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### **Estimating Business and Management Journal Quality from the 2008 Research Assessment Exercise in the UK**

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# Estimating Business and Management Journal Quality from the 2008 Research Assessment Exercise in the UK

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## **Abstract**

The 2008 Research Assessment Exercise in the UK involved the peer review of over 12,500 research outputs in Business and Management, of which 92% were journal articles. Each output was graded on a 5-point scale from “world leading” to “no research contribution”. These grades were accumulated for each department to provide an overall quality profile in terms of the proportions of its outputs in each category. The assessments of individual papers were not made public but the papers submitted by each department were. This data provides a major opportunity for addressing issues of concern about the evaluation of research and the effects of journal rankings, as well as the possibility of reconstructing the judgements made by the Panel about journal quality. Given the submission details and the resulting grade profile for each department, we have used linear programming to produce the best estimate of the grades awarded to papers from each journal that had more than three entries. This provides both a grade profile for each journal and a single quality estimate. The results are shown to have good validity in comparison with other journal rankings. Apart from providing a ranking of 700 journals based on the RAE results, the paper is also able to shed light on issues such as the accuracy and coverage of the ABS ranking; the degree of selectivity of submissions; the dispersion of grades for a journal; and differences between different subject areas.

**Key Words:** journal rankings, Research Assessment Exercise (RAE), research evaluation

## **1. Introduction**

There is an increasing drive towards measuring the research quality of academics whether it is for the purposes of promotions, jobs, or assessing the performance of departments and centres or even whole universities. Quality can only be judged through the activities and publications produced, especially journal papers as that, in Business and Management, is the primary currency. However, assessing the quality of individual papers by peer review is itself time consuming, requires expert(s) in the area, and there could be disagreement. Partly for these reasons, the quality of the journal that the paper is published in is often taken as a proxy for the quality of the paper itself. This then displaces the problem to judging the quality of journals (and assuming that all papers within are of equal quality) – hence the proliferation of journal rankings.

There are two main ways of generating rankings – stated preference (peer review), where some group of experts determines a ranking, and revealed preference where actual publishing behaviour is measured usually in terms of the citation impact factor (IF) or the h-index. A third approach is to statistically combine a set of already existing lists (Mingers and Harzing, 2007). There are many ranking lists available on the Harzing website (<http://www.harzing.com/>) but for Business and Management the list produced by the Association of Business Schools (ABS) (<http://www.the-abs.org.uk/?id=257>) has become the

*de facto* standard. There are two major problems, however – the lists do not agree with each other, and in reality there will be a range of quality within any one journal.

However, the use of journal rankings as a proxy for quality is actually extremely contentious. For example, Paul (2007, 2008), who was a member of the 2008 RAE Panel, states that “One major conclusion appears to be that journal rankings are not a good indicator of the quality of any paper published in that journal, nor necessarily the combined quality of all the papers” (Paul, 2008, p. 324). Macdonald and Kam (2007), in a bitter critique, suggest that the whole world of academic publishing in management is one of gamesmanship and game playing with the so called quality journals simply reproducing standard, consensual research within a small elite community. Clarke and Wright (Clark and Wright, 2007), then editors of the *J. of Management Studies*, disagree and argue that journals do develop and change in response to their communities, and that the reviewing processes of high quality journals do in fact lead to high quality papers. Adler and Harzing (2009) provide another strong critique of the dysfunctional effects of academic ranking systems and journal rankings in particular. The main complaint is that they lead to a narrowing of the discipline, concentrating research into the narrow confines of established journals and discouraging innovation and interdisciplinary work.

In the light of these debates, the latest (2008) Research Assessment Exercise (RAE) provides a major opportunity to investigate the extent to which journal rankings are concordant with direct judgements of the quality of individual papers. The 2008 RAE differed in major ways from previous ones. Rather than assigning departments a single grade for their research quality as before (1, 2, 3B, 3A, 4, 5, 5\* in 2001), a quality profile was generated in terms of the proportion of the department’s research that was judged to be on a scale from 4\* (world leading) to 0\* (unclassified). Full details of the RAE can be found in various reports issued by HEFCE (RAE, 2004, 2005, 2006) prior to it, and the results were announced in 2008 (RAE, 2008). Also available online are the subject overview report for the Business and Management Panel (RAE, 2009a); the complete submissions (RAE, 2009b); and the quality profiles (RAE, 2009c).

Quality itself was defined in terms of three characteristics – originality, significance and rigour – and the levels were:

- 4\*: Quality that is world-leading, that has become, or is likely to become, a primary point of reference in the field or sub-field.
- 3\*: Quality that is internationally excellent, that has become, or is likely to become, a major point of reference in the field or sub-field.
- 2\*: Quality that is recognised internationally, that has made, or will make, a contribution to knowledge, theory, policy or practice.
- 1\*: Quality that is recognised nationally, that has made or will make a limited contribution.
- Unclassified (0\*): Quality that falls below the standard of nationally recognised work or which does not meet the definition of research.

The requirement of the Panel was to assess a department’s quality in terms of their submitted research outputs, the research environment and the esteem of the staff members. A profile

was generated for each and these were combined (70%, 20%, 10%) to produce the overall quality profile. As we are only concerned with the outputs the environment and esteem profiles will not be considered.

The Panel was therefore required to produce a quality grading for every single piece of work submitted, in this case 12,575 in the RAE database. This was clearly a huge task and the RAE only required that 25% be looked at in detail. The results that were made public consisted of the grade profile for each of the 90 institutions that submitted together with details of all the publications. However, the grades for individual outputs are not available.

Prior to the exercise, the Panel Chair (Professor Mike Pidd) made it clear on several occasions that the Panel did not intend to use journal ranking lists in making their judgements. He also stated that they expected to find a range of qualities within a single journal. What was not clear was how they would in fact grade outputs if they were only actually going to read a proportion of them. In the event, the Panel claimed that “most outputs were read in considerable detail” (RAE, 2009a, p. 5). This is clearly different to the 2001 RAE where the Panel “typically read 15%-30% of outputs in their sub-areas, with some reading as much as 75%” (Bessant et al., 2003, p. 53). It would seem to be a formidable task: 12,600 outputs to be read by 18 academics (700 each) over a just a few weeks, and informally it was suggested that in many cases just the abstract was read but nevertheless it does represent a major exercise in directly assessing the quality of research outputs. However, little is said in the review about precisely how the quality judgements were made, how the grade boundaries were determined, or the extent of consensus or dissensus.

The purpose of this paper is to try to use the peer review quality judgements made by the Panel to evaluate journal quality and journal ranking lists such as the Association of Business School’s one. Geary et al (Geary, Marriott and Rowlinson, 2004) performed a similar task after 2001 although their approach was somewhat indirect. They assumed that staff in higher quality departments will tend to publish in higher quality journals and that therefore one could assess a journal’s quality by the RAE grade of the departments that submitted it. Frequency counts were calculated for each journal and it was then awarded points on a 7-point scale corresponding to the RAE grades for each department that submitted it. An average score for the journal could then be calculated using the mean, mode or median. This method has obvious drawbacks: it does not discriminate that well between journals; the score for a department depends on things other than the research outputs; and it ignores the fact that there may be “islands” of excellence in otherwise weak departments.

A similar method could be used for 2008 based on the mean or GPA of the department’s profile, but we are proposing a more sophisticated approach that attempts to reconstruct the Panels decisions from a knowledge of the outputs submitted and the quality profile awarded to them for each of the 90 departments. This is done using linear programming (LP). In brief, we create a set of decision variables for each journal that represent the 5 possible quality levels. We then use LP to find the values of those variables that minimise the difference between the estimated quality profile (calculated from the variables) and the actual quality profile awarded to each department. The approach is analogous to least squares regression but

with several thousand variables to be determined. The result is an estimate of the proportion of papers from a journal that were awarded the various levels of quality.

In the first section we compare the outputs submitted to the 2008 RAE with those from previous ones. We then describe the methodology including the mathematical model(s) developed, and the data cleaning and manipulation. Finally, we explore the results obtained and comment on their validity.

## 2. Comparison of the 2008 and 2001 submissions

In this section we will just present the basic facts of the RAE submissions in comparison with previous ones without considering the quality levels. Note that the journal data has been the subject of a cleaning process which is described in the next section. In particular, papers that were submitted as internet journal publications, i.e., they had been published electronically but not in print, were allocated to the appropriate print journal.

Table 1 shows that since 1996 there has been a contraction of the number of submissions, and presumably departments, but an increase in the number of staff and publications submitted. Staff have increased by 43% but outputs by nearly 60%. More worryingly perhaps, journal papers have come to dominate the submissions reaching 90% in 2008. Other forms of research such as authored books, edited books and research reports are certainly not being submitted to the RAE, whether or not they are actually being produced. The number of different journal titles is also rising inexorably although it is not necessarily the case that they are all highly regarded as later results will show. The mean number of entries per journal and entries per institution has also risen significantly.

*Table 1 Submission statistics for the last three RAEs  
Adapted from Geary et al (2004), Bence and Oppenheim (2004), RAE (2009a)*

	1996	2001	2008
<b>No of submissions</b>	100	97	90
<b>No. of staff submitted</b>	2300+	3000+	3300
<b>Total no. of outputs</b>	8000+	9942	12575
<b>No. of journal papers (% of total)<sup>a</sup></b>	5494 (69%)	7973 (80%)	11625 (92%)
<b>No. of journal titles</b>	1275	1582	1639
<b>Mean outputs/journal</b>	4.3	5.0	7.1
<b>Mean outputs/institution</b>	80.0	102.5	139.7

<sup>a</sup> Totals differ slightly between different sources. Figures for 2008 are after data cleaning as described later

The dominance of journals can be seen more clearly in Table 2. Authored books and especially book chapters have fallen dramatically. This may well be attributable to comments by Panel members before the submission that one had to be careful with outputs that had not been peer reviewed, i.e., that were not in refereed journals. It will be interesting to see how

the REF (the next RAE) tackles this problem with its increased emphasis on the external impact of research not merely its scholarly impact.

**Table 2 Number of publications by output type**

*Adapted from Geary et al (2004), Bence and Oppenheim (2004), RAE (2009a). Categories with zero entries have been suppressed*

<b>Output Type</b>	<b>Description</b>	<b>1996</b>	<b>2001</b>	<b>2008</b>
<b>A</b>	Authored book		431	285
<b>B</b>	Edited book		77	60
<b>C</b>	Chapter in book		863	332
<b>D</b>	Journal article		7973	11374
<b>E</b>	Conference contribution		295	85
<b>G</b>	Software		3	1
<b>H</b>	Internet publication		24	318
<b>N</b>	Research report for external body		80	98
<b>T</b>	Other form of assessable output		184	22
	Total		9942	12575

Looking within the journals, it has always been the case that submissions follow the Pareto rule – a small number of journals account for a large proportion of the submitted outputs and vice versa.

**Table 3 Dispersion of submitted journal outputs**

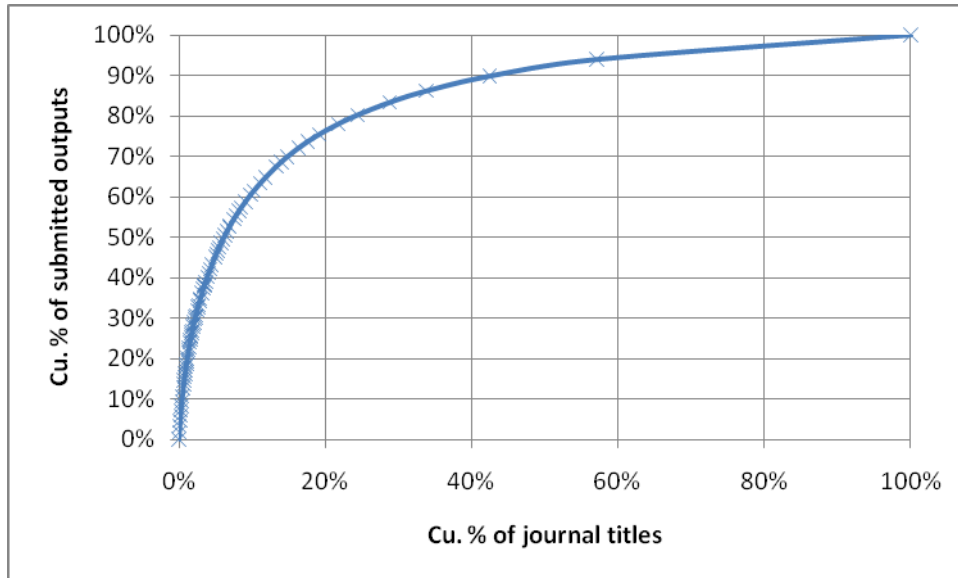
*Adapted from Geary et al (2004), Bence and Oppenheim (2004), RAE (2009a)*

<b>No. of entries per journal title</b>	<b>1996 % titles</b>	<b>2001 % titles</b>	<b>2008 % titles</b>
<b>1</b>	51.0%	49.0%	42.9%
<b>2</b>	15.5%	16.0%	14.6%
<b>3</b>	8.5%	7.0%	8.7%
<b>4</b>	5.0%	5.0%	4.9%
<b>5-10</b>	11.5%	12.0%	14.0%
<b>11-25</b>	5.5%	7.0%	8.5%
<b>&gt; 25</b>	3.0%	4.0%	6.3%

We can see from Table 3 that around 50% of the journals only have a single entry in the RAE although this proportion reduced in 2008. Over 70% of journal titles have 4 or less entries. On the other hand, a relatively small number of journals account for a high proportion of total

entries. The 105 most common journals between them account for 50% of the journal outputs submitted and as Figure 1 shows, the top 20% of journal titles account for almost 80% of the submitted outputs.

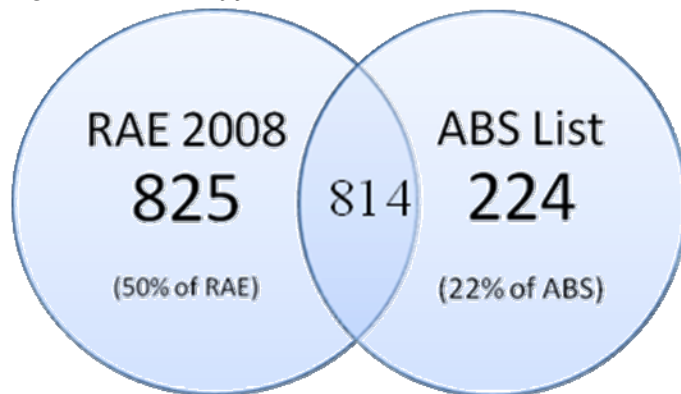
**Figure 1 Pareto curve for the number of entries per journal in the 2008 RAE**



Concentrating on these, we can compare the most popular journals with those from 2001. The 20 most frequently submitted journals from 2008 are listed in Table 4 along with their relative positions on the Geary equivalent for 2001. The “top twenty” represented 22 % of the 2008 outputs, compared to 20% of those in 2001. 15 journals have retained their place in the top 20, while five have slipped out - *Human Resource Management Journal*, *Industrial Relations Journal*, *Personnel Review*, *Applied Economics* and *Long Range Planning*. The top twenty journals cover most of the spectrum of business and management and it is interesting that two top journals classified as social science have entered – *Regional Studies* and *Research Policy*. All but *Service Industries Journal* are 3\* or 4\* in the ABS rankings.

In the light of the discussion in the introduction about rankings lists leading to standardisation, it is interesting to see what proportion of the journals submitted are actually included in the ABS list. Figure 2 shows that there were 825 journals in the RAE that are not in ABS; 224 journals in ABS that were not entered in the RAE; and 814 that were in both. The first figure shows that 50% of the RAE journals are not actually included in ABS which is the most comprehensive listing of B&M journals there is. There would seem to be two possible reasons: genuine business and management journals that ABS has not yet included, and journals that are not business ones. These would typically either be applications journals, e.g., health services or construction, or other relevant disciplines e.g., philosophy or social science. The latter examples could be seen as healthy interdisciplinary and applicability, or they could be seen as business schools being somewhat of a “dumping ground” for academics who do not fit well in other, more focussed, departments.

*Figure 2 Numbers of journals in the RAE and the ABS list*



The issue of fragmentation within B&M submissions is important as Bence and Oppenheim discuss (2004). First, it is very difficult for Panel members to genuinely have expertise across such a wide range of subjects. The 2001 Panel expressed quite strong concerns about this problem (Bessant et al., 2003). This time the Panel overview was more sanguine but still concluded that “Some submissions ... seemed to be of little or no relevance to business and management studies and ... some submissions were an over-eclectic mix of outputs” (RAE, 2009a, p. 5). The second, related concern is that even if Panel members consider themselves competent to judge a paper they may downgrade it in comparison with similar papers in more core business journals. Some evidence relevant to this will be presented in the results section.

On the other side, we can see that 22% of the ABS journals were not actually submitted in the RAE. At first sight this seems quite high, especially given the large range of journals that were submitted. The main explanation is likely to be that they are the lower ranked journals which departments chose not to submit for fear of getting low quality gradings. This is confirmed when we see that of the 224 unsubmitted ABS journals over 80% are graded at 1\* or 2\*. In the results section it is shown that there is a lower proportion of 1\* journals in the submitted ABS journals than in the ABS list as a whole.



**Table 4 Twenty journals most frequently submitted in the 2008 Business and Management RAE**  
*Adapted from Geary et al (2004)*

2008 Rank	2001 Rank	Journal Name	2008 Total	2001 Total	ABS Grade	ABS area	subject
1	2	Journal of Management Studies	219	116	4	GEN MAN	
2	8	Human Relations	171	78	4	ORG STUD	
3	3	Journal of the Operational Research Society	153	113	3	OR&MANSCI	
4	5	European Journal of Marketing	146	90	3	MKT	
5	10	Organization Studies	144	75	4	ORG STUD	
6	14	European Journal of Operational Research	137	61	3	OR&MANSCI	
7	6	International Journal of Operations and Production Management	134	85	3	OPS&TECH	
8	9	International Journal of Human Resource Management	133	76	3	HRM&EMP	
9	1	Journal of Marketing Management	125	127	3	FINANCE	
9	11	Journal of Business Finance and Accounting	125	65	3	MKT	
11	4	British Journal of Management	108	107	4	GEN MAN	
12	13	Work, Employment and Society	103	64	4	HRM&EMP	
13	7	British Journal of Industrial Relations	99	84	4	HRM&EMP	
14		Regional Studies	97		4	SOC SCI	
15		Research Policy	95		4	SOC SCI	
16	16	Service Industries Journal	92	59	2	MKT	
17		Critical Perspectives on Accounting	89		3	ACCOUNT	
18	20	Organization	83	55	3	ORG STUD	
19		Accounting, Organisations and Society	82		4	ACCOUNT	
20		Journal of Business Ethics	81		3	ETH-GOV	
20		Journal of Business Research	81		3	GEN MAN	

### 3. Reconstructing the RAE quality evaluations

### 3.1 The LP Model

Linear programming (LP) is a mathematical method which determines the values of a set of decision variables so as to maximise or minimise a linear function of those variables (the objective function) subject to a set of linear constraints. In our situation we know the quality profiles for each institution and we also know how many entries for each journal the institution submitted. We can then create two sets of variables – the grade profile for each journal and the estimated grade profile for each institution. The grade profile for a journal consists of five variables each of which represents the proportion of the journal's entries judged to be in a particular category (0\* – 4\*). The sum of the 5 variables for a journal must sum to 1.

The estimated grade profiles for institutions are formed from the journal grades, weighted by the number of articles an institution submitted from each journal. The estimated profile is, for each institution at each grade, the sum of each journal grade at grade (0\*- 4\*) multiplied by the number of articles from the institution submitted from that journal divided by the total number of articles in that department's submission. The objective (function) is then to minimise the difference between the estimated profile and the actual profile for each institution by finding the best values for the journal grades. In other words, the model will try and replicate the decisions made by the RAE Panel in order to reproduce the institutional grade profiles.

#### Initial model (QP1)

Let:

j index the journals (j = 1 .. no. of journals)

g index the grades 0\* - 4\* (g = 0 .. 4)

i index the universities (i = 1 .. no. of institutions)

$e_{ig}$  be the estimated proportion of research at grade g for university i

$p_{jg}$  be the estimated proportion of the outputs of journal j graded at grade g

$u_{ig}$  be the actual proportion of research at grade g for university i

$n_{ij}$  be the number of entries of journal j submitted by university i

$$\text{Min.} \sum_i \sum_g (u_{ig} - e_{ig})^2 \quad (1)$$

s.t.

$$e_{ig} = \frac{1}{\sum_j n_{ij}} \sum_j n_{ij} p_{jg} \quad \text{for each institution (i) and grade (g)} \quad (2)$$

$$\sum_g p_{jg} = 1 \quad \text{for each journal (j)} \quad (3)$$

$$p_{jg} \geq 0$$

$$e_{ig} \geq 0$$

The objective function (1) minimises the squared differences between the actual and the estimated proportion of research outputs at each grade level for each department. Constraint (2) defines the estimated proportion in terms of the number of entries of a journal multiplied by the proportion of the journal at a particular grade and divided by the total number of entries for that department. Constraint (2) ensures that the grade proportions for each journal sum to 1. It is possible to formulate this model without explicitly using an estimated proportion variable, but we have done it this way for clarity.

As formulated, this is actually a quadratic program as the objective function is quadratic. Since solving large quadratic programs is generally computationally more expensive than linear ones an alternative model was produced with a linear objective minimising the absolute difference rather than the squared difference.

### Alternative model (AbsVal1)

$$\text{Min.} \sum_i \sum_g |(u_{ig} - e_{ig})|$$

Although the absolute value function is itself non-linear it can be easily linearised by generating a new variable ( $err_{ig}$ ) and two new constraints:

$$\text{Min.} \sum_i \sum_g err_{ig} \tag{4}$$

s.t.

$$err_{ig} \geq (u_{ig} - e_{ig}) \tag{5}$$

$$err_{ig} \geq (e_{ig} - u_{ig}) \tag{6}$$

$$e_{ig} = \frac{1}{\sum_j n_{ij}} \sum_j n_{ij} p_{jg} \quad \text{for each institution (i) and grade (g)} \tag{2}$$

$$\sum_g p_{jg} = 1 \quad \text{for each journal (j)} \tag{3}$$

$$p_{jg} \geq 0$$

$$e_{ig} \geq 0$$

$$err_{ig} \geq 0$$

Here constraints (4) and (5) between them ensure that  $err$  takes on only the positive difference between actual and expected.

A third model was also developed with the idea of determining a single integer quality grade for each journal rather than a grade profile. This was easy to achieve in the formulation by simply restricting the journal grade variables ( $p_{jg}$ ) to being 0-1 integers. The constraint that they must sum to 1 for each journal ensures that only one of the five possibilities will actually be 1 and so each journal will have only one grade level. This model (**MIP1**) proved very difficult to solve computationally.

### 3.2 Cleansing the data

Each submitting institution used a pro-forma to enter details of their outputs. After the publication of the RAE 2008 outcomes, the details of the individual outputs were released. The spreadsheet <RA2> was downloaded from the business and management sub panel section of the RAE website. There were 12575 records in the data set. Each output had to be placed within one of twenty categories (summarised in Table 2).

The RA2 data was used to derive a list of all journals, along with the number of outputs from each journal, cross-referenced with the institutions submitting those outputs. As journal nomenclature can be imprecise, journal titles were checked to ensure that no journal is listed more than once (“The Journal of Example” and “Journal of Example” must be resolved, is there an error in one of the titles? Are there two distinct journals?). We also used the journal ISSNs which were part of the RAE data but again there was a good deal noise here: some were entered as text and some numeric; some were incorrect; and some journals actually have more than one ISSN. The online papers were treated as different category in the RAE data (type H) but we amalgamated those with their printed equivalents. The journal titles adopted in the ABS list of journals were used in preference to any other variants found in the RA2 data.

The next issue was what to do with the outputs that were not journal papers, in the main books and book chapters. We could not include each item individually as if it were a journal because the model only works to the extent that the same journal occurs in a number of submissions. We could simply leave them out which would increase the residual variation in the results but lose information. So, what we did was to include each type (authored book, book chapter etc) as if it were a journal. Thus all 285 authored books were included as if they were a single journal. This increased the accuracy of the model and also allowed us to see how these output types were treated by the RAE Panel. Were books rated highly or lowly? These categories (Book, Book Chapter, Edited Book, External Report and Other) represented 950 outputs (7.556% of the whole dataset).

We also had to decide what to do with all the journals that had only a small number of entries. The problem is that if the journal only occurs a small number of times it becomes essentially unconstrained and the model can use it simply to fill in unexplained variation. After some experimentation we decided to only include in the model those journals that had at least three entries. This meant excluding around 57% of the journal titles (see Table 2)

The final output of this process was a 2-dimensional array indexed by journal name and institution. The full list of cleaned data is available from the authors. As noted by Geary et al (Geary et al., 2004), the process of cleansing the RA2 data was the most intensive part of the project, and the results produced may not be identical to others attempting the same task. Using the ABS list as a standard and automating the search process errors are kept to a minimum.

### **3.3 Solving the models**

With the data arrays prepared and the linear programme constructed, the programme was coded using the OPL Studio 3.7 modelling language and solved by the CPLEX 8.0 optimizer. Several runs of different versions and sizes of the model were conducted. The final version of the AbsVal1 included 701 journals and 89 institutions. It included roughly 4,400 variables and 2,050 constraints. It solved in a few minutes and gave an objective function value of 23.6, i.e., the sum of all the 445 errors.

This model gave a grade profile for each journal but for the purpose of constructing a journal ranking and comparing it with existing ones it is more appropriate for each journal to have a single grade. There are several ways of achieving this: take the modal grade, i.e., the one with the largest proportion; calculate the mean grade (i.e., the GPA) and then round this to the nearest integer; or get the LP to calculate the best value with the integer version of the model (MIP1).

The integer version proved to be computationally very expensive. After running continuously for 35 days it had still not reached an optimal, fully integer solution. This is not unusual with models that have a large number of integer variables (3500 in our case). It had in fact converged to a near optimal which did not change significantly over 21 days but could not be shown to be the actual optimal.

After inspecting and comparing the results for the three different methods – mode, rounded mean, and MIP it was decided that the mode gave the fairest and most consistent results and so this has been used in the ranking comparisons, but the final table of results (Table 5) includes the grade profile for each journal and the MIP results.

## **4. The Results**

The full results are shown in Table 5 (at the end of the paper) for all the journals that were included in our model, i.e., those with at least three entries. We show the grade awarded based on the mode of the journal profile; the profile itself in terms of the proportions judged to be in each rank; the number of items submitted, the ABS rank where available and the subject classification. An alternative Table sorted into subject area is available from the website.

### **4.1 Assessing the validity of the reconstruction**

Before presenting the results in detail, it is important to evaluate their validity. Have we actually been able to capture something of the judgements made by the RAE Panel? This is a subjective question. Clearly, if the results were wholly at odds with our preconceptions of journal quality we might conclude that the results were not capturing anything meaningful. But we would not expect them to be identical with the existing rankings, partly because of noise in the data resulting from the non-journal outputs being removed, and partly because the Panel were clear that their results did not mirror the existing lists (RAE, 2009a, p. 1). So it is a matter of degrees of concordance.

We first consider the extent of concordance with existing journal rankings.

*Table 6 Correlations between reconstructed RAE grade and journal rankings (no. of observations)*

	ABS 2009	Kent 2007	Geary median	ABS 1* or 4*
<b>RAE grade</b>	0.42 (574)	0.37 (575)	0.42 (416)	
<b>ABS 2009</b>		.69 (574)	0.48 (394)	
<b>Kent 2007</b>			0.49 (394)	
<b>Geary median</b>				
<b>RAE grade 1* or 4*</b>				.61 (183)

Table 6 shows the correlations between the reconstructed RAE grades and the ABS, Kent (Mingers and Harzing, 2007) and the Geary et al (Geary et al., 2004) rankings. Given the large numbers of observations (shown in parenthesis) all the correlations are highly significant. It is noticeable, however, that they are not as high as the correlations between the rankings themselves tend to be, as shown in the ABS documentation. We can see for example that the correlation between the Kent ranking and the ABS one is significantly higher. Nevertheless, it is clear that the RAE calculations are ranking journals in broadly the same way as the rankings. We also looked specifically at the extremes – the 1\* and 4\* journals. These had a higher correlation (0.609) perhaps showing that there is greater agreement about the best and worst journal and less about the boundary between 2\* and 3\*.

Some further evidence is shown by the treatment of non-journal outputs. As explained in the previous section, rather than totally ignore outputs such as books, book chapters and reports we included them as if they were a single journal. This generated a score for each of these categories so that we could see how the category was treated in comparison with the journals. The results are shown in Table 7.

*Table 7 Reconstructed grades for non-journal outputs*

Type	Modal grade	Mean grade	No of outputs	No. of institutions
<b>Authored book</b>	2	2.37	285	68
<b>Book chapter</b>	2	2.24	333	65
<b>Edited book</b>	2	1.87	61	28
<b>External report</b>	1	1.35	102	35
<b>Other</b>	1	1.31	169	47

In the third column we can see the mean grade awarded to each output type. From a validation perspective the order of these types is what we would have expected, i.e., authored books were graded most highly, going down through book chapters to other outputs being least valued. This again gives us a degree of confidence in the overall method. In terms of the actual numbers, there was a concern before the RAE that books would be downgraded because they were not refereed. This does seem to have happened in that one might expect that a quality book would be regarded more highly than a single paper and so books should

have achieved a high grading – at least 3\* or more. We can also see that external reports scored poorly which does not bode well for the REF trying to encourage the submission of work that has external impact.

Finally we look at the journals that come out top from our reconstruction in Table 8. In terms of our estimation, the best journals are those that have the highest proportion of 4\*, ideally 100% 4\*. In the Table we have selected all journals that have at least 90% 4\* and we have restricted it to those with at least 8 entries. This results in 32 journals and they are ordered in terms of the number of entries in the RAE. Firstly, all 32 journals are in ABS and only five were less than 3\* or 4\*. They were also generally ranked highly in other lists including Geary's analysis of the 2001 RAE and the citation impact (CI) factor. Interestingly, 17 of them are also included in the FT top-40 list of journals which is used to rank business schools worldwide. Of the rest of the FT-40 list, all but four were graded 3\*, those being *Human Resource Management (USA)*, *International J. of HRM*, *J. of Business Ethics*, and *J. International Business Studies* which were only graded 2\*. Table 8 also includes a sprinkling of the very top American journals such as *AMR*, *Management Science*, *Organization Science*, *HBR* and the *American Economic Review*. Given that these results have been generated purely by the model it does give us confidence that we are genuinely picking up the judgements of the RAE Panel.

*Table 8 Top 32 journals from RAE (>=90% 4\* and >= 8 entries)*

Journal	%4*	%3*	Num ber	ABS grade	Kent	Gaer y	5- year CI index	FT 40	ABS sector
Accounting, Organisations and Society	100	0	82	4	4	6	2	y	ACCOUNT
Journal of Financial Economics	100	0	39	4	4	7	4	y	FINANCE
International Journal of Management Reviews	92.9	7.1	37	3	2	6	3		GEN MAN
Journal of Applied Psychology	100	0	33	4	4	6.5	3	y	PSYCH
Journal of Business Venturing	94.9	5.1	32	4	3	6	4	y	ENT-SMBUS
Academy of Management Review	100	0	30	4	2	6	4	y	GEN MAN
Management Science	94.6	5.4	29	4	4	6	4	y	OR&MANS CI
Organization Science	100	0	28	4	4	6	4	y	ORG STUD
Management International Review	100	0	27	3	2	6		y	IB&AREA
Review of Financial Studies	93.7	6.3	27	4	4	7	4	y	FINANCE
Abacus	100	0	25	2	2	5			ACCOUNT
MIT Sloan Management Review	100	0	23	3	3	7	2	y	GEN MAN
Harvard Business Review	100	0	19	3	3	7	3	y	GEN MAN
Information Systems Journal	100	0	18	3	3	6	3		INFO MAN
Journal of the Academy of Marketing Science	100	0	18	4	3	6	3		MKT
American Economic Review	100	0	17	4	4	6.5	4	y	ECON
Journal of Marketing Research	100	0	17	4	4	7	4	y	MKT
International Journal of Industrial Organization	95.7	4.3	14	4	3	6	2		ECON
Fiscal Studies	100	0	13	2	1	5	2		ECON
Marketing Science	100	0	12	4	4	7	4	y	MKT
Journal of Consumer Research	100	0	11	4	4	7	4	y	MKT
Journal of International Economics	100	0	11	3	3	7	4		ECON
California Management Review	100	0	10	3	3	6	2	y	GEN MAN
British Journal of Guidance and Counselling	100	0	9	2	0	4.5			MGDEV&E D
Journal of Accounting Research	100	0	9	4	4	5	4	y	ACCOUNT



<b>Journal of Health Economics</b>	100	0	9	3	4	4	4	ECON
<b>Personnel Psychology</b>	100	0	9	4	3		4	HRM&EMP
<b>Mathematical Finance</b>	94.2	8	9	3	3	7	3	FINANCE
<b>Academy of Management Executive</b>	100	0	8	3	2	6	3	GEN MAN
<b>Journal of International Management</b>	100	0	8	2	2			IB&AREA
<b>Journal of Macroeconomics</b>	100	0	8	2	3	5		ECON
<b>Review of Economics and Statistics</b>	100	0	8	4	3	6	4	ECON

## 4.2 Comparing the RAE grades with the ABS ranking

As the ABS list has become the *de facto* standard for Business and Management and is used extensively, for better or worse, in making decisions about appointments, promotions and submissions, it is important to see how it compares with the reconstructed RAE grades.

*Table 9 Proportions of journals in particular ranks comparing ABS with RAE grades*

*Note: we show the proportions in terms of % for ease of comparison but all Chi-Square tests were performed on the underlying frequencies*

	ABS Grades			RAE Estimated Grades		
	All journals	Journals not in RAE	Journals in RAE and our list	All our list	Journals not in ABS	Journals in ABS and our list
<b>4*</b>	10%	4%	15%	17%	13%	18%
<b>3*</b>	24%	12%	31%	29%	28%	31%
<b>2*</b>	37%	39%	37%	28%	26%	28%
<b>1*</b>	27%	45%	17%	23%	19%	22%
<b>0*</b>				3%	13%	2%
<b>GPA</b>	2.17	1.74	2.43	2.34	2.09	2.41

Table 9 shows the proportions of journals awarded different grades from the ABS ranking and our RAE reconstruction. The first column shows the proportions in the total ABS list, whether or not they were submitted in the RAE, with a GPA of 2.17. Column 4 shows the proportions for all those journals in our RAE list (remembering that it excludes journals with less than 3 entries) with a GPA of 2.34. This is significantly higher ( $X^2=31.3$ ) than the ABS list but that is to be expected because of the selectivity exercised in submitting to the RAE (this will be discussed later). The proportion of 4\* and 3\* is higher, and 2\* and 1\* lower. A fairer comparison is to consider only those journals that are in common between ABS and our RAE list – columns 3 and 6. These two are in fact very similar with GPAs of 2.43 and 2.41

although there are significant differences ( $X^2=15.6$ ) within grades with the RAE giving more 4\* and 1\*, and less 2\*. In other words, the RAE gave more of the extreme grades.

We can also look at the distribution of differences between the RAE and ABS. Table 10 shows, for each RAE grade, the numbers of journals that were 0, 1, 2 or 3 grades away in ABS. So, of those journals graded 4\* in the RAE, 31 were also 4\* in ABS, 38 were 3\* in ABS, 32 2\* and 4 1\*. At the other end, 18 ABS 3\* were graded 1\* in the RAE and 3 4\* were graded 1\*. These were: *Accounting Review*, *Journal of Rural Studies* and *Organizational Research Methods* although they all had relatively small numbers of submissions.

**Table 10 Differences between RAE 2008 and ABS**

RAE 2008 Grade	ABS 2009 grade minus RAE 2008 Grade (absolute value)			
	0	1	2	3
0*		2	9	
1*	51	51	18	3
2*	69	73	18	
3*	75	84	16	
4*	31	38	32	4
<b>Grand Total</b>	226	248	93	7

### 4.3 Selectivity of journal submission

We now move to the issue of selectivity of journal submission. On the one hand, as we saw in section 2, there were an increased number of journals entered into RAE 2008 and a significant number of these are not even in the ABS list. This suggests a wide range of material. However, at the same time there is continual pressure on institutions to submit only the best work and this pressure will grow. There is currently concern that increasingly the top business schools will limit their academics to publishing only in the top A-rated journals. Indeed, the Parliamentary Select Committee on Science and Technology raised these very concerns in a report in 2004:

*“The perception that the RAE rewards publication in journals with high impact factors is affecting decisions made by authors about where to publish. We urge HEFCE to remind RAE panels that they are obliged to assess the quality of the content of individual articles, not the reputation of the journal in which they are published.”* (Select Committee on Science and Technology, 2004).

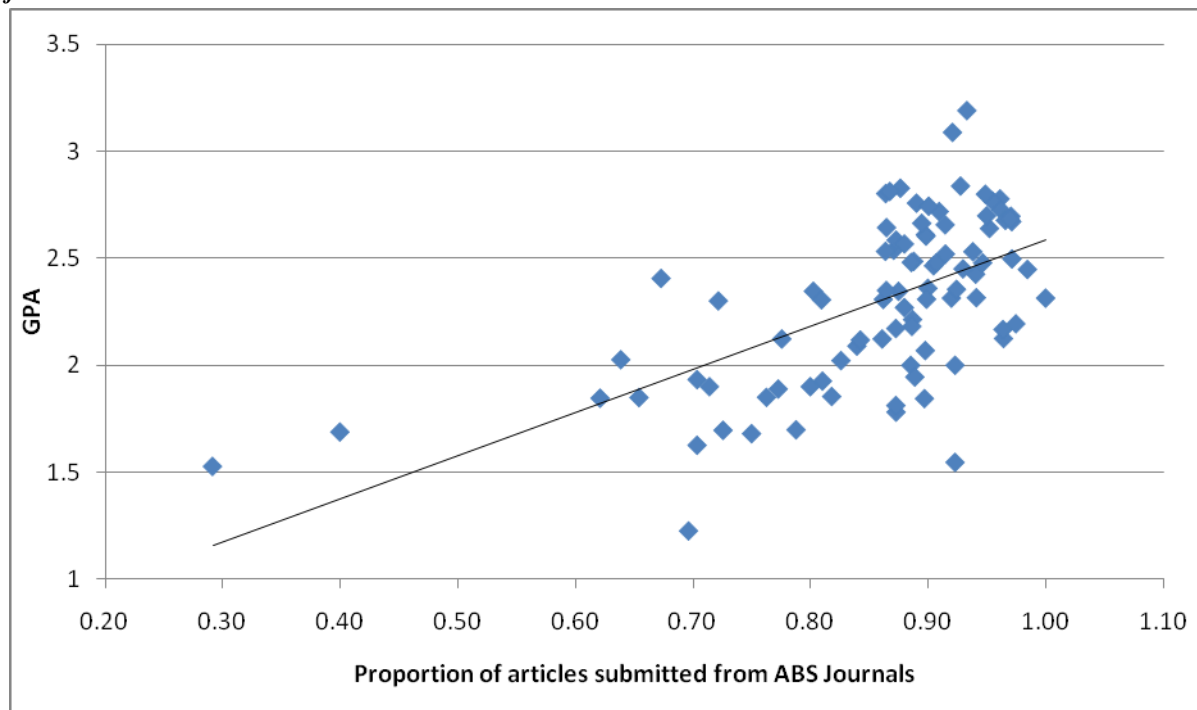
Guidelines recently issued concerning the 2013 RAE (the REF) (HEFCE, 2009) say that they aim to support quality rather than quantity and the number of academics and papers is likely

to reduce. This will lead to institutions focussing even more on those believed to be high quality journals.

The degree of selectivity can be seen from column 2 of Table 9 which shows the grade proportions in those ABS journals that were not submitted in the RAE. These are significantly different to the profile of ABS journals that were submitted ( $X^2=60.1$ ). We can see that 45% of those not submitted were 1\* while only 4% were 4\*. This clearly shows the extent to which attention was focussed on those ABS journals that are at least 2\*.

The possible results of this effect can also be seen in Figure 3 which is a scattergram of the proportion of an institution's submission in ABS journals on the x-axis and the GPA gained by institution on the y-axis. The correlation coefficient is highly significant (0.6) and it explains 36% of the variation in GPA by itself. Taken at face value this shows that the greater the concentration on ABS journals the better an institution did in its GPA. This certainly provides evidence that the RAE Panel grades papers from ABS (or at least mainstream business and management if not ABS *per se*) journals more highly than others.

**Figure 3 Scattergram showing association between GPA and proportion of an institution's submitted journals that are in ABS**



There are other possible interpretations of this association. One might suppose that high quality institutions produce more papers that are in the mainstream of B&M anyway, and that there will be more papers available to be selected, so that the institution can choose mainly ABS ones. Whereas poor quality institutions have to make do with what papers they have, and may include more academics from the fringe areas. On this interpretation, the association would be indirect rather than causal – the high GPA and the high proportion of ABS both reflect underlying high quality rather than one causing the other. Alternatively, one could

interpret it reverse causality and as evidence for the selectivity effect mentioned above – the better quality institutions are more rigorous in limiting their staff to ABS-only journals.

We can get some more evidence directly from columns 5 and 6 of Table 9. This shows the distribution of RAE grades for ABS and non-ABS journals. Did the RAE Panel actually grade ABS journals higher than non-ABS ones? They are significantly different ( $X^2=36.3$ ) but although there are fewer 4\* and 3\* than would be expected in the non-ABS journals, the biggest difference is that 13% of the non-ABS journals were allocated 0\* as opposed to only 2% of the ABS ones. In other words, according to our estimates a significant proportion of the non-ABS papers were considered to be of no research merit. This could be a legitimate response of the Panel to submissions that were not relevant to business and management. They state,

*“In a very limited number of cases, such left-field outputs were given low grades because of their lack of relevance” (RAE, 2009a, p. 5)*

But it could also reflect a conscious or unconscious bias towards recognised journals regardless of paper quality.

Overall, we feel that there is evidence both of extensive selectivity in submissions and possible bias in judgements.

#### **4.5 Dispersion of grades for a journal**

Another issue in connection with journal rankings is the extent to which the RAE Panel would award all papers in a particular journal the same grade which would indicate that they simply went by the ranking of the journal. The Panel stated both before and after that they did not intend to do that, and the results do back them up to some extent.

Given that we are choosing the grade of a journal by its modal grade, i.e., the grade with the greatest proportion, we can measure the degree of dispersion by the percentage that is *not* in the modal grade. Journals with 100% in one grade will thus have zero dispersion. The greatest dispersion a journal could have is 66% with 34% being in the modal grade.

Table 11 shows the frequency distribution of dispersion. In fact the majority (62%) have been found to have 100% at a particular grade. Clearly this is only the estimate from our model and we do not know if this is the actual case but there is no reason for our model to choose 100% particularly and one would expect that it would do the best it could to match the grade profiles. So this evidence would suggest that many journals were seen as having only one quality level (although not necessarily the same as their ABS grading of course).

**Table 11 Distribution of dispersion of journal grading**

<b>% outside the modal grade</b>	<b>Frequency</b>
0	432
<=10	56
10<=20	43
20<=30	55
30<=40	46
40<=50	55
>50	8

Table 12 shows those journals that are ranked as 4\* in ABS but which have a high degree of dispersion in the RAE results. As can be seen, there are some well known journals here and most have a large number of entries so the results should be reliable. In many cases the split is just between two adjacent grades, e.g., *Organization Studies* or *J. Operations Management*, but in some cases it is split much more widely, e.g., *British J. of Social Psychology* or *Organizational Research Methods*. The top journals with little dispersion were shown in Table 8.

**Table 12 ABS 4\* journals with a high degree of dispersion**

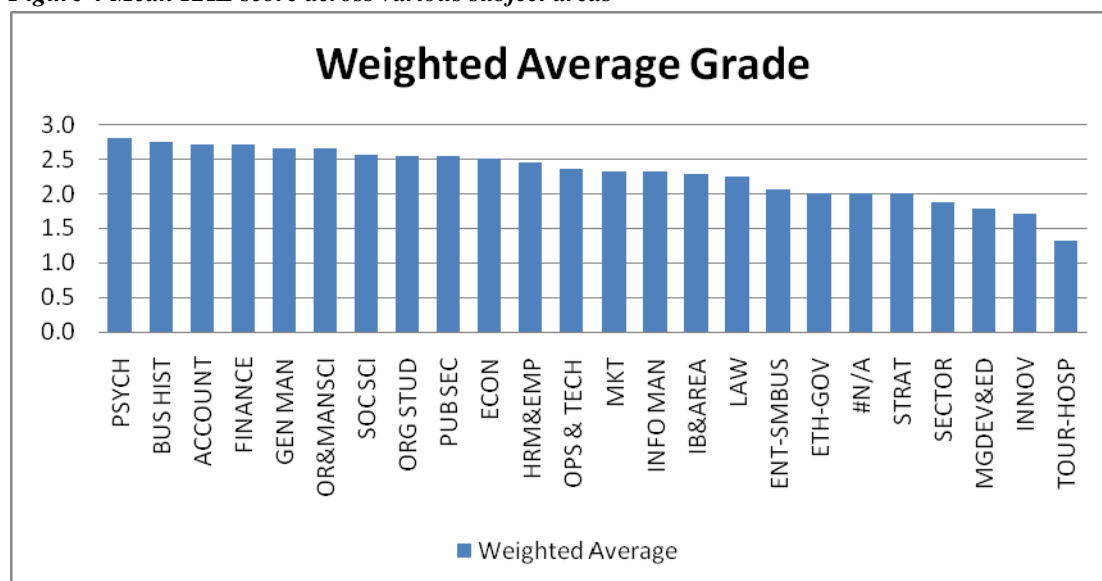
<b>Journal</b>	<b>4*</b>	<b>3*</b>	<b>2*</b>	<b>1*</b>	<b>0*</b>	<b>RAE Mode</b>	<b>% dispersion</b>	<b>No. of entries</b>
<b>Organizational Research Methods</b>	0.0	24.6	3.1	47.2	25.1	1	52.8	13
<b>Organization Studies</b>	47.3	52.7	0.0	0.0	0.0	3	47.3	144
<b>Industrial Relations: A Journal of Economy and Society</b>	53.6	0.0	8.8	37.6	0.0	4	46.4	25
<b>Strategic Management Journal</b>	0.1	54.7	45.2	0.0	0.0	3	45.3	38
<b>Journal of Organisational Behaviour</b>	0.0	44.5	55.5	0.0	0.0	2	44.5	26
<b>Journal of Econometrics</b>	43.4	56.6	0.0	0.0	0.0	3	43.4	26
<b>British Journal of Social Psychology</b>	57.1	0.0	0.0	42.9	0.0	4	42.9	4
<b>British Journal of Industrial Relations</b>	59.5	33.0	7.5	0.0	0.0	4	40.5	99
<b>Journal of Operations Management</b>	39.7	60.3	0.0	0.0	0.0	3	39.7	31
<b>Journal of Economic Theory</b>	0.0	60.7	39.3	0.0	0.0	3	39.3	11
<b>Public Administration Review</b>	38.5	61.5	0.0	0.0	0.0	3	38.5	17
<b>Games and Economic Behaviour</b>	62.5	37.5	0.0	0.0	0.0	4	37.5	7
<b>Social Science and</b>	0.0	35.6	64.4	0.0	0.0	2	35.6	11

<b>Medicine</b>								
<b>Journal of Product Innovation Management</b>	0.0	34.1	65.9	0.0	0.0	2	34.1	14
<b>Work, Employment and Society</b>	0.0	72.7	27.3	0.0	0.0	3	27.3	103
<b>Journal of Finance</b>	27.1	72.9	0.0	0.0	0.0	3	27.1	49
<b>Entrepreneurship, Theory and Practice</b>	1.3	76.4	22.3	0.0	0.0	3	23.6	28
<b>Leadership Quarterly</b>	0.0	77.5	22.5	0.0	0.0	3	22.5	4
<b>Journal of Occupational and Organizational Psychology</b>	21.0	79.0	0.0	0.0	0.0	3	21.0	43
<b>Business History</b>	0.0	0.0	79.6	20.4	0.0	2	20.4	37
<b>Journal of Marketing</b>	79.6	20.4	0.0	0.0	0.0	4	20.4	18
<b>Economic Journal</b>	0.0	20.2	79.8	0.0	0.0	2	20.2	37
<b>Regional Studies</b>	0.0	15.4	84.6	0.0	0.0	2	15.4	97
<b>British Journal of Psychology</b>	0.0	0.0	85.0	0.0	15.0	2	15.0	3
<b>MIS Quarterly</b>	0.0	85.4	0.0	14.6	0.0	3	14.6	8
<b>Quarterly Journal of Economics</b>	0.0	12.9	87.1	0.0	0.0	2	12.9	6
<b>Environment and Planning A</b>	0.0	88.3	11.7	0.0	0.0	3	11.7	46

#### 4.6 Differences between subject areas.

It is of interest to look at the relative grading between subject areas. Reports from both the 2001 RAE (Bessant et al., 2003) and the 2008 RAE (RAE, 2009a) make it clear that the subjects were seen to have different levels of quality. So, to what extent is that borne out by the ratings? Figure 4 shows the mean journal grading by the ABS sector for the journal where it was in ABS. Those not in ABS have been given the title “#N/A”.

Figure 4 Mean RAE score across various subject areas



The data show a significant difference from the highest sector, Psychology, with a weighted average score of 2.8 down to Tourism and Hospitality with a score of 1.3. The non-ABS journals have an average of 2.0. The ABS sectors are somewhat different to the subject groups that the RAE Panel report discusses. We can see that many of the long-established disciplines (e.g., Psychology) and management areas (e.g., Accounting and Finance, Operational Research and Organisational Studies) scored highly while newer and perhaps more applied areas (e.g., ethics, management development, innovation and tourism) did less well. Some surprises perhaps are the poor score for Strategy and perhaps the relatively high scores for General Management (which is a bit of a catch-all category) and Public Sector.

We want to look in more detail at specific subject areas and have chosen Operational Research as that is where we have expertise. Note that some more mathematical OR groups were submitted the Statistics and OR Panel so their contributions are not included here. Table 13 shows all OR journals ranked in terms of the RAE grade and then the number of entries. Those with a “-“ in the ABS Grade column were not classified in the ABS list but we have added them in as they all would be considered as OR journals. There are seven 4\* journals although all but *Management Science* have small numbers and three do not appear in ABS. Some of these are likely to be due to the small sample, but *Decision Sciences*, *J. of Heuristics* and the *SIAM* journal are generally considered to be strong. In the 3\* journals comes *EJOR* with the second largest entry and a wide range of other journals, many with small entries. It is interesting that *Operations Research*, the other top US journal, has all its entries graded as 3\* rather than 4\*.

The next point of interest is the ranking of *J. of the Operational Research Society (JORS)* as 2\*. This has the largest entry (third highest in the whole RAE) and, together with *EJOR*, is the main publication outlet for UK academics who find it hard to publish in the US journals. *JORS* figured highly in the Geary analysis of the 2001 RAE because of their methodology which rated journals in terms of the departments which published in them. It happens that the largest groups of OR academics are at Lancaster and Warwick which were top rated in 2001 and so *JORS* secured a high grade. However, this was unrealistic in terms of the journal’s world rating (Mingers and Harzing, 2007) as the current result shows. It is a surprise, however, that it has gained no 4\* work at all in our reconstruction. One other anomaly is the *J. Optimization Theory and Applications (JOTA)* which is a good journal although rated 2\* here. In fact, nearly 50% was graded 4\* but a slightly greater proportion was 2\*.

**Table 13 Journals in OR/Management Science ranked by RAE grade and number of entries**

Journal	RAE Grade	Entries	4*	3*	2*	1*	0*	ABS Grade	Kent 2007 1* to 4*
Management Science	4	29	94.6	5.4	0.0	0.0	0.0	4	4
Group Decision and Negotiation	4	4	100	0.0	0.0	0.0	0.0	3	2

<b>Operations Research Letters</b>	4	4	100	0.0	0.0	0.0	0.0	2	3
<b>Computational Optimization and Applications</b>	4	3	100	0.0	0.0	0.0	0.0	-	-
<b>Decision Sciences</b>	4	3	100	0.0	0.0	0.0	0.0	3	3
<b>Journal of Heuristics</b>	4	3	88.4	0.0	0.0	0.0	11.6	-	-
<b>SIAM Journal on Optimization</b>	4	3	100	0.0	0.0	0.0	0.0	-	-
<b>European Journal of Operational Research</b>	3	137	0.0	100	0.0	0.0	0.0	3	3
<b>Omega: The International Journal of Management Science</b>	3	37	0.0	83.4	16.6	0.0	0.0	3	2
<b>Operations Research</b>	3	20	0.0	100	0.0	0.0	0.0	4	4
<b>Systems Research and Behavioral Science</b>	3	11	0.0	53.1	46.9	0.0	0.0	2	0
<b>Journal of the Royal Statistical Society Series A (Statistics in Society)</b>	3	9	8.4	91.6	0.0	0.0	0.0	3	4
<b>IEEE Transactions on Systems, Man, and Cybernetics - Part A: Systems and Humans</b>	3	7	0.0	100	0.0	0.0	0.0	-	-
<b>Mathematical Programming</b>	3	7	0.0	100	0.0	0.0	0.0	3	4
<b>Advances in Applied Probability</b>	3	5	0.0	100	0.0	0.0	0.0	3	3
<b>Annals of Operations Research</b>	3	5	0.0	100	0.0	0.0	0.0	2	3
<b>Journal of Combinatorial Optimization</b>	3	4	0.0	100	0.0	0.0	0.0	-	-
<b>Computational Statistics &amp; Data Analysis</b>	3	3	0.0	100	0.0	0.0	0.0	-	-
<b>Discrete Applied Mathematics</b>	3	3	0.0	92.0	0.0	0.0	8.0	-	-
<b>Interfaces</b>	3	3	0.0	100	0.0	0.0	0.0	2	2
<b>Journal of the Operational Research Society</b>	2	152	0.0	46.5	53.5	0.0	0.0	3	2
<b>International Journal of Forecasting</b>	2	23	0.0	0.0	100	0.0	0.0	3	3
<b>Computers and Operations Research</b>	2	20	0.0	15.9	84.1	0.0	0.0	2	2
<b>Journal of Forecasting</b>	2	14	0.0	0.0	100	0.0	0.0	3	3
<b>Theory and Decision</b>	2	9	0.0	0.0	100	0.0	0.0	2	0
<b>International Transactions in Operational Research</b>	2	6	0.0	0.0	100	0.0	0.0	2	2
<b>Journal of Optimization Theory and Applications</b>	2	5	40.9	0.0	59.1	0.0	0.0	-	-
<b>Applied Mathematics and Computation</b>	2	3	0.0	0.0	100	0.0	0.0	-	-



<b>Naval Research Logistics</b>	1	6	0.0	0.0	0.0	50.3	49.7	3	2
<b>OR Insight</b>	1	4	0.0	0.0	19.5	80.5	0.0	-	-
<b>Simulation Modelling Practice and Theory</b>	1	3	0.0	0.0	0.0	100	0.0	-	-

## 5. Conclusions

The 2008 RAE has been a huge exercise in peer review and the judgements that were made would have been extremely valuable in addressing some of the issues that surround the whole idea of journal rankings. Unfortunately, the gradings of individual outputs have been kept secret which was, in our view, both unnecessary and undesirable. What we have attempted to do in this paper is to reconstruct the judgements made by the RAE Panel at least at the level of individual journals although not at the level of papers. We have done this by developing a mathematical programming model that determines the best grade profiles to match the overall institutional profiles for all journals submitted that had at least three entries.

We have shown, both in terms of internal reliability and in terms of correspondence with existing ranking lists such as the ABS list, that the results we have generated have a high degree of plausibility. It is extremely unlikely that they do not represent to a reasonable degree the actual judgements made by the Panel although clearly we can never actually assess the extent of the residual error.

With these results, we have been able to comment on several issues that have arisen concerning the conduct and effects of the RAE, as well as produce an RAE-based ranking for around 700 journals in Business and Management and related areas. Many of these journals are not included in the ABS list. Care should be taken in interpreting the results, especially for journals that had few entries.

- Comparing the grades given by the RAE with those in ABS, on those journals that are in common the overall results are very similar in terms of the average grade awarded. However, there are differences in the proportions of each grade with the RAE giving more 4\* and 1\*, and there are differences for particular journals with some being two or even three grades apart.
- In terms of the RAE leading to selectivity, there is evidence in both directions. There were a very wide range of journals submitted, many of them not in ABS but many of these non-management journals were given a low rank. It is clear that there was selectivity in the submissions with relatively few ABS 1\* journals being submitted. There is also a clear association between the GPA awarded to an institution and the proportion of its submission that was in ABS journals although the direction and nature of the causality is unclear.
- The RAE Panel was clear that it was not grading papers on the basis of the journal they were published in. There is evidence that supports that since many journals, even top ones, had a degree of dispersion in their gradings. However, our results also

produced 62% of journals with 100% in a single grade suggestion a considerable degree of uniformity in judgement.

- As expected, there were significant differences in the gradings given to different sectors with Psychology, Accounting and Finance, Management, and OR doing well and Management Development, Innovation, and Tourism faring worst.
- For non-journal outputs, our results show that books (GPA 2.4) and book chapters (GPA 2.2) gained grades that were commensurate with journals, but reports (GPA 1.4) and other forms of output (GPA 1.3) were seen as poor. This does not bode well for the REF and its focus on external research impact.

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**Table 5 Ranking of 700 journals based on a reconstruction of the 2008 RAE**

\*The sectors come from mainly the ABS rankings. Where a journal is not in ABS we also looked on the Harzing website and categorised a few from that

Journal Title	RAE Grade (mode)	Proportion of entries in each grade					No. of Entries	ABS 2009 1* to 4*	Gear y (median)	Kent 2007 1* to 4*	RAE Grade (Integer)	ABS sector*
		4*	3*	2*	1*	0*						
Abacus	4	100	0	0	0	0	25	2	5	2	4	ACCOUNT
Academy of Management Executive	4	100	0	0	0	0	8	3	6	2	3	GEN MAN
Academy of Management Journal	3	0	100	0	0	0	43	4	6	4	4	GEN MAN
Academy of Management Review	4	100	0	0	0	0	30	4	6	2	4	GEN MAN
Academy of Management, Learning and Education	3	0	100	0	0	0	12	3		4	3	MGDEV&ED
Academy of Marketing Science Review	2	0	0	100	0	0	3	2		2	2	MKT
Accounting and Business Research	3	38	62	0	0	0	52	3	6	2	4	ACCOUNT
Accounting Education	2	0	0	100	0	0	22	2	4		2	MGDEV&ED
Accounting Forum	3	0	54	46	0	0	18	2	4		2	ACCOUNT
Accounting Historians Journal	4	87	13	0	0	0	8	2		1	4	BUS HIST
Accounting History	4	100	0	0	0	0	3	2	5.5		4	BUS HIST
Accounting Horizons	4	100	0	0	0	0	5	3	5.5	3	4	ACCOUNT
Accounting in Europe	1	0	0	0	78	22	3	1			1	ACCOUNT
Accounting Review	1	0	0	0	100	0	3	4		4	3	ACCOUNT
Accounting, Auditing and Accountability Journal	3	0	78	22	0	0	72	3	5	2	2	ACCOUNT
Accounting, Business and Financial History	1	0	0	22	78	0	15	2	6		1	BUS HIST
Accounting, Organisations and Society	4	100	0	0	0	0	82	4	6	4	4	ACCOUNT
Active Learning in Higher Education	0	0	0	0	0	100	3	1			2	MGDEV&ED
Administrative Science Quarterly	3	0	100	0	0	0	6	4	6	4	2	GEN MAN
Advances in Applied Probability	3	0	100	0	0	0	5	3		3	3	OR&MANSCI
Advances in Consumer Research	3	0	100	0	0	0	18	2	7	2	3	MKT
Advances in Developing Human Resources	2	0	0	76	0	24	7	2			2	MGDEV&ED
Advances in Industrial and Labor Relations	1	0	0	0	100	0	4	#N/A		#N/A	3	#N/A
Advances in International Accounting	2	0	0	100	0	0	3	2		1	4	ACCOUNT
Agricultural Economics	3	0	100	0	0	0	3	2			3	ECON
AI and Society	1	0	0	0	100	0	3	#N/A	4	#N/A	1	#N/A
American Economic Review	4	100	0	0	0	0	17	4	6.5	4	4	ECON
American Journal of Agricultural Economics	1	0	0	0	88	12	3	3		3	1	ECON
American Journal of Economics and Sociology	4	100	0	0	0	0	4	2	6	3	4	SOC SCI
American Sociological Review	2	0	0	100	0	0	3	4	6	4	2	SOC SCI

Annals of Finance	3	0	100	0	0	0	5	1			3	FINANCE
Annals of Operations Research	3	0	100	0	0	0	5	2	5	3	3	OR&MANSCI
Annals of Public and Cooperative Economics	3	0	100	0	0	0	8	2	4.5	3	3	ECON
Annals of Regional Science	2	0	0	100	0	0	3	2	7	2	1	SOC SCI
Annals of Tourism Research	3	0	100	0	0	0	42	4	5	3	3	TOUR-HOSP
Applied Economics	2	0	0	100	0	0	48	2	4	2	3	ECON
Applied Economics Letters	2	0	0	100	0	0	15	1	4.5	1	4	ECON
Applied Financial Economics	2	0	0	85	15	0	49	2	5	2	2	FINANCE
Applied Financial Economics Letters	2	0	0	78	0	22	3	#N/A		#N/A	2	#N/A
Applied Mathematics and Computation	2	0	0	100	0	0	3	#N/A		#N/A	1	MIS, KM
Applied Psychology	4	100	0	0	0	0	4	#N/A		#N/A	4	#N/A
Asia Pacific Business Review	2	22	0	78	0	0	11	2	5	1	1	IB&AREA
Asia Pacific Journal of Human Resources	4	100	0	0	0	0	3	2	5	2	2	HRM&EMP
Asia Pacific Journal of Management	4	100	0	0	0	0	5	3		2	4	GEN MAN
ASTIN Bulletin: Journal of the International Actuarial Association	2	0	0	100	0	0	4	#N/A		#N/A	2	#N/A
Australasian Journal of Regional Studies	1	0	0	14	86	0	3	#N/A		#N/A	2	#N/A
Australasian Marketing Journal	2	0	0	100	0	0	3	1		1	1	MKT
Benchmarking: An International Journal	3	0	100	0	0	0	3	1	5	1	1	OPS & TECH
Biometrical Journal	0	0	0	0	0	100	3	#N/A		#N/A	4	#N/A
BMJ (Clinical Research Ed.)	4	61	0	0	39	0	8	#N/A	6	#N/A	4	#N/A
British Accounting Review	2	0	0	100	0	0	43	3	5	1	2	ACCOUNT
British Actuarial Journal	2	0	0	100	0	0	5	#N/A		#N/A	2	#N/A
British Food Journal	1	0	0	0	77	23	9	1	4		1	SECTOR
British Journal of Clinical Psychology	0	0	0	0	0	100	3	#N/A		#N/A	1	#N/A
British Journal of Educational Technology	0	0	0	0	49	51	5	2		2	0	INFO MAN
British Journal of Guidance and Counselling	4	100	0	0	0	0	9	2	4.5		3	MGDEV&ED
British Journal of Industrial Relations	4	59	33	7	0	0	99	4	5	3	4	HRM&EMP
British Journal of Management	3	0	100	0	0	0	108	4	5	2	3	GEN MAN
British Journal of Politics & International Relations	2	0	0	56	44	0	3	#N/A		#N/A	0	#N/A
British Journal of Psychology	2	0	0	85	0	15	3	4		2	2	PSYCH
British Journal of Social Psychology	4	57	0	0	43	0	4	4		1	1	PSYCH
British Journal of Sociology	4	100	0	0	0	0	4	3	5.5	3	1	SOC SCI
British Tax Review	1	0	0	0	100	0	3	2	5		3	FINANCE
Building Research & Information	2	0	0	100	0	0	4	#N/A		#N/A	2	#N/A
Bulletin of Economic Research	2	0	0	100	0	0	6	2	6	2	3	ECON
Bulletin of the World	3	0	81	0	0	19	3	#N/A		#N/A	3	#N/A

<b>Health Organization</b>												
<b>Business Ethics: A European Review</b>	2	0	0	100	0	0	34	2	4	1	2	ETH-GOV
<b>Business History</b>	2	0	0	80	20	0	37	4	6	2	2	BUS HIST
<b>Business History Review</b>	3	31	69	0	0	0	5	3	6	2	2	BUS HIST
<b>Business Process Management Journal</b>	2	0	0	100	0	0	13	1	4	1	3	OPS & TECH
<b>Business Strategy and the Environment</b>	1	0	0	0	100	0	17	2	4.5	2	1	STRAT
<b>California Management Review</b>	4	100	0	0	0	0	10	3	6	3	2	GEN MAN
<b>Cambridge Journal of Economics</b>	3	0	100	0	0	0	50	3	6	3	3	ECON
<b>Canadian Journal of Economics</b>	4	100	0	0	0	0	5	3	6	3	4	ECON
<b>Capital and Class</b>	2	0	0	100	0	0	10	2			2	SOC SCI
<b>Career Development International</b>	2	0	0	100	0	0	5	1	4	1	2	HRM&EMP
<b>China Economic Review</b>	2	0	0	100	0	0	5	2			2	IB&AREA
<b>Climate Policy</b>	1	0	0	37	63	0	3	#N/A		#N/A	2	#N/A
<b>Communications of the ACM</b>	3	43	57	0	0	0	13	3	6	4	1	INFO MAN
<b>Communications of the AIS</b>	4	62	0	0	38	0	3	2			4	INFO MAN
<b>Comparative Economic Studies</b>	2	0	0	100	0	0	5	#N/A		#N/A	1	#N/A
<b>Competition and Change</b>	2	0	0	100	0	0	13	2		2	2	GEN MAN
<b>Computational Optimization and Applications</b>	4	100	0	0	0	0	3	#N/A		#N/A	4	#N/A
<b>Computational Statistics &amp; Data Analysis</b>	3	0	100	0	0	0	3	#N/A		#N/A	3	#N/A
<b>Computers &amp; Education</b>	1	0	0	0	71	29	3	#N/A		#N/A	3	#N/A
<b>Computers and Operations Research</b>	2	0	16	84	0	0	20	2	5.5	2	3	OR&MANSCI
<b>Construction Management and Economics</b>	2	0	0	100	0	0	10	2	5		3	SECTOR
<b>Consumption, Markets and Culture</b>	3	0	100	0	0	0	20	2	5		3	MKT
<b>Contemporary Accounting Research</b>	3	4	96	0	0	0	7	3	6	3	4	ACCOUNT
<b>Contributions to Political Economy</b>	1	0	0	0	71	29	4	2		2	1	ECON
<b>Corporate Governance: An International Review</b>	3	33	55	13	0	0	43	3		1	3	ETH-GOV
<b>Corporate Governance: The International Journal of Business in Society</b>	2	0	0	100	0	0	5	1			2	ETH-GOV
<b>Corporate Ownership and Control</b>	2	0	0	100	0	0	3	#N/A		#N/A	1	#N/A
<b>Corporate Reputation Review</b>	1	5	0	0	95	0	5	1	5	1	1	ETH-GOV
<b>Creativity and Innovation Management</b>	1	0	0	0	100	0	12	1	5	1	4	INNOV
<b>Criminal Justice</b>	1	6	0	0	94	0	3	#N/A		#N/A	3	#N/A
<b>Critical Perspectives on Accounting</b>	2	0	0	100	0	0	89	3	5	2	2	ACCOUNT
<b>Critical Perspectives on International Business</b>	2	9	0	91	0	0	4	1			2	IB&AREA
<b>Critical Social Policy</b>	2	0	0	100	0	0	4	#N/A		#N/A	4	#N/A
<b>Cross Cultural Management: An International Journal</b>	1	0	0	18	82	0	4	1	3	2	3	IB&AREA
<b>Culture and Organization</b>	3	0	100	0	0	0	16	2		2	3	ORG STUD

Current Issues in Tourism	1	0	0	0	100	0	15	2	5		1	TOUR-HOSP
Decision Sciences	4	100	0	0	0	0	3	3	7	3	1	OR&MANSCI
Decision Support Systems	3	0	100	0	0	0	21	3	5	3	3	INFO MAN
Defence and Peace Economics	2	0	0	98	2	0	7	2	4		2	ECON
Derivatives Use, Trading and Regulation	2	0	0	100	0	0	3	1	5		2	FINANCE
Development in Practice	2	0	0	100	0	0	3	#N/A		#N/A	1	#N/A
Development Policy Review	2	0	0	100	0	0	3	#N/A		#N/A	2	#N/A
Discrete Applied Mathematics	3	0	92	0	0	8	3	#N/A		#N/A	3	#N/A
Ecological Economics	3	0	100	0	0	0	13	3	5	3	3	ECON
Econometric Theory	3	0	100	0	0	0	6	3	6	3	2	ECON
Econometrica	3	0	100	0	0	0	5	4	6	4	2	ECON
Econometrics Journal	2	0	0	100	0	0	5	3			2	ECON
Economic and Industrial Democracy	2	0	25	75	0	0	27	3	4.5	2	2	HRM&EMP
Economic History Review	3	0	100	0	0	0	14	4	5.5	3	3	SOC SCI
Economic Inquiry	2	0	0	100	0	0	13	3	6	3	2	ECON
Economic Journal	2	0	20	80	0	0	37	4	6	4	2	ECON
Economic Modelling	1	0	0	37	63	0	7	2	5	1	4	ECON
Economic Policy	3	0	100	0	0	0	3	3	7	3	3	ECON
Economic Theory	3	0	100	0	0	0	12	3	7	3	3	ECON
Economica	2	0	0	100	0	0	21	3	6	3	2	ECON
Economics Letters	2	11	0	89	0	0	56	3	5.5		2	ECON
Economics of Education Review	4	72	28	0	0	0	6	2			3	ECON
Economics of Governance	2	0	19	81	0	0	3	#N/A		#N/A	3	#N/A
Economics of Innovation and New Technology	2	0	26	74	0	0	6	2		2	2	ECON
Economics of Planning	1	0	0	0	70	30	6	1		2	1	ECON
Economics of Transition	3	0	100	0	0	0	9	1		2	3	ECON
Economy and Society	3	0	100	0	0	0	9	3	5	3	3	SOC SCI
Education and Training	1	0	0	0	100	0	12	1	4		1	MGDEV&ED
Educational Management Administration & Leadership	2	0	0	100	0	0	7	#N/A		#N/A	3	#N/A
Electronic Markets	4	62	0	0	0	38	4	1		1	4	SOC SCI
Emergence: Journal in Complexity Management	3	1	99	0	0	0	5	1	5		4	ORG STUD
Empirical Economics	3	0	62	38	0	0	3	2		2	3	ECON
Employee Relations	1	0	0	39	61	0	46	2	5	1	1	HRM&EMP
Energy Economics	1	0	0	0	100	0	3	2		2	1	ECON
Energy Journal	1	0	0	0	100	0	4	3			4	SECTOR
Energy Policy	1	0	0	0	100	0	16	#N/A	6	#N/A	1	#N/A
Enterprise and Society	1	0	31	0	69	0	10	3			2	BUS HIST
Entrepreneurship and Regional Development	2	0	4	96	0	0	24	3	5	1	2	ENT-SMBUS
Entrepreneurship, Theory and Practice	3	1	76	22	0	0	28	4	5	2	3	ENT-SMBUS
Environment and Planning A	3	0	88	12	0	0	46	4	5	3	3	SOC SCI
Environment and Planning C: Government and Policy	3	0	80	20	0	0	60	3	5	3	3	PUB SEC
Environment and	4	100	0	0	0	0	5	4	5	3	4	SOC SCI

Planning D: Society and Space												
Environmental and Resource Economics	1	0	0	0	100	0	5	2	5		1	ECON
Environmental Management	3	0	100	0	0	0	3	#N/A		#N/A	2	#N/A
Equal Opportunities International	2	0	0	100	0	0	6	#N/A		#N/A	2	#N/A
Ethics and Information Technology	4	81	19	0	0	0	4	#N/A		#N/A	3	#N/A
European Accounting Review	3	0	84	16	0	0	24	3	5	2	3	ACCOUNT
European Business Review	1	0	0	0	100	0	19	2	3	2	1	GEN MAN
European Economic Review	3	0	100	0	0	0	19	3	6.5	3	3	ECON
European Educational Research Journal	1	0	0	0	100	0	3	#N/A		#N/A	1	#N/A
European Environment	2	0	0	62	0	38	5	#N/A	5	#N/A	1	#N/A
European Finance Review	3	0	100	0	0	0	5	3	7	2	3	FINANCE
European Financial Management	2	0	48	52	0	0	32	3	6	2	3	FINANCE
European Intellectual Property Review	3	0	95	0	3	2	3	#N/A		#N/A	1	#N/A
European Journal of Finance	2	0	0	100	0	0	15	3	5	2	2	FINANCE
European Journal of Housing Policy	4	100	0	0	0	0	3	#N/A		#N/A	4	#N/A
European Journal of Industrial Relations	2	0	22	78	0	0	32	3	4	2	3	HRM&EMP
European Journal of Information Systems	4	88	12	0	0	0	49	3	5	2	4	INFO MAN
European Journal of Innovation Management	1	0	0	14	86	0	4	1	5	1	2	INNOV
European Journal of Marketing	3	0	57	43	0	0	146	3	5	2	2	MKT
European Journal of Operational Research	3	0	100	0	0	0	137	3	6	3	3	OR&MANSCI
European Journal of Political Economy	2	0	0	100	0	0	10	2		3	2	ECON
European Journal of Social Psychology	4	91	0	9	0	0	5	3		3	3	PSYCH
European Journal of the History of Economic Thought	4	100	0	0	0	0	3	#N/A		#N/A	4	#N/A
European Journal of Work and Organizational Psychology	1	0	0	0	100	0	12	2	5	1	2	PSYCH
European Management Journal	3	1	75	0	25	0	29	1	5	1	3	GEN MAN
European Management Review	3	0	100	0	0	0	7	1			3	GEN MAN
European Planning Studies	1	0	0	0	100	0	11	2		3	1	SOC SCI
European Review of Agricultural Economics	2	0	0	100	0	0	3	2	3	2	2	ECON
European Review of Economic History	3	0	100	0	0	0	4	#N/A		#N/A	2	ECONOMICS
European Urban and Regional Studies	1	0	0	0	100	0	6	3			1	IB&AREA
Evaluation	1	0	0	0	100	0	3	2		1	1	SOC SCI
Expert Systems	0	0	0	0	0	100	4	#N/A	6	#N/A	0	MIS, KM
Expert Systems with Applications	1	0	4	12	84	0	9	3		3	1	INFO MAN
Facilities	0	0	0	1	14	85	7	#N/A	5	#N/A	0	#N/A
Feminist Economics	3	0	100	0	0	0	3	3			3	SOC SCI



Finance and Stochastics	4	100	0	0	0	0	4	3		2	4	FINANCE
Financial Accountability and Management	4	77	0	23	0	0	30	3	5	1	4	FINANCE
Financial Analysts Journal	3	0	100	0	0	0	13	3	6	3	3	FINANCE
Financial History Review	4	100	0	0	0	0	5	2			4	BUS HIST
Financial Management (USA)	4	100	0	0	0	0	4	3	6	3	2	FINANCE
Financial Markets, Institutions and Instruments	2	0	0	100	0	0	4	3		3	4	FINANCE
Fiscal Studies	4	100	0	0	0	0	13	2	5	1	1	ECON
Food Control	1	0	0	0	100	0	3	#N/A		#N/A	1	#N/A
Food Policy	1	0	32	11	57	0	8	2			1	SECTOR
Futures	2	0	0	100	0	0	19	2	4	2	2	SOC SCI
Fuzzy Sets and Systems	0	0	0	0	0	100	3	#N/A		#N/A	0	#N/A
Games and Economic Behaviour	4	62	38	0	0	0	7	4	6	2	4	ECON
Gender, Work and Organization	3	0	63	37	0	0	35	3	4	1	2	HRM&EMP
Geneva Papers on Risk and Insurance Theory	3	0	100	0	0	0	5	2	4	1	3	FINANCE
Geoforum	1	0	0	0	100	0	3	#N/A		#N/A	1	#N/A
Global Finance Journal	2	36	0	64	0	0	5	2			2	FINANCE
Governance: An International Journal of Policy and Administration	4	100	0	0	0	0	3	3			3	PUB SEC
Group Decision and Negotiation	4	100	0	0	0	0	4	3	5	2	4	OR&MANSCI
Harvard Business Review	4	100	0	0	0	0	19	3	7	3	4	GEN MAN
Health Care Management Science	1	0	0	0	100	0	4	1			1	SECTOR
Health Economics	2	0	0	100	0	0	6	2		2	3	ECON
Health Policy	2	0	0	100	0	0	3	#N/A	5	#N/A	3	#N/A
Health Services Management Research	1	0	0	0	100	0	13	1	5	1	1	SECTOR
Higher Education	3	0	72	28	0	0	3	#N/A		#N/A	3	PSM
Higher Education Quarterly	2	0	0	100	0	0	5	2			2	MGDEV&ED
Historical Studies in Industrial Relations	2	0	0	100	0	0	7	#N/A	5	#N/A	2	#N/A
History of Political Economy	4	100	0	0	0	0	6	2	5	3	4	ECON
Housing Studies	3	0	78	22	0	0	3	#N/A		#N/A	3	#N/A
Human Relations	3	9	91	0	0	0	171	4	5		3	ORG STUD
Human Resource Development International	1	0	0	41	59	0	22	2	3		2	MGDEV&ED
Human Resource Development Review	2	0	0	100	0	0	3	2			2	MGDEV&ED
Human Resource Management (USA)	2	0	0	100	0	0	13	4	5	3	2	HRM&EMP
Human Resource Management Journal	2	0	4	96	0	0	65	3	5	2	2	HRM&EMP
IEEE Transactions on Engineering Management	3	2	98	0	0	0	12	3		2	1	OPS & TECH
IEEE Transactions on Evolutionary Computation	4	100	0	0	0	0	4	#N/A		#N/A	4	#N/A
IEEE Transactions on Systems, Man, and Cybernetics - Part A: Systems and Humans	3	0	100	0	0	0	7	#N/A		#N/A	3	#N/A

IEEE Transactions on Systems, Man, and Cybernetics - Part C: Applications and Reviews	3	21	79	0	0	0	3	#N/A		#N/A	2	#N/A
IIE Transactions	4	100	0	0	0	0	4	#N/A		#N/A	4	
IMA Journal of Management Mathematics	0	0	0	0	1	99	7	2	6		0	OR&MANSCI
Industrial and Corporate Change	4	72	15	0	13	0	30	3	6	2	4	SOC SCI
Industrial and Labor Relations Review	2	0	0	100	0	0	10	3	5	3	2	HRM&EMP
Industrial Law Journal	3	0	100	0	0	0	8	3	4		1	LAW
Industrial Management and Data Systems	1	0	6	0	94	0	4	1		1	2	INFO MAN
Industrial Marketing Management	2	0	44	56	0	0	72	3	5	2	3	MKT
Industrial Relations Journal	3	0	55	45	0	0	60	2	5	1	2	HRM&EMP
Industrial Relations: A Journal of Economy and Society	4	54	0	9	37	0	25	4		3	2	HRM&EMP
Industry and Higher Education	3	0	81	19	0	0	8	1			3	MGDEV&ED
Industry and Innovation	1	0	0	0	77	23	7	2	6	1	1	INNOV
Information and Management	2	0	0	100	0	0	28	3	6	2	2	INFO MAN
Information and Organization	3	0	100	0	0	0	26	3		1	3	INFO MAN
Information and Software Technology	3	0	100	0	0	0	4	2			2	INFO MAN
Information Research	4	100	0	0	0	0	3	#N/A		#N/A	4	#N/A
Information Resources Management Journal	2	0	0	100	0	0	3	1			2	INFO MAN
Information Society	3	0	100	0	0	0	4	2		2	3	INFO MAN
Information System Frontiers	0	0	0	0	50	50	3	2			2	INFO MAN
Information Systems Journal	4	100	0	0	0	0	18	3	6	3	4	INFO MAN
Information Systems Management	2	0	0	100	0	0	3	2		2	2	INFO MAN
Information Systems Research	3	0	100	0	0	0	6	4	5.5	4	3	INFO MAN
Information Technology and People	1	0	0	0	100	0	13	2	6	2	1	INFO MAN
Information, Communication and Society	2	0	0	100	0	0	7	1	5		1	SOC SCI
INFORMS Journal on Computing	3	0	100	0	0	0	3	3			3	INFO MAN
Innovations in Education & Teaching International	1	0	0	0	100	0	4	#N/A		#N/A	1	#N/A
Insurance Mathematics and Economics	2	8	0	92	0	0	18	2		3	2	ECON
Integrated Manufacturing Systems	1	0	0	0	100	0	6	2	6	2	2	OPS & TECH
Intelligent Systems in Accounting, Finance and Management	1	0	0	0	100	0	7	2			1	FINANCE
Interacting with Computers	3	0	86	0	14	0	5	2	4		2	INFO MAN
Intereconomics	1	0	0	12	88	0	7	#N/A	6	#N/A	1	#N/A
Interfaces	3	0	100	0	0	0	3	2	7	2	2	OR&MANSCI
International Business Review	2	32	0	68	0	0	31	2	5	2	4	IB&AREA
International Economic Review	3	0	100	0	0	0	3	4	7	3	3	ECON

International Entrepreneurship and Management Journal	3	0	100	0	0	0	3	1			3	ENT-SMBUS
International Journal of Accounting	2	0	0	100	0	0	9	3	5	1	2	ACCOUNT
International Journal of Advanced Manufacturing Technology	3	0	68	0	32	0	3	#N/A		#N/A	3	#N/A
International Journal of Advertising	3	0	100	0	0	0	13	2	5	1	2	MKT
International Journal of Agile Management Systems	1	0	0	0	100	0	3	1			1	OPS & TECH
International Journal of Agile Manufacturing	2	0	0	100	0	0	3	#N/A		#N/A	2	#N/A
International Journal of Auditing	3	7	93	0	0	0	9	2	5		3	ACCOUNT
International Journal of Bank Marketing	1	0	21	0	79	0	10	1	4	1	1	MKT
International Journal of Business Governance and Ethics	2	0	0	100	0	0	5	#N/A		#N/A	2	#N/A
International Journal of Consumer Studies	1	0	0	0	58	42	19	1			1	MKT
International Journal of Contemporary Hospitality Management	1	0	0	0	100	0	10	2	4	1	1	TOUR-HOSP
International Journal of Cross Cultural Management	1	0	0	0	100	0	4	1		1	1	IB&AREA
International Journal of Electronic Commerce	2	0	0	100	0	0	3	3		3	2	MKT
International Journal of Entrepreneurial Behaviour and Research	2	0	0	100	0	0	26	2	4	1	2	ENT-SMBUS
International Journal of Entrepreneurship and Innovation	1	0	0	36	64	0	6	2		1	2	ENT-SMBUS
International Journal of Entrepreneurship and Innovation Management (IJEIM)	1	0	4	0	96	0	11	1			1	ENT-SMBUS
International Journal of Finance and Economics	1	0	0	0	100	0	10	2	6	3	1	FINANCE
International Journal of Flexible Manufacturing Systems	0	0	0	0	3	97	3	2		2	1	OPS & TECH
International Journal of Forecasting	2	0	0	100	0	0	23	3	5	3	1	OR&MANSCI
International Journal of Health Care Quality Assurance	2	0	34	51	0	16	6	1	5		2	SECTOR
International Journal of Healthcare Technology and Management	3	0	100	0	0	0	5	#N/A		#N/A	3	#N/A
International Journal of Heritage Studies	1	0	0	0	100	0	5	1	4		1	TOUR-HOSP
International Journal of Hospitality Management	1	0	0	27	73	0	17	2	2.5	2	2	TOUR-HOSP
International Journal of Human Resource Management	2	8	24	68	0	0	132	3	5	3	2	HRM&EMP
International Journal of Human-Computer Studies	2	0	0	100	0	0	3	3	5	2	2	INFO MAN
International Journal of Industrial Organization	4	96	4	0	0	0	14	4	6	3	4	ECON
International Journal of Information	1	0	0	0	100	0	26	2	4	2	1	INFO MAN

<b>Management</b>												
<b>International Journal of Information Technology and Management</b>	1	0	0	0	100	0	3	#N/A		#N/A	2	#N/A
<b>International Journal of Innovation Management</b>	3	0	100	0	0	0	20	2	5	2	2	INNOV
<b>International Journal of Knowledge, Culture and Change Management</b>	1	0	0	0	62	38	6	#N/A		#N/A	0	#N/A
<b>International Journal of Logistics Management</b>	4	55	45	0	0	0	15	2	5	2	3	OPS & TECH
<b>International Journal of Logistics: Research and Applications</b>	3	0	73	15	13	0	22	2	5		3	OPS & TECH
<b>International Journal of Management</b>	1	0	0	0	100	0	3	#N/A	4	#N/A	1	#N/A
<b>International Journal of Management and Decision Making</b>	2	0	39	55	5	0	9	1			1	GEN MAN
<b>International Journal of Management Education (IJME)</b>	2	0	0	100	0	0	3	1			3	MGDEV&ED
<b>International Journal of Management Reviews</b>	4	93	7	0	0	0	37	3	6	2	4	GEN MAN
<b>International Journal of Manpower</b>	2	0	0	100	0	0	6	2	4	1	2	HRM&EMP
<b>International Journal of Market Research</b>	2	0	0	100	0	0	25	2	4	2	2	MKT
<b>International Journal of Nonprofit and Voluntary Sector Marketing</b>	1	0	0	0	100	0	10	1			1	MKT
<b>International Journal of Operations and Production Management</b>	3	40	60	0	0	0	134	3	5	2	4	OPS & TECH
<b>International Journal of Physical Distribution and Logistics Management</b>	1	0	0	0	100	0	13	1	5	2	3	OPS & TECH
<b>International Journal of Production Economics</b>	3	0	77	23	0	0	60	3	5.5	2	3	OPS & TECH
<b>International Journal of Production Research</b>	3	0	85	0	15	0	71	3	5.5	3	3	OPS & TECH
<b>International Journal of Productivity and Performance Management</b>	0	0	0	0	0	100	3	1			0	OPS & TECH
<b>International Journal of Project Management</b>	2	0	0	93	7	0	32	2	5	1	2	OPS & TECH
<b>International Journal of Psychophysiology</b>	0	0	0	0	36	64	3	#N/A		#N/A	3	#N/A
<b>International Journal of Public Administration</b>	4	53	47	0	0	0	3	2		2	4	PUB SEC
<b>International Journal of Public Sector Management</b>	2	0	0	83	17	0	44	2	4	2	2	PUB SEC
<b>International Journal of Quality and Reliability Management</b>	2	0	0	100	0	0	16	2	5	2	2	OPS & TECH
<b>International Journal of Research in Marketing</b>	4	100	0	0	0	0	5	3	5	3	4	MKT
<b>International Journal of Retail and Distribution Management</b>	1	0	0	0	100	0	34	1	4	1	1	SECTOR
<b>International Journal of Selection and Assessment</b>	2	0	0	100	0	0	3	3	3.5	3	3	HRM&EMP
<b>International Journal of Service Industry Management</b>	2	0	47	53	0	0	17	2	5	2	2	SECTOR

International Journal of Sociology and Social Policy	4	65	0	0	35	0	4	1			1	SOC SCI
International Journal of Stress Management	2	0	0	97	3	0	4	#N/A		#N/A	1	#N/A
International Journal of Technology and Human Interaction	3	0	100	0	0	0	3	#N/A		#N/A	2	#N/A
International Journal of Technology Management	2	0	0	100	0	0	33	2	5	2	3	OPS & TECH
International Journal of the Economics of Business	3	12	88	0	0	0	8	3	6	2	4	ECON
International Journal of the Sociology of Law	1	0	0	0	100	0	4	#N/A		#N/A	1	#N/A
International Journal of Theoretical and Applied Finance	4	100	0	0	0	0	7	2			4	FINANCE
International Journal of Tourism Research	1	0	0	30	70	0	29	2	4		1	TOUR-HOSP
International Journal of Urban and Regional Research	4	100	0	0	0	0	5	#N/A		#N/A	4	<i>SOCIOLOGY</i>
International Marketing Review	1	0	24	10	66	0	28	3	4.5	1	3	MKT
International Review of Administrative Sciences	0	0	0	4	10	86	7	2	4	2	2	GEN MAN
International Review of Applied Economics	1	0	0	0	100	0	12	2	4	3	1	ECON
International Review of Economics Education	1	0	0	0	100	0	3	#N/A		#N/A	1	#N/A
International Review of Financial Analysis	1	38	0	0	62	0	13	3		1	4	FINANCE
International Review of Law and Economics	1	0	0	0	100	0	4	2		2	1	LAW
International Review of Retail Distribution & Consumer Research	3	0	37	36	27	0	15	#N/A	5	#N/A	3	<i>MARKETING</i>
International Review of Retail Distribution and Consumer Research	2	0	0	79	21	0	13	1	5	1	2	MKT
International Small Business Journal	1	0	32	0	68	0	51	3	4	1	2	ENT-SMBUS
International Studies of Management and Organisation	1	0	0	17	83	0	18	2	5	2	1	GEN MAN
International Tax and Public Finance	2	0	0	100	0	0	4	2			2	FINANCE
International Transactions in Operational Research	2	0	0	100	0	0	6	2	7	2	1	OR&MANSCI
Internet Research	2	0	0	100	0	0	3	2	4		3	INFO MAN
Investment Management and Financial Innovations	1	0	0	30	70	0	3	1			1	FINANCE
Irish Journal of Management	1	0	0	0	100	0	4	#N/A		#N/A	0	#N/A
Journal of Accounting and Economics	4	100	0	0	0	0	5	4	7	4	4	ACCOUNT
Journal of Accounting and Organizational Change	1	0	0	0	100	0	3	1			3	ACCOUNT
Journal of Accounting and Public Policy	4	63	0	37	0	0	13	3	5	3	2	ACCOUNT
Journal of Accounting Research	4	100	0	0	0	0	9	4	5	4	4	ACCOUNT
Journal of Advanced Nursing	1	0	0	0	72	28	8	#N/A	7	#N/A	1	#N/A

Journal of Advertising	3	0	100	0	0	0	14	3	5	2	3	MKT
Journal of Advertising Research	1	25	10	0	64	0	14	3	4	2	3	MKT
Journal of Agricultural Economics	3	0	100	0	0	0	10	2			3	ECON
Journal of Applied Accounting Research	3	0	100	0	0	0	6	2	4.5	1	3	ACCOUNT
Journal of Applied Behavioral Science	4	100	0	0	0	0	4	2	5		1	ORG STUD
Journal of Applied Corporate Finance	4	100	0	0	0	0	5	2	6.5	2	4	FINANCE
Journal of Applied Econometrics	3	0	100	0	0	0	12	3	6.5	3	3	ECON
Journal of Applied Psychology	4	100	0	0	0	0	33	4	6.5	4	4	PSYCH
Journal of Applied Social Psychology	0	33	0	25	0	42	3	2		2	4	PSYCH
Journal of Banking and Finance	2	2	46	53	0	0	76	3	6	3	3	FINANCE
Journal of Bionics Engineering	1	0	0	0	58	42	3	#N/A		#N/A	1	#N/A
Journal of Brand Management	1	0	0	0	100	0	6	1	4	1	1	MKT
Journal of Business	3	0	100	0	0	0	16	4	6.5	4	2	GEN MAN
Journal of Business and Economic Statistics	2	0	0	100	0	0	8	4	7	3	2	ECON
Journal of Business and Industrial Marketing	2	0	0	100	0	0	15	2	5	1	3	MKT
Journal of Business Ethics	2	0	6	79	15	0	81	3	3	2	2	ETH-GOV
Journal of Business Finance and Accounting	3	24	70	6	0	0	125	3	6	3	3	FINANCE
Journal of Business Law	3	0	100	0	0	0	7	2			3	LAW
Journal of Business Logistics	3	0	88	0	0	12	3	2		2	2	OPS & TECH
Journal of Business Research	2	0	9	91	0	0	81	3	6	3	2	GEN MAN
Journal of Business Venturing	4	95	5	0	0	0	32	4	6	3	4	ENT-SMBUS
Journal of Change Management	1	0	0	0	100	0	5	1			0	STRAT
Journal of Combinatorial Optimization	3	0	100	0	0	0	4	#N/A		#N/A	0	OR, MS, POM
Journal of Common Market Studies	3	0	70	30	0	0	3	3	6	2	1	IB&AREA
Journal of Comparative Economics	2	36	0	64	0	0	11	3	5	2	3	ECON
Journal of Computer Information Systems	2	0	0	84	0	16	5	2			0	INFO MAN
Journal of Construction Engineering and Management	3	0	100	0	0	0	3	#N/A		#N/A	1	#N/A
Journal of Consumer Behaviour	2	0	0	97	3	0	15	2		2	2	MKT
Journal of Consumer Research	4	100	0	0	0	0	11	4	7	4	3	MKT
Journal of Corporate Finance	2	0	0	100	0	0	20	3	6	3	4	FINANCE
Journal of Customer Behaviour	1	0	0	0	70	30	3	1			0	MKT
Journal of Derivatives	3	0	100	0	0	0	4	2	6	2	3	FINANCE
Journal of Development Economics	4	100	0	0	0	0	7	3	6.5	3	4	ECON
Journal of Development Studies	3	0	100	0	0	0	13	3	5.5	3	2	SOC SCI
Journal of Econometrics	3	43	57	0	0	0	26	4	6	3	3	ECON
Journal of Economic Behaviour and	2	0	0	100	0	0	15	3	6	3	3	ECON

<b>Organization</b>												
<b>Journal of Economic Dynamics and Control</b>	3	0	100	0	0	0	20	3	6	2	3	ECON
<b>Journal of Economic Geography</b>	2	0	0	100	0	0	10	4			3	SOC SCI
<b>Journal of Economic Issues</b>	1	0	0	0	100	0	10	1	4	2	1	ECON
<b>Journal of Economic Literature</b>	2	0	0	100	0	0	4	4	4	4	3	ECON
<b>Journal of Economic Methodology</b>	4	100	0	0	0	0	5	2			4	ECON
<b>Journal of Economic Psychology</b>	3	0	100	0	0	0	11	2	5	2	2	PSYCH
<b>Journal of Economic Studies</b>	3	0	57	43	0	0	6	2	4	2	2	ECON
<b>Journal of Economic Theory</b>	3	0	61	39	0	0	11	4	7	4	2	ECON
<b>Journal of Economics and Business</b>	3	0	100	0	0	0	5	1		2	2	ECON
<b>Journal of Economics and Management Strategy</b>	3	0	100	0	0	0	4	3	5	1	2	STRAT
<b>Journal of Education and Work</b>	3	0	100	0	0	0	6	2	5		3	MGDEV&ED
<b>Journal of Education Policy</b>	1	0	0	0	100	0	4	2	7	2	1	MGDEV&ED
<b>Journal of Empirical Finance</b>	4	56	0	44	0	0	14	3	6.5	3	2	FINANCE
<b>Journal of End User Computing</b>	2	0	0	59	41	0	5	#N/A	4	#N/A	3	MIS, KM
<b>Journal of Enterprising Culture</b>	1	0	0	0	100	0	3	1	4.5	1	1	ENT-SMBUS
<b>Journal of Environmental Economics and Management</b>	2	0	0	100	0	0	8	4		3	3	ECON
<b>Journal of Environmental Planning and Management</b>	1	0	0	0	100	0	3	#N/A		#N/A	1	#N/A
<b>Journal of Epidemiology &amp; Community Health</b>	1	0	0	0	100	0	3	#N/A		#N/A	3	#N/A
<b>Journal of Euromarketing</b>	2	0	0	100	0	0	5	1	4	1	3	MKT
<b>Journal of European Economic History</b>	2	0	0	100	0	0	4	2		2	2	SOC SCI
<b>Journal of European Industrial Training</b>	1	0	0	0	100	0	14	1	4	1	1	MGDEV&ED
<b>Journal of European Public Policy</b>	1	25	0	31	45	0	10	3	5	3	4	PUB SEC
<b>Journal of Evolutionary Economics</b>	3	44	56	0	0	0	12	2	6	3	3	ECON
<b>Journal of Experimental Social Psychology</b>	4	100	0	0	0	0	4	3	6	3	3	PSYCH
<b>Journal of Finance</b>	3	27	73	0	0	0	49	4	7	4	3	FINANCE
<b>Journal of Finance and Management in Public Services</b>	1	0	0	0	100	0	7	1			1	FINANCE
<b>Journal of Financial and Quantitative Analysis</b>	3	0	100	0	0	0	10	4	5.5	4	3	FINANCE
<b>Journal of Financial Econometrics</b>	3	0	100	0	0	0	3	#N/A		#N/A	3	ECONOMICS
<b>Journal of Financial Economics</b>	4	100	0	0	0	0	39	4	7	4	4	FINANCE
<b>Journal of Financial Intermediation</b>	2	0	33	35	0	32	10	3	7	3	2	FINANCE
<b>Journal of Financial Regulation and Compliance</b>	2	0	0	76	24	0	4	1	5		1	FINANCE
<b>Journal of Financial</b>	3	0	100	0	0	0	10	3		2	4	FINANCE

Research												
Journal of Financial Services Marketing	1	0	0	0	100	0	6	1	4		0	MKT
Journal of Financial Services Research	0	14	0	0	0	86	3	2	6	1	3	FINANCE
Journal of Financial Stability	3	0	100	0	0	0	4	#N/A		#N/A	3	#N/A
Journal of Fixed Income	4	80	20	0	0	0	4	1	6.5		4	FINANCE
Journal of Forecasting	2	0	0	100	0	0	14	3	6	3	4	OR&MANSCI
Journal of Futures Markets	3	0	100	0	0	0	21	3	5.5	3	3	FINANCE
Journal of General Management	3	0	79	12	0	9	11	2	4	1	2	GEN MAN
Journal of Health Economics	4	100	0	0	0	0	9	3	4	4	4	ECON
Journal of Health Organisation and Management	1	0	0	0	100	0	5	1			1	SECTOR
Journal of Health Services Research and Policy	3	0	81	19	0	0	5	1	5		3	SECTOR
Journal of Heuristics	4	88	0	0	0	12	3	#N/A		#N/A	2	#N/A
Journal of Hospitality and Tourism Management	2	0	0	100	0	0	3	#N/A		#N/A	1	#N/A
Journal of Industrial Ecology	2	0	0	100	0	0	4	2		3	3	SOC SCI
Journal of Industrial Economics	1	0	0	0	100	0	5	3	5.5	3	0	ECON
Journal of Information Science	1	0	0	0	100	0	4	2		1	1	INFO MAN
Journal of Information Technology	3	0	100	0	0	0	51	3	5	2	3	INFO MAN
Journal of Institutional and Theoretical Economics	4	100	0	0	0	0	4	2	6	2	4	ECON
Journal of Interdisciplinary Economics	4	100	0	0	0	0	6	1	4		4	ECON
Journal of International Accounting, Auditing and Taxation	3	0	100	0	0	0	3	2			3	ACCOUNT
Journal of International Business Studies	2	0	0	100	0	0	69	4	6	4	2	IB&AREA
Journal of International Development	1	0	0	0	100	0	5	1	5	1	1	ECON
Journal of International Economics	4	100	0	0	0	0	11	3	7	3	3	ECON
Journal of International Entrepreneurship	1	0	0	0	100	0	6	1			1	ENT-SMBUS
Journal of International Financial Management and Accounting	3	42	58	0	0	0	3	2	6	1	3	FINANCE
Journal of International Financial Markets, Institutions and Money	2	0	0	100	0	0	15	3		1	2	FINANCE
Journal of International Management	4	100	0	0	0	0	8	2		2	1	IB&AREA
Journal of International Marketing	2	0	0	100	0	0	15	3	6	3	2	MKT
Journal of International Money and Finance	3	0	100	0	0	0	22	3	6	3	3	FINANCE
Journal of Knowledge Management	2	0	42	58	0	0	11	2			2	ORG STUD
Journal of Labour Research	2	0	0	100	0	0	4	2	5	2	1	HRM&EMP
Journal of Law and Society	2	2	0	98	0	0	4	2	4		2	LAW



Journal of Macroeconomics	4	100	0	0	0	0	8	2	5	3	4	ECON
Journal of Macromarketing	1	0	0	0	100	0	4	2	5	1	1	MKT
Journal of Management	4	100	0	0	0	0	7	4	6	3	3	GEN MAN
Journal of Management Accounting Research (American Accounting Association)	3	0	100	0	0	0	3	2		2	3	ACCOUNT
Journal of Management Development	2	0	0	60	40	0	4	1	4	1	0	MGDEV&ED
Journal of Management Education	1	0	15	10	75	0	5	2	4.5		1	MGDEV&ED
Journal of Management Inquiry	3	0	53	47	0	0	14	3	5	3	4	GEN MAN
Journal of Management Studies	3	0	100	0	0	0	219	4	5	3	3	GEN MAN
Journal of Managerial Psychology	2	0	0	100	0	0	17	1	5	1	2	PSYCH
Journal of Manufacturing Technology Management	3	40	55	5	0	0	13	2			3	OPS & TECH
Journal of Marketing	4	80	20	0	0	0	18	4	5	4	3	MKT
Journal of Marketing Communications	2	0	0	100	0	0	9	2	4	1	2	MKT
Journal of Marketing Education	1	0	0	0	100	0	4	2		2	2	MGDEV&ED
Journal of Marketing Management	2	0	1	99	0	0	125	3	5	2	2	MKT
Journal of Marketing Research	4	100	0	0	0	0	17	4	7	4	4	MKT
Journal of Mathematical Economics	1	0	0	0	100	0	7	3		3	1	ECON
Journal of Monetary Economics	2	0	0	100	0	0	7	4	7	4	2	ECON
Journal of Money, Credit and Banking	3	48	52	0	0	0	17	3	5.5	3	3	FINANCE
Journal of Multinational Financial Management	3	0	51	0	0	49	5	2		1	2	FINANCE
Journal of Nonprofit & Public Sector Marketing	2	0	0	100	0	0	4	#N/A	4	#N/A	2	MARKETING
Journal of Nursing Management	1	0	0	0	100	0	3	#N/A		#N/A	1	#N/A
Journal of Occupational and Organizational Psychology	3	21	79	0	0	0	43	4	5	3	3	PSYCH
Journal of Occupational Health Psychology	4	90	10	0	0	0	6	2	6		3	PSYCH
Journal of Operations Management	3	40	60	0	0	0	31	4	7	3	3	OPS & TECH
Journal of Optimization Theory and Applications	2	41	0	59	0	0	5	#N/A		#N/A	4	OR, MS, POM
Journal of Organisational Behaviour	2	0	45	55	0	0	26	4	5.5		2	ORG STUD
Journal of Organizational Change Management	2	0	0	100	0	0	22	2	5	1	3	ORG STUD
Journal of Peace Research	2	0	0	100	0	0	3	#N/A		#N/A	2	#N/A
Journal of Pension Economics and Finance	3	0	100	0	0	0	3	1			3	FINANCE
Journal of Personal Selling and Sales Management	4	100	0	0	0	0	4	2	5	2	0	MKT
Journal of Personality and Social Psychology	4	100	0	0	0	0	6	4	6	4	4	PSYCH
Journal of Policy	1	0	8	0	92	0	4	2		2	2	SOC SCI

<b>Modelling</b>												
<b>Journal of Political Economy</b>	4	100	0	0	0	0	3	4	6	4	3	ECON
<b>Journal of Population Economics</b>	3	0	100	0	0	0	6	3			3	ECON
<b>Journal of Portfolio Management</b>	3	0	100	0	0	0	13	2	6.5	2	3	FINANCE
<b>Journal of Post Keynesian Economics</b>	1	0	0	2	98	0	9	2	5.5	3	1	ECON
<b>Journal of Product and Brand Management</b>	2	0	0	100	0	0	10	1	4	1	1	MKT
<b>Journal of Product Innovation Management</b>	2	0	34	66	0	0	14	4	6	3	4	INNOV
<b>Journal of Productivity Analysis</b>	3	0	100	0	0	0	12	2	4	3	3	OPS & TECH
<b>Journal of Property Research</b>	2	0	0	100	0	0	4	#N/A		#N/A	2	#N/A
<b>Journal of Public Administration: Research and Theory</b>	4	100	0	0	0	0	7	4		2	4	PUB SEC
<b>Journal of Public Economics</b>	3	5	95	0	0	0	11	3	5	3	3	ECON
<b>Journal of Public Policy and Marketing</b>	3	41	59	0	0	0	5	3		2	1	PUB SEC
<b>Journal of Purchasing and Supply Management</b>	4	100	0	0	0	0	7	2			4	OPS & TECH
<b>Journal of Real Estate Finance and Economics</b>	3	0	100	0	0	0	4	2		2	2	FINANCE
<b>Journal of Regional Science</b>	3	0	100	0	0	0	3	3	4	3	2	SOC SCI
<b>Journal of Regulatory Economics</b>	3	0	100	0	0	0	7	2	5.5	2	4	ECON
<b>Journal of Retailing</b>	4	100	0	0	0	0	6	4	5	3	4	MKT
<b>Journal of Retailing and Consumer Services</b>	1	0	0	0	100	0	10	1	5	1	1	MKT
<b>Journal of Risk and Insurance</b>	3	0	100	0	0	0	6	2	5	2	2	FINANCE
<b>Journal of Risk and Uncertainty</b>	3	0	100	0	0	0	7	4	6	3	3	SOC SCI
<b>Journal of Risk Research</b>	3	0	100	0	0	0	8	2			3	SOC SCI
<b>Journal of Rural Studies</b>	1	0	0	0	100	0	13	4	4	3	1	SOC SCI
<b>Journal of Service Research</b>	2	0	7	93	0	0	15	3		2	2	SECTOR
<b>Journal of Services Marketing</b>	2	0	0	100	0	0	21	3	4	1	2	MKT
<b>Journal of Small Business and Enterprise Development</b>	1	0	0	12	88	0	32	2	4	1	1	ENT-SMBUS
<b>Journal of Small Business Management</b>	3	0	100	0	0	0	9	3	5	2	3	ENT-SMBUS
<b>Journal of Social Policy</b>	3	0	100	0	0	0	9	3		3	3	PUB SEC
<b>Journal of Sports Economics</b>	0	0	0	0	28	72	3	#N/A		#N/A	0	#N/A
<b>Journal of Strategic Information Systems</b>	3	0	100	0	0	0	21	3	6	2	2	INFO MAN
<b>Journal of Strategic Marketing</b>	3	0	60	40	0	0	41	2	5	2	2	MKT
<b>Journal of Sustainable Tourism</b>	1	0	0	0	100	0	17	1	5	1	1	TOUR-HOSP
<b>Journal of Technology Transfer</b>	1	0	0	0	100	0	3	#N/A	6	#N/A	0	#N/A
<b>Journal of the Academy of Marketing Science</b>	4	100	0	0	0	0	18	4	6	3	4	MKT
<b>Journal of the American Society for Information Science and Technology</b>	3	0	100	0	0	0	4	#N/A		#N/A	3	#N/A
<b>Journal of the European</b>	2	0	0	90	10	0	8	3		1	2	ECON

Economic Association (JEEA)												
Journal of the Operational Research Society	2	0	46	54	0	0	152	3	6	2	2	OR&MANSCI
Journal of the Royal Statistical Society Series A (Statistics in Society)	3	8	92	0	0	0	9	3	4	4	2	OR&MANSCI
Journal of the Textile Institute	3	0	100	0	0	0	4	2			2	SECTOR
Journal of Transport Economics and Policy	2	0	0	46	44	10	3	2	5	2	1	SECTOR
Journal of Transport Geography	1	0	0	0	100	0	10	2			1	SOC SCI
Journal of Travel Research	2	0	4	96	0	0	22	3	4	3	2	TOUR-HOSP
Journal of Vacation Marketing	1	0	0	0	100	0	3	1	4		1	TOUR-HOSP
Journal of Vocational Behavior	2	0	0	100	0	0	16	4	5	3	4	HRM&EMP
Journal of Vocational Education and Training	2	0	0	100	0	0	6	1			2	MGDEV&ED
Journal of World Business (formerly Columbia JWB)	3	0	100	0	0	0	32	3	6	3	3	IB&AREA
Journal on Chain and Network Science	2	0	0	100	0	0	3	#N/A		#N/A	3	#N/A
Knowledge and Process Management	3	0	100	0	0	0	7	1	5	1	3	OPS & TECH
Knowledge Management Research and Practice	3	0	69	1	30	0	7	1		2	3	INFO MAN
Kybernetes	0	0	0	0	0	100	3	#N/A		#N/A	0	#N/A
Kyklos	1	0	0	0	100	0	6	3	5	3	1	ECON
Labour Economics	3	23	77	0	0	0	10	3		3	4	ECON
Labour: Review of Labour Economics and Industrial Relations	3	0	100	0	0	0	3	1	6	2	3	HRM&EMP
Land Economics	1	0	0	0	100	0	4	3	5	2	1	ECON
Leadership	3	0	100	0	0	0	14	N			2	ORG STUD
Leadership and Organisational Development	2	0	18	52	30	0	5	1	4	1	2	ORG STUD
Leadership Quarterly	3	0	77	23	0	0	4	4	7	3	3	ORG STUD
Learning Organization	1	0	0	0	63	37	4	1			0	ORG STUD
Legal and Criminological Psychology	1	0	0	0	100	0	3	#N/A		#N/A	1	#N/A
Leisure Studies	1	0	8	0	92	0	7	2	4		1	TOUR-HOSP
Local Economy	2	0	0	100	0	0	15	2	4	2	2	SOC SCI
Local Government Studies	2	0	0	100	0	0	31	2	4.5	3	2	PUB SEC
Long Range Planning	3	0	100	0	0	0	47	3	5	2	3	STRAT
Macroeconomic Dynamics	2	0	0	97	0	3	6	2			2	ECON
Management Accounting Research	2	0	3	97	0	0	34	3	6	3	3	ACCOUNT
Management and Organisational History	3	0	100	0	0	0	5	1			2	BUS HIST
Management Decision	1	0	0	0	100	0	32	1	4	1	1	GEN MAN
Management International Review	4	100	0	0	0	0	27	3	6	2	4	IB&AREA
Management Learning	2	0	34	66	0	0	66	3	5	2	3	GEN MAN
Management Science	4	95	5	0	0	0	29	4	6	4	3	OR&MANSCI
Managerial and Decision Economics	3	0	100	0	0	0	18	2	6	2	3	ECON
Managerial Auditing	1	0	0	13	87	0	14	1	4	1	2	ACCOUNT

Journal												
Managerial Finance	2	0	0	100	0	0	15	1	3	1	2	FINANCE
Managing Leisure: An International Journal	1	0	0	0	100	0	4	1	4		1	TOUR-HOSP
Managing Service Quality	1	0	0	0	100	0	5	1	4	1	1	OPS & TECH
Manchester School	2	0	34	66	0	0	22	2	6	2	2	ECON
Manufacturing and Service Operations Management (M& SOM)	3	0	100	0	0	0	4	2		1	3	OPS & TECH
Marine Policy	2	0	0	68	32	0	8	2	5	3	2	SECTOR
Marine Resource Economics	1	0	0	0	100	0	7	#N/A		#N/A	1	#N/A
Marketing Intelligence and Planning	1	0	0	0	100	0	22	1	4	1	1	MKT
Marketing Letters	3	0	98	2	0	0	7	3	7	3	1	MKT
Marketing Review	1	0	0	0	100	0	7	1		1	0	MKT
Marketing Science	4	100	0	0	0	0	12	4	7	4	4	MKT
Marketing Theory	4	72	28	0	0	0	7	2		2	4	MKT
Mathematical Finance	4	94	6	0	0	0	9	3	7	3	4	FINANCE
Mathematical Programming	3	0	100	0	0	0	7	3	6	4	4	OR&MANSCI
Metroeconomica	4	100	0	0	0	0	5	#N/A		#N/A	4	#N/A
Milbank Quarterly	4	91	9	0	0	0	3	4			3	PUB SEC
MIS Quarterly	3	0	85	0	15	0	8	4	6	4	3	INFO MAN
MIT Sloan Management Review	4	100	0	0	0	0	23	3	7	3	4	GEN MAN
National Institute Economic Review	3	0	100	0	0	0	5	2	6		1	ECON
Naval Research Logistics	1	0	0	0	50	50	6	3		2	1	OR&MANSCI
New Political Economy	1	0	12	0	88	0	5	2			1	SOC SCI
New Technology, Work and Employment	4	78	0	22	0	0	35	3	5	2	3	HRM&EMP
Non-Profit and Voluntary Sector Quarterly	2	0	0	100	0	0	3	3		3	2	SECTOR
Non-Profit Management and Leadership	2	0	0	100	0	0	5	1	4	2	2	SECTOR
North American Actuarial Journal	2	0	0	100	0	0	6	#N/A		#N/A	2	#N/A
Occupational and Environmental Medicine	4	90	0	0	10	0	3	#N/A		#N/A	0	#N/A
Omega: The International Journal of Management Science	3	0	83	17	0	0	37	3	5	2	3	OR&MANSCI
Open Economies Review	1	0	0	0	100	0	4	1			1	ECON
Operations Research	3	0	100	0	0	0	20	4	7	4	4	OR&MANSCI
Operations Research Letters	4	100	0	0	0	0	4	2		3	4	OR&MANSCI
OR Insight	1	0	0	19	81	0	4	#N/A	4	#N/A	0	#N/A
Organization	3	0	100	0	0	0	83	3	5	3	3	ORG STUD
Organization Science	4	100	0	0	0	0	28	4	6		4	ORG STUD
Organization Studies	3	47	53	0	0	0	144	4	5	3	3	ORG STUD
Organizational Behaviour and Human Decision Processes	3	0	100	0	0	0	8	4	6	4	3	PSYCH
Organizational Dynamics	4	100	0	0	0	0	5	3	5.5	3	4	ORG STUD
Organizational Research Methods	1	0	25	3	47	25	13	4		4	1	ORG STUD
Oxford Bulletin of Economics and Statistics	3	0	100	0	0	0	17	3	6	2	3	ECON
Oxford Economics Papers	3	0	100	0	0	0	18	3	6	3	3	ECON
Oxford Review of	3	0	100	0	0	0	5	2	6		2	ECON

<b>Economic Policy</b>												
<b>Pacific Basin Finance Journal</b>	4	100	0	0	0	0	4	2	5	1	4	FINANCE
<b>Parliamentary Affairs</b>	1	0	13	0	87	0	5	2	4		2	SOC SCI
<b>Personality and Social Psychology Bulletin</b>	4	100	0	0	0	0	5	4	7	4	3	PSYCH
<b>Personnel Psychology</b>	4	100	0	0	0	0	9	4		3	4	HRM&EMP
<b>Personnel Review</b>	2	0	2	79	19	0	57	2	4	1	1	HRM&EMP
<b>Philosophy of Management/Reason in Practice</b>	1	0	0	0	100	0	6	#N/A		#N/A	1	#N/A
<b>Physica A: Statistical Mechanics and Its Applications</b>	2	0	0	100	0	0	5	#N/A		#N/A	2	#N/A
<b>Policy and Politics</b>	3	0	95	5	0	0	33	3	6	2	2	SOC SCI
<b>Policy Studies</b>	1	0	0	0	100	0	9	2	5	2	1	PUB SEC
<b>Political Studies</b>	4	100	0	0	0	0	3	2		2	4	SOC SCI
<b>Post-Communist Economies</b>	1	0	0	0	100	0	3	1			1	ECON
<b>Proceedings of the Institution of Mechanical Engineers - Part B: Journal of Engineering Manufacture</b>	3	0	100	0	0	0	7	#N/A	4	#N/A	3	#N/A
<b>Production and Operations Management</b>	4	100	0	0	0	0	7	3		2	3	OPS & TECH
<b>Production Planning and Control</b>	3	0	53	47	0	0	17	3	5	2	2	OPS & TECH
<b>Project Management Journal</b>	1	0	0	0	100	0	5	2		2	1	OPS & TECH
<b>Prometheus</b>	0	0	0	0	47	53	10	2	5		2	SOC SCI
<b>Psychology and Marketing</b>	3	0	100	0	0	0	24	3	6	2	3	MKT
<b>Public Administration and Development</b>	2	0	0	100	0	0	4	2	5	2	2	PUB SEC
<b>Public Administration Review</b>	3	39	61	0	0	0	17	4	6	3	3	PUB SEC
<b>Public Administration: An International Quarterly</b>	3	0	65	35	0	0	78	3	6	3	2	PUB SEC
<b>Public Choice</b>	4	66	34	0	0	0	6	3	4	3	4	ECON
<b>Public Integrity</b>	1	0	0	0	100	0	3	#N/A		#N/A	4	#N/A
<b>Public Management Review</b>	2	0	0	100	0	0	28	2			2	PUB SEC
<b>Public Money and Management</b>	2	0	39	61	0	0	48	2	5	2	3	PUB SEC
<b>Public Policy and Administration</b>	2	0	0	71	29	0	22	2	4		1	PUB SEC
<b>Qualitative Market Research</b>	3	0	51	0	49	0	8	1	4	1	1	MKT
<b>Qualitative Research in Organizations and Management</b>	1	0	0	0	100	0	3	1			0	ORG STUD
<b>Quality and Safety in Health Care</b>	2	0	0	100	0	0	3	#N/A		#N/A	3	#N/A
<b>Quantitative Finance</b>	3	0	100	0	0	0	10	2			4	FINANCE
<b>Quarterly Journal of Economics</b>	2	0	13	87	0	0	6	4		4	3	ECON
<b>Quarterly Review of Economics and Finance</b>	2	0	0	100	0	0	6	2		2	2	ECON
<b>R and D Management</b>	2	0	0	100	0	0	25	3	4.5	2	2	INNOV
<b>RAND Journal of Economics</b>	3	0	100	0	0	0	5	3	7	4	3	ECON
<b>Real Estate Economics</b>	3	0	100	0	0	0	6	2			2	ECON

Regional Science and Urban Economics	4	55	45	0	0	0	5	3	6	3	3	SOC SCI
Regional Studies	2	0	15	85	0	0	97	4	4	3	2	SOC SCI
Relations Industrielles/Industrial Relations	1	43	0	0	57	0	4	#N/A		#N/A	1	#N/A
Reliability Engineering and System Safety	4	100	0	0	0	0	4	3	5	2	4	OPS & TECH
Research Evaluation	3	0	100	0	0	0	3	#N/A		#N/A	2	#N/A
Research in the Sociology of Organizations	4	100	0	0	0	0	3	3		3	4	SOC SCI
Research Policy	3	0	100	0	0	0	95	4	6	3	3	SOC SCI
Review of Accounting Studies	3	0	100	0	0	0	9	4		3	3	ACCOUNT
Review of Derivatives Research	3	0	100	0	0	0	5	2		3	3	FINANCE
Review of Development Economics	1	0	0	41	59	0	3	#N/A		#N/A	2	#N/A
Review of Economic Studies	3	0	100	0	0	0	16	4	7	4	4	ECON
Review of Economics and Statistics	4	100	0	0	0	0	8	4	6	3	4	ECON
Review of Finance	4	100	0	0	0	0	3	2			0	FINANCE
Review of Financial Economics	2	1	0	99	0	0	5	1		2	2	ECON
Review of Financial Studies	4	94	6	0	0	0	27	4	7	4	4	FINANCE
Review of Industrial Organization	4	100	0	0	0	0	3	2	5.5	2	4	ECON
Review of International Economics	2	0	0	100	0	0	7	3			2	ECON
Review of International Political Economy	2	0	0	100	0	0	8	3			2	SOC SCI
Review of Political Economy	2	0	0	100	0	0	6	1			2	ECON
Review of Public Personnel Administration	1	0	0	41	59	0	3	1			2	HRM&EMP
Review of Quantitative Finance and Accounting	4	100	0	0	0	0	4	3	5	3	4	FINANCE
Review of Social Economy	3	0	100	0	0	0	5	2	5	2	4	SOC SCI
Risk Analysis: An International Journal	2	0	0	100	0	0	10	4	5.5		2	SOC SCI
Scandinavian Actuarial Journal	2	0	0	100	0	0	3	#N/A		#N/A	3	#N/A
Scandinavian Journal of Economics	2	0	0	100	0	0	4	3		3	3	ECON
Scandinavian Journal of Management	1	0	0	0	100	0	6	2	6	2	1	GEN MAN
Science	4	100	0	0	0	0	4	#N/A		#N/A	4	#N/A
Science and Public Policy	3	0	82	18	0	0	8	2	5	2	1	SOC SCI
Scientometrics	3	0	100	0	0	0	3	#N/A		#N/A	3	#N/A
Scottish Journal of Political Economy	2	0	0	71	29	0	24	2	5	3	2	ECON
Service Industries Journal	2	0	0	100	0	0	92	2	5	2	2	MKT
SIAM Journal on Optimization	4	100	0	0	0	0	3	#N/A		#N/A	4	OR, MS, POM
Simulation Modelling Practice and Theory	1	0	0	0	100	0	3	#N/A		#N/A	1	#N/A
Small Business Economics	3	12	64	24	0	0	42	3	6	2	3	ENT-SMBUS
Small Group Research	0	0	0	0	21	80	4	2			2	PSYCH
Social Choice and Welfare	1	0	0	0	70	30	4	3		3	4	ECON

Social Policy and Administration	1	0	0	0	100	0	4	3	4.5	3	1	PUB SEC
Social Policy and Society	0	0	0	0	13	87	3	#N/A		#N/A	1	#N/A
Social Science and Medicine	2	0	36	64	0	0	11	4	5.5	3	4	SECTOR
Society and Business Review	2	0	0	100	0	0	3	2			2	SOC SCI
Socio-Economic Review	1	0	0	0	100	0	6	2			1	SOC SCI
Sociological Review	3	49	51	0	0	0	20	3	5	3	3	SOC SCI
Sociology	2	0	10	90	0	0	24	3	5	3	2	SOC SCI
Sociology of Health & Illness	4	100	0	0	0	0	3	#N/A		#N/A	2	#N/A
Southern Economic Journal	3	0	100	0	0	0	9	3	5.5	3	3	ECON
Strategic Change	1	0	0	22	78	0	46	2	4	1	1	STRAT
Strategic Management Journal	3	0	55	45	0	0	38	4	6	4	2	STRAT
Stroke	0	0	0	0	9	91	3	#N/A		#N/A	1	#N/A
Structural Change and Economic Dynamics	3	0	100	0	0	0	4	#N/A	4	#N/A	3	#N/A
Studies in Economics and Finance	1	0	0	30	70	0	3	1			1	ECON
Studies in Higher Education	1	0	0	0	100	0	6	3			1	MGDEV&ED
Supply Chain Management: An International Journal	2	0	50	50	0	0	35	3	4		1	OPS & TECH
Systemic Practice and Action Research	2	0	0	100	0	0	13	2	4.5	2	2	ORG STUD
Systemica	0	0	0	0	10	90	6	#N/A		#N/A	1	#N/A
Systems Research and Behavioral Science	3	0	53	47	0	0	11	2	4		2	OR&MANSCI
Technological Forecasting and Social Change	3	0	100	0	0	0	14	3	4	1	2	SOC SCI
Technology Analysis and Strategic Management	2	0	0	100	0	0	38	2	5		2	STRAT
Technovation	2	0	0	100	0	0	41	2	5	1	3	INNOV
Telecommunications Policy	3	9	91	0	0	0	7	2	5		1	SECTOR
The Howard Journal of Criminal Justice	2	0	0	100	0	0	3	#N/A		#N/A	2	#N/A
The TQM Magazine	2	0	0	100	0	0	3	#N/A	4	#N/A	2	#N/A
Theory and Decision	2	0	0	100	0	0	9	2			2	OR&MANSCI
Theory Culture and Society	4	100	0	0	0	0	3	3		3	4	SOC SCI
Thunderbird International Business Review	1	0	0	0	100	0	8	2	5	1	1	IB&AREA
Time and Society	4	100	0	0	0	0	5	2			4	SOC SCI
Total Quality Management and Business Excellence	1	0	0	0	100	0	7	1			1	OPS & TECH
Tourism Analysis	1	0	0	0	100	0	4	2			1	TOUR-HOSP
Tourism and Hospitality Research	1	0	0	0	100	0	3	#N/A		#N/A	1	#N/A
Tourism and Hospitality: Planning and Development	2	0	5	95	0	0	3	2		2	4	TOUR-HOSP
Tourism Economics	1	0	0	0	100	0	7	2	4	1	1	TOUR-HOSP
Tourism Geographies	1	0	0	0	100	0	3	2			1	TOUR-HOSP
Tourism Management	2	0	0	100	0	0	42	3	5	2	2	TOUR-HOSP
Tourism Recreation Research	1	0	0	0	100	0	5	#N/A	4	#N/A	1	#N/A
Transfer: European Review of Labour and	3	0	100	0	0	0	3	#N/A		#N/A	1	#N/A

<b>Research</b>												
<b>Transnational Corporations</b>	4	97	0	3	0	0	7	2	5	1	2	IB&AREA
<b>Transport Policy</b>	1	0	0	33	67	0	4	#N/A	4	#N/A	3	#N/A
<b>Transportation Research Part A: Policy and Practice</b>	3	0	100	0	0	0	11	3	4	3	1	SECTOR
<b>Transportation Research Part B: Methodological</b>	3	0	100	0	0	0	5	4	4	3	2	SECTOR
<b>Transportation Research Part D: Transport and Environment</b>	1	0	0	0	100	0	3	2	4	3	1	SECTOR
<b>Transportation Research Part E: Logistics and Transportation Review</b>	2	0	0	100	0	0	8	3	4	3	2	SECTOR
<b>Urban Studies</b>	3	9	84	7	0	0	33	3	4	3	3	SOC SCI
<b>Utilities Policy</b>	1	0	0	0	100	0	10	#N/A		#N/A	1	#N/A
<b>Venture Capital: An International Journal of Entrepreneurial Finance</b>	4	45	0	14	41	0	8	2	4.5		2	ENT-SMBUS
<b>Voluntas: International Journal of Voluntary and Non-Profit Organisation</b>	2	0	0	100	0	0	7	2		2	2	SECTOR
<b>Women in Management Review</b>	1	0	0	0	100	0	16	1	4	1	1	GEN MAN
<b>Work and Occupations</b>	4	100	0	0	0	0	5	3	7	3	3	HRM&EMP
<b>Work and Stress</b>	3	25	42	25	8	0	13	3	6	2	2	PSYCH
<b>Work, Employment and Society</b>	3	0	73	27	0	0	103	4	5	3	3	HRM&EMP
<b>World Development</b>	3	0	100	0	0	0	17	3	6	3	2	SOC SCI
<b>World Economy</b>	1	0	49	0	51	0	25	2	5	2	1	ECON
<b>World Review of Entrepreneurship, Management and Sustainable Development</b>	1	0	0	0	73	27	5	1			1	ENT-SMBUS



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