in book	332	2.6%
Journal article	11,374	90.4%
Conference contribution	85	0.7%
Software	1	0.0%
Internet publication	318	2.5%
Research report for external body	98	0.8%
Other form of assessable output	22	0.2%
Total	12,575	100.0%

Table 4 Distribution of ratings for Business and Management in RAE2001 and RAE2008

RAE2008	4*	3*	2*	1*	U	total		
no ftes	554	1,222	1,098	427	34	3,337		
% ftes	17%	37%	33%	13%	1%	100%		
RAE2001	5*	5	4	3a	3b	2	1	total
no ftes	280	639	664	527	276	157	12	2,555
% ftes	11%	25%	26%	21%	11%	6%	0%	100%

Table 5 RAE 2008 results and research funding 2012-13

Rank by no ftes		UoA	no submissions	FTEs	mean size	% of total FTEs	GPA	QR funding per fte
1	Business and Management Studies	36	90	3,338	37	6.4%	2.55	£12,857
2	Biological Sciences	14	52	2,354	45	4.5%	2.55	£27,537
3	English Language and Literature	57	87	1,851	21	3.5%	2.66	£13,431
4	Computer Science and Informatics	23	81	1,839	23	3.5%	2.75	£25,594
5	History	62	83	1,761	21	3.4%	2.66	£13,137
6	Art and Design	63	72	1,701	24	3.2%	2.35	£13,936
7	Education	45	82	1,696	21	3.2%	2.29	£11,483
8	Physics	19	42	1,686	40	3.2%	2.65	£27,649
9	Law	38	67	1,671	25	3.2%	2.48	£11,213
10	Psychology	44	76	1,659	22	3.2%	2.39	£12,872
11	Other Hospital Based Clinical Subjects	4	28	1,624	58	3.1%	2.81	£28,394
12	Allied Health Professions and Studies	12	70	1,456	21	2.8%	2.04	£13,257
13	General Engineering and Mineral & Mining Engineering	25	52	1,455	28	2.8%	2.66	£27,495
14	Politics and International Studies	39	59	1,269	22	2.4%	2.34	£10,854
15	Social Work and Social Policy & Administration	40	68	1,243	18	2.4%	2.58	£12,571
21	Sociology	41	39	927	24	1.8%	2.47	£11,999
24	Economics and Econometrics	34	35	838	24	1.6%	3.01	£20,598
60	Accounting and Finance	35	14	160	11	0.3%	2.34	£5,969
	totals		2,363	52,409	22	100.0%	2.58	£19,434

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Chart 1

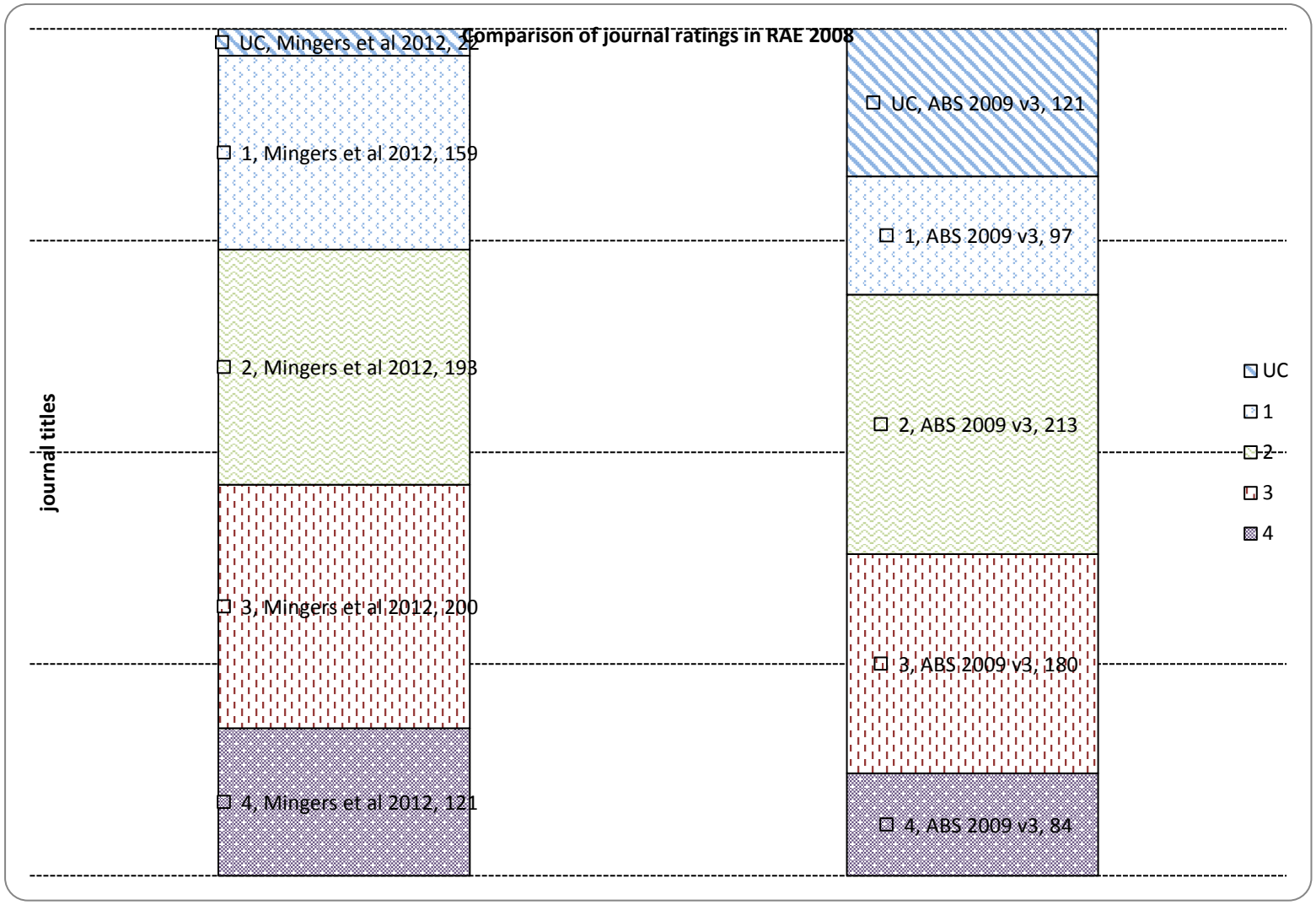

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Chart 2

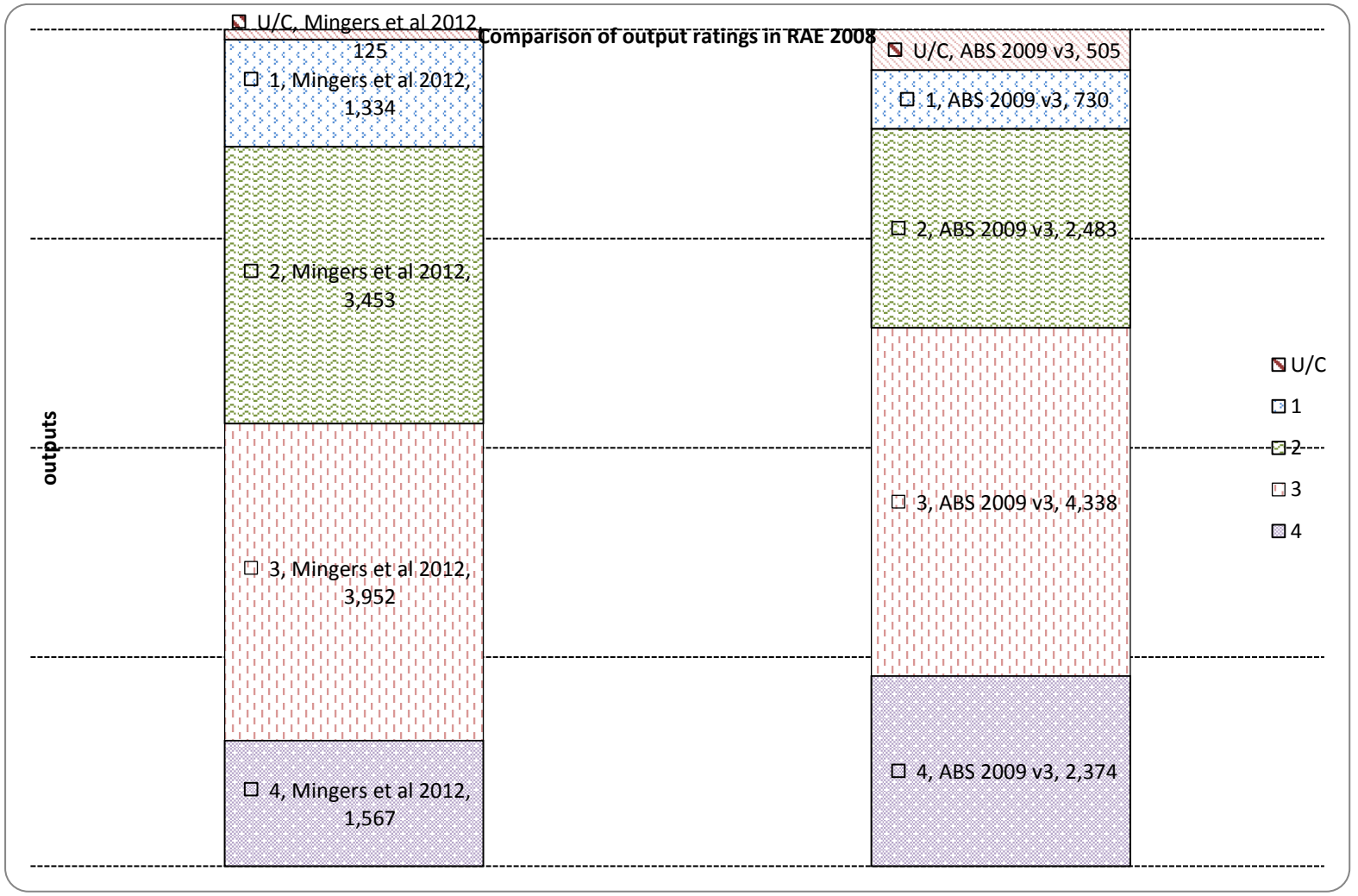

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Chart 3

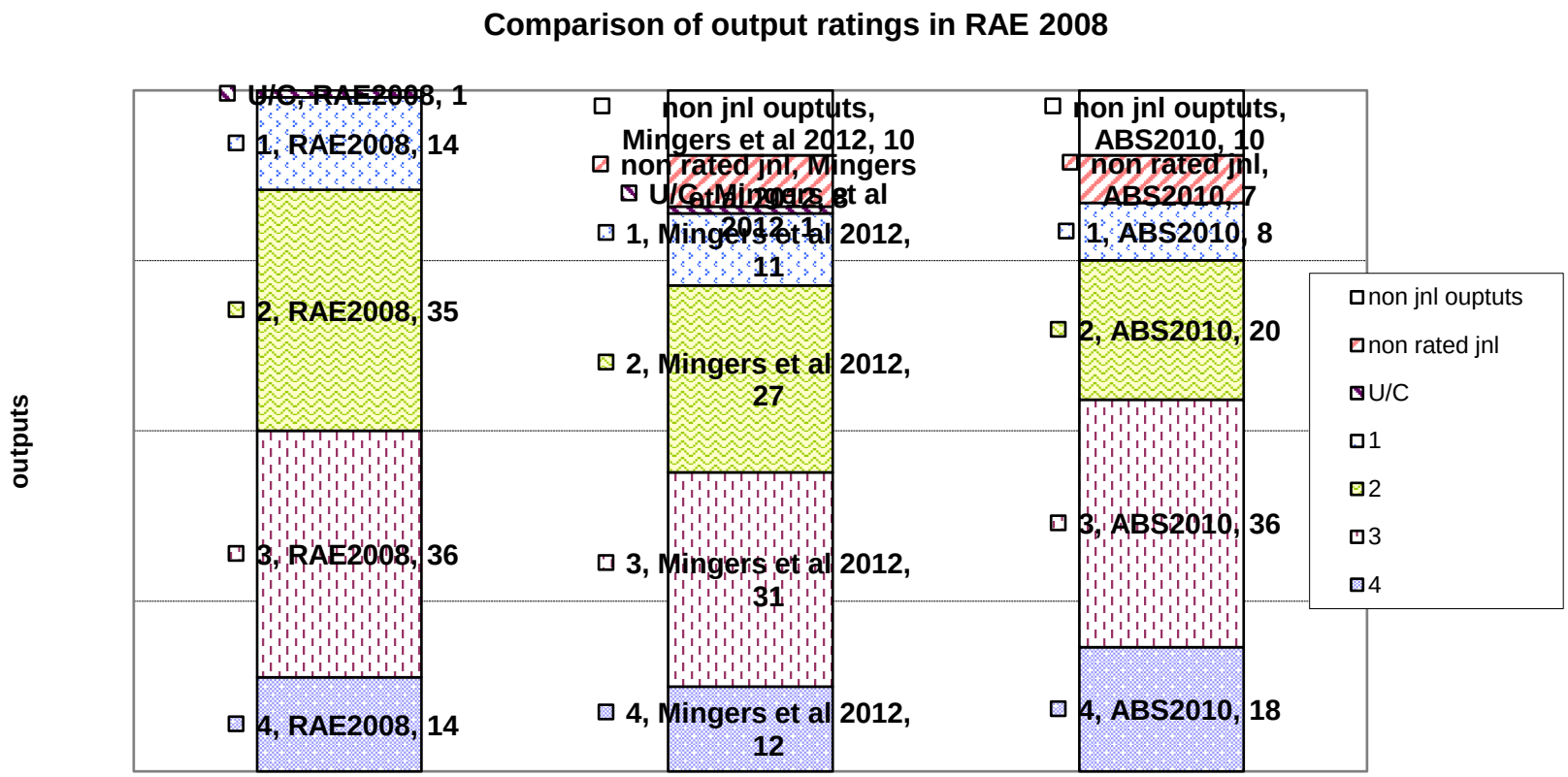

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Chart 4

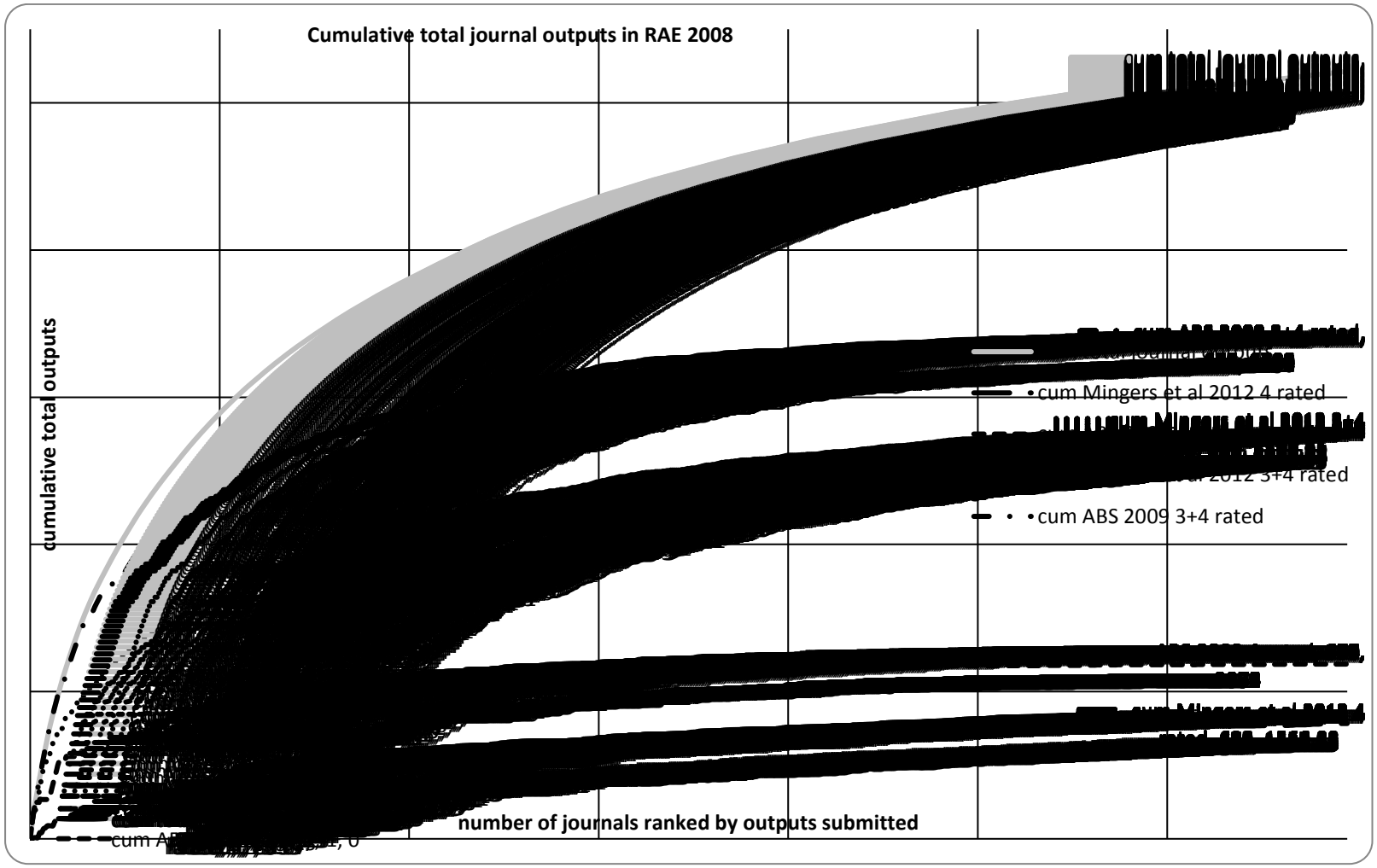

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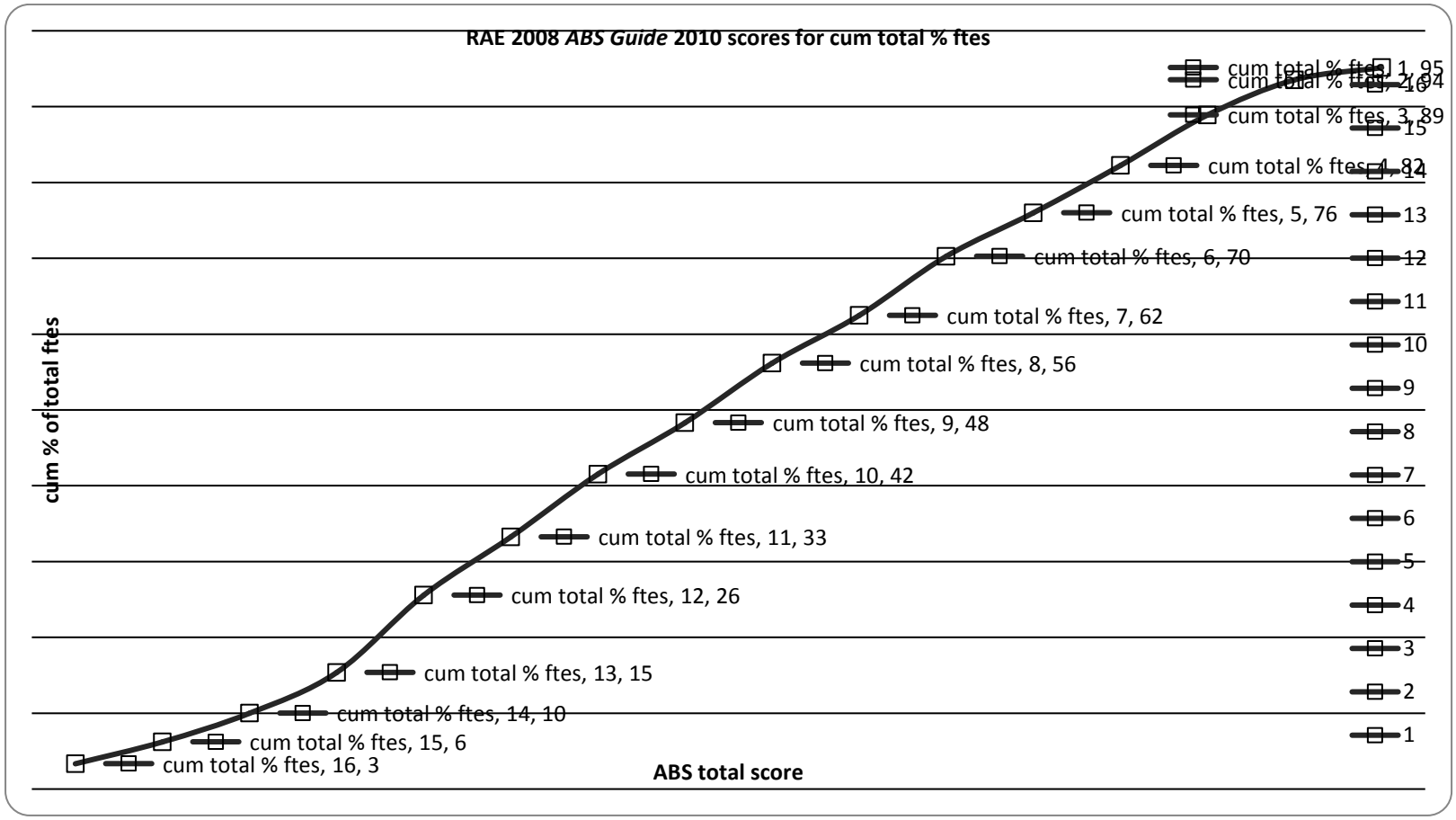
Table 6 Count of ABS 2010 rated journal outputs from individual staff in RAE 2008

count	ABS4	ABS3	ABS2	ABS1	nonABS
4	118	233	43	13	78
3	158	412	164	49	150
2	320	711	451	152	345
1	666	940	950	478	847
total	1262	2296	1608	692	1420
cum total	1262	2779	3257	3368	3540

Chart 5


RAE 2008 *ABS Guide* 2010 scores for cum total % ftes
cum % of total ftes
ABS total score
cum total % ftes, 16, 3
cum total % ftes, 15, 6
cum total % ftes, 14, 10
cum total % ftes, 13, 15
cum total % ftes, 12, 26
cum total % ftes, 11, 33
cum total % ftes, 10, 42
cum total % ftes, 9, 48
cum total % ftes, 8, 56
cum total % ftes, 7, 62
cum total % ftes, 6, 70
cum total % ftes, 5, 76
cum total % ftes, 4, 82
cum total % ftes, 3, 89
16
15
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Rowlinson, M., Harvey, C., Kelly, A., Morris, H. and Todeva, E. (2015) *Accounting for Research Quality: Research Audits and the Journal Rankings Debate, Critical Perspectives on Accounting* , Vol. 26, (2015): pp. 2-22.

Chart 6

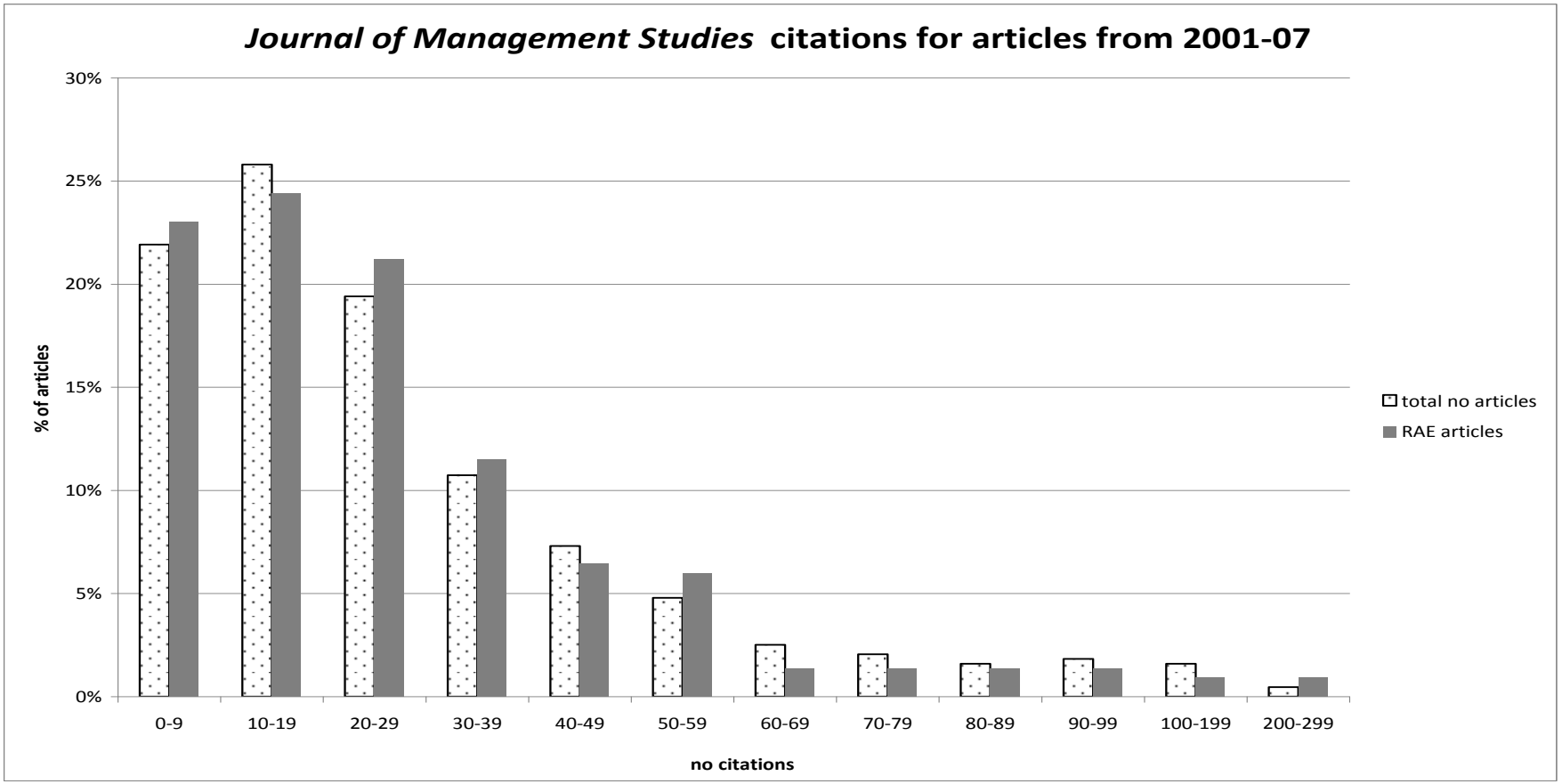

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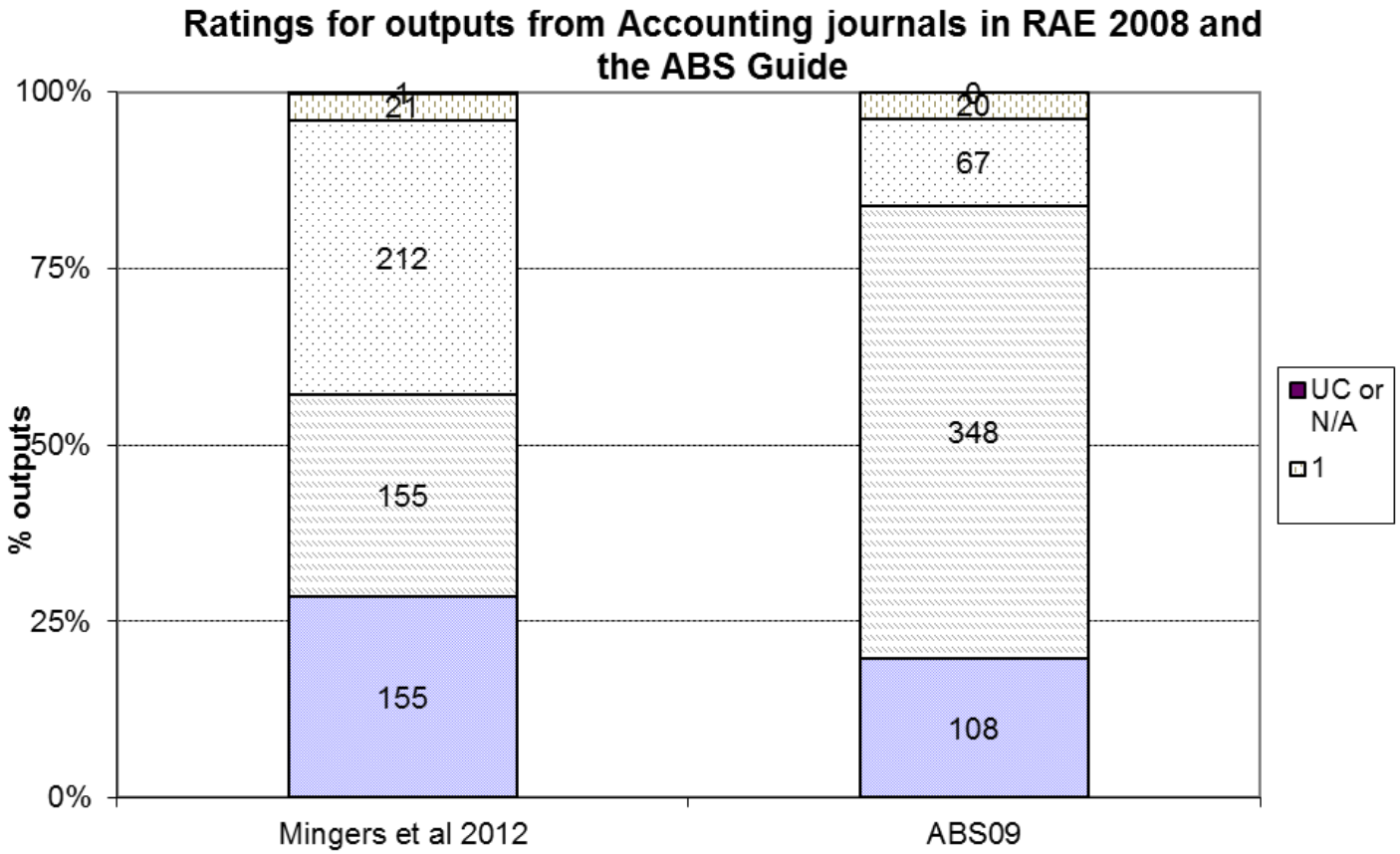
Table 7 Ratings of Accounting journals in RAE 2008

rating	Mingers et al 2012	ABS09
4	6	5
3	10	10
2	5	7
1	4	3

Chart 7



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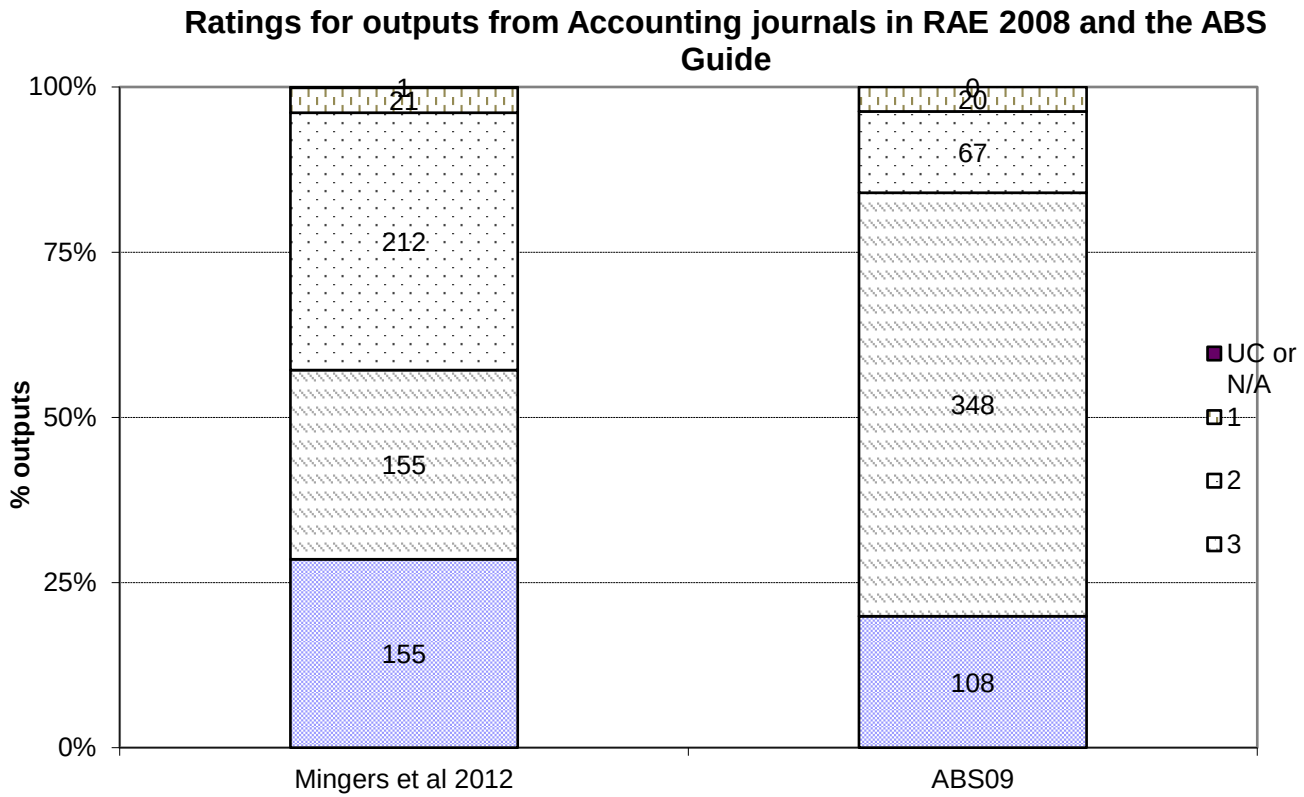

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Chart 8 Network for authors with papers submitted from *Business History*

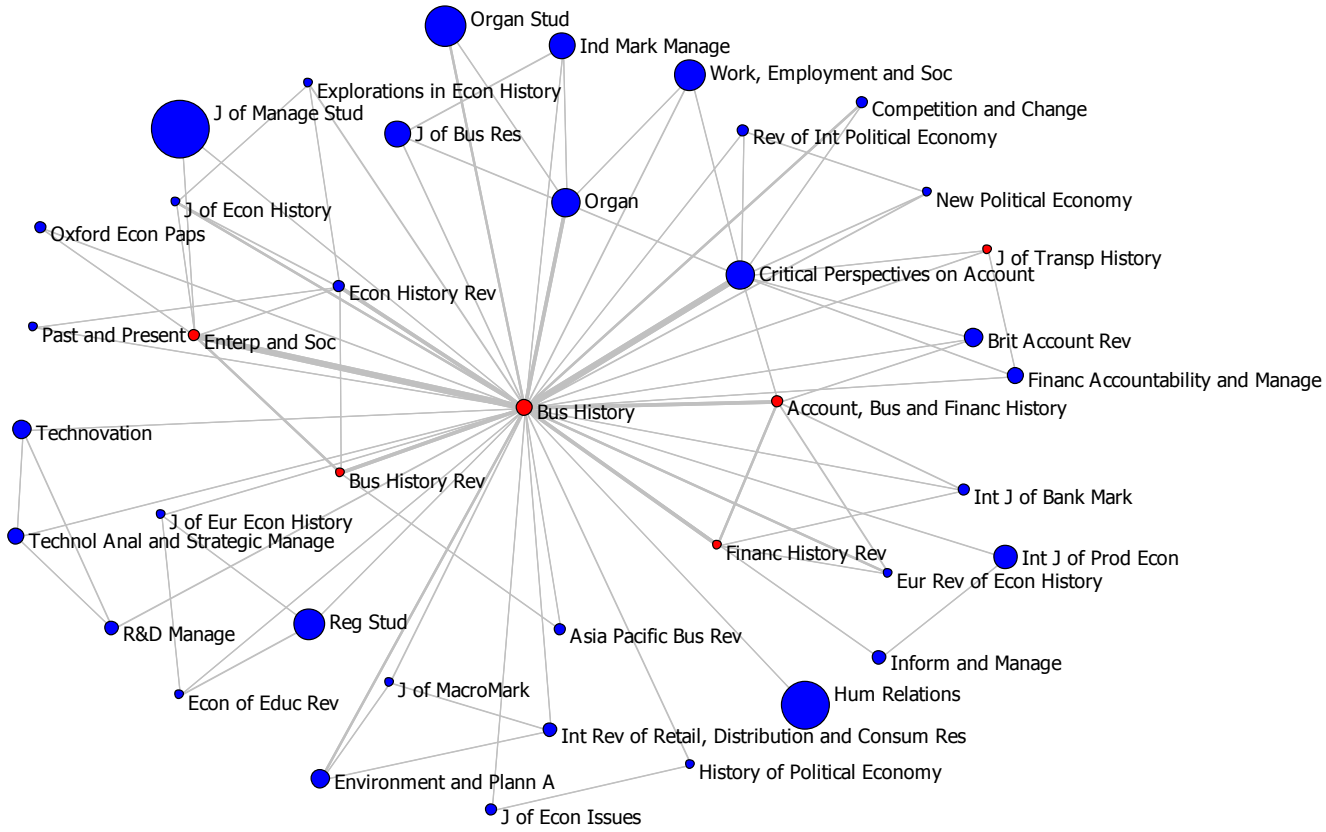

Table 8. Comparison of accounting education and business history journals in the RAE 2008, as estimated by Mingers et al (2012), and the *ABS Guide*

Journal Title	RAE Grade (mode)	4	3	2	1	U/C	total	ABS 2009
Accounting Education	2	0	0	100	0	0	22	2
Accounting Historians Journal	4	87	13	0	0	0	8	2
Accounting History	4	100	0	0	0	0	3	2
Accounting, Business and Financial History	1	0	0	22	78	0	15	2
Business History	2	0	0	80	20	0	37	4
Business History Review	3	31	69	0	0	0	5	3

Chart 9

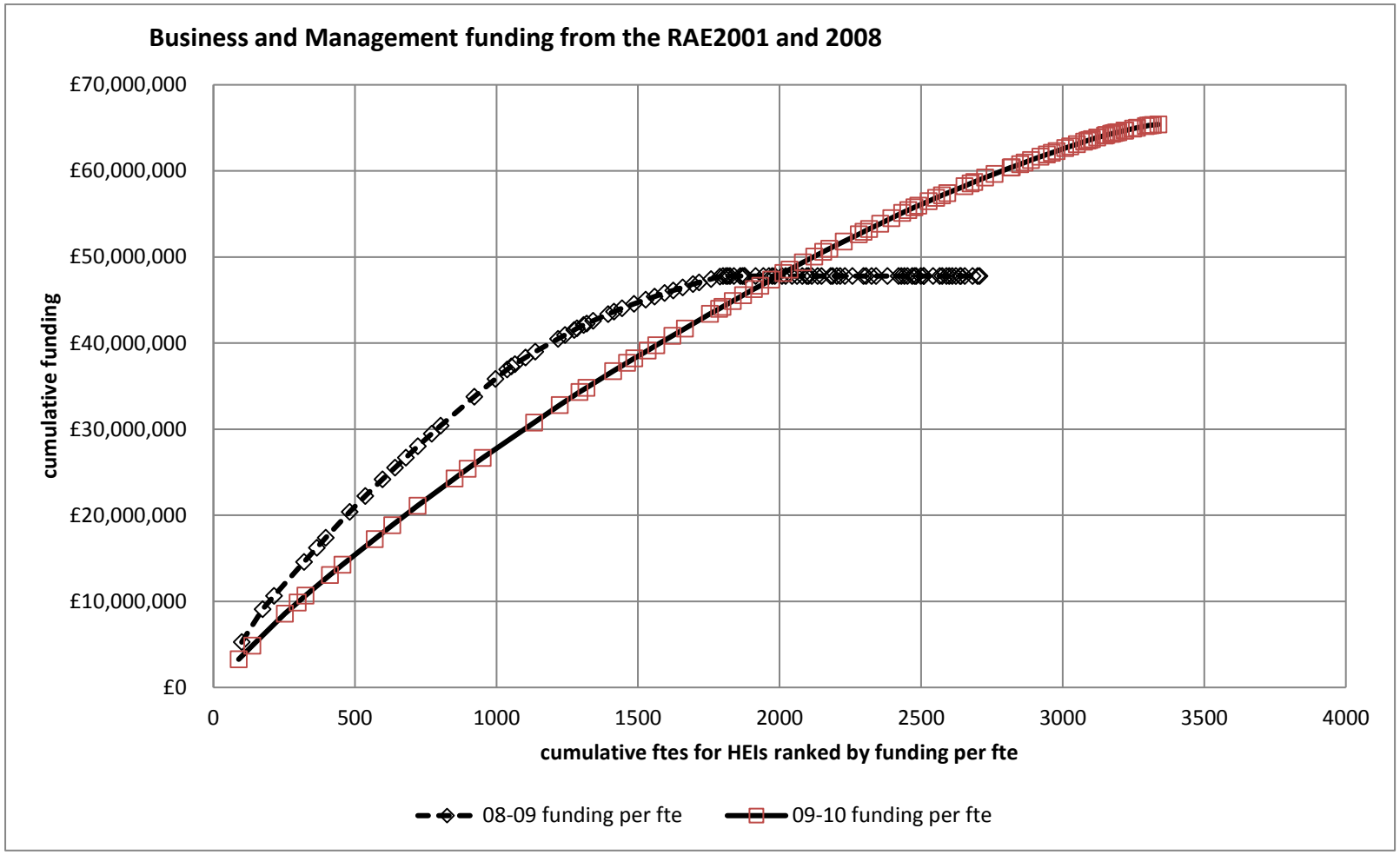
Business and Management funding from the RAE2001 and 2008
£70,000,000
£60,000,000
£50,000,000
£40,000,000
£30,000,000
£20,000,000
£10,000,000
£0
cumulative funding
0
500
1000
1500
2000
2500
3000
3500
4000
cumulative ftes for HEIs ranked by funding per fte
08-09 funding per fte
09-10 funding per fte

Table 9 Research Active FTEs in RAE2008 and HESA student numbers 2010-11

rank by ftes	UoAs in RAE2008	UoA	no submissions	FTEs	mean size	% of total FTEs	Full time postgrad	Total full time students	Pgs per fte	students per fte	% total full time pgs	% total full time
1	Business and Management	36	90	3,338	37	6.4%						
60	Accounting and Finance	35	14	160	11	0.3%						
	UoAs 35 and 36 combined		104	3,497		6.7%	66,915	249,405	19	71	22%	15%
2	Biological Sciences	14	52	2,354	45	4.5%	11,050	89,865	5	38	4%	5%
3	English Language and Literature	57	87	1,851	21	3.5%	3,985	47,250	2	26	1%	3%
4	Computer Science and Informatics	23	81	1,839	23	3.5%	16,335	76,720	9	42	5%	5%
5	History	62	83	1,761	21	3.4%	9,515	65,195	5	37	3%	4%
7	Education	45	82	1,696	21	3.2%	30,885	88,715	18	52	10%	5%
8	Physics	19	42	1,686	40	3.2%	3,845	15,950	2	9	1%	1%
9	Law	38	67	1,671	25	3.2%	14,125	72,685	8	44	5%	4%
10	Psychology	44	76	1,659	22	3.2%	9,800	59,235	6	36	3%	4%
24	Economics and Econometrics	34	35	838	24	1.6%	7,240	34,035	9	41	2%	2%
	total for all UoAs		2,363	52,409	22		310,015	1,677,345	6	32		

Appendix. Estimated Ratings for RAE2008 outputs from 40 journals with highest number of outputs submitted (Mingers et al., 2012)

	Journal Title	RAE mode	4	3	2	1	U/C	total	ABS 2009	
1	Journal of Management Studies	3	0	100	0	0	0	219	4	GEN MAN
2	Human Relations	3	9	91	0	0	0	171	4	ORG STUD
3	Journal of the Operational Research Society	2	0	46	54	0	0	152	3	OR&MANSCI
4	European Journal of Marketing	3	0	57	43	0	0	146	3	MKT
5	Organization Studies	3	47	53	0	0	0	144	4	ORG STUD
6	European Journal of Operational Research	3	0	100	0	0	0	137	3	OR&MANSCI
7	International Journal of Operations and Production Management	3	40	60	0	0	0	134	3	OPS & TECH
8	International Journal of Human Resource Management	2	8	24	68	0	0	132	3	HRM&EMP
9	Journal of Business Finance and Accounting	3	24	70	6	0	0	125	3	FINANCE
10	Journal of Marketing Management	2	0	1	99	0	0	125	3	MKT
11	British Journal of Management	3	0	100	0	0	0	108	4	GEN MAN
12	Work, Employment and Society	3	0	73	27	0	0	103	4	HRM&EMP
13	British Journal of Industrial Relations	4	59	33	7	0	0	99	4	HRM&EMP
14	Regional Studies	2	0	15	85	0	0	97	4	SOC SCI
15	Research Policy	3	0	100	0	0	0	95	4	SOC SCI
16	Service Industries Journal	2	0	0	100	0	0	92	2	MKT
17	Critical Perspectives on Accounting	2	0	0	100	0	0	89	3	ACCOUNT
18	Organization	3	0	100	0	0	0	83	3	ORG STUD
19	Accounting, Organisations and Society	4	100	0	0	0	0	82	4	ACCOUNT
20	Journal of Business Ethics	2	0	6	79	15	0	81	3	ETH-GOV
21	Journal of Business Research	2	0	9	91	0	0	81	3	GEN MAN

	Journal Title	RAE mode	4	3	2	1	U/C	total	ABS 2009	
22	Public Administration: An International Quarterly	3	0	65	35	0	0	78	3	PUB SEC
23	Journal of Banking and Finance	2	2	46	53	0	0	76	3	FINANCE
24	Accounting, Auditing and Accountability Journal	3	0	78	22	0	0	72	3	ACCOUNT
25	Industrial Marketing Management	2	0	44	56	0	0	72	3	MKT
26	International Journal of Production Research	3	0	85	0	15	0	71	3	OPS & TECH
27	Journal of International Business Studies	2	0	0	100	0	0	69	4	IB&AREA
28	Management Learning	2	0	34	66	0	0	66	3	GEN MAN
29	Human Resource Management Journal	2	0	4	96	0	0	65	3	HRM&EMP
30	Environment and Planning C: Government and Policy	3	0	80	20	0	0	60	3	PUB SEC
31	Industrial Relations Journal	3	0	55	45	0	0	60	2	HRM&EMP
32	International Journal of Production Economics	3	0	77	23	0	0	60	3	OPS & TECH
33	Personnel Review	2	0	2	79	19	0	57	2	HRM&EMP
34	Economics Letters	2	11	0	89	0	0	56	3	ECON
35	Accounting and Business Research	3	38	62	0	0	0	52	3	ACCOUNT
36	International Small Business Journal	1	0	32	0	68	0	51	3	ENT-SMBUS
37	Journal of Information Technology	3	0	100	0	0	0	51	3	INFO MAN
38	Cambridge Journal of Economics	3	0	100	0	0	0	50	3	ECON
39	Applied Financial Economics	2	0	0	85	15	0	49	2	FINANCE
40	European Journal of Information Systems	4	88	12	0	0	0	49	3	INFO MAN

Mingers, J., Watson, K., & Scaparra, P. 2012. Estimating business and management journal quality from the 2008 reserach assessment exercise in the uk. ***Information Processing and Management***.