

# THE VALUE OF CONSTRUCTION MANAGEMENT JOURNALS TO SUBMITTING AUTHORS

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Publishers of academic journals can be seen as service providers to authors, in addition to their traditional role of providers of research results to readers. When submitting their manuscripts to journals authors make choices that may have career consequences for them as academics, and they would benefit from better information about the service characteristics of the journals they choose between. The purpose of this study was to analyse author perceptions of leading journals in construction management. Seven journals were identified and for each 2006 article, one author email address was extracted. A web-based questionnaire was sent to 397 authors and 35% responded. It was found that there was a core of three journals, regularly followed by at least half the respondents. These are journals that fulfil the criterion of 'relevant readership', which respondents ranked very high among service characteristics. Most of the other four journals have scopes broader than construction management and receive lower scores for characteristics such as impact on researchers. No open access journals were included, and authors in the field of construction management rarely post openly accessible copies of their manuscripts or publications on the web.

Keywords: authors, journals, open access, readership.

## INTRODUCTION

Every time academic authors submit a manuscript to a particular peer reviewed scholarly journal, they are making an important decision which may have repercussions on their future careers. In choosing a particular journal the author is in fact making an investment decision. A bad choice will result in a poor return rate on the time and effort spent on the underlying research; a good choice may enhance reputation and the impact of the research presented in the manuscript. Economists have even calculated the discounted present value of publishing in a prestigious journal, in terms of future higher salaries, which helps explain why academic authors as a rule donate the fruits of their labour to scientific publishers. The fact of the matter is that academics barter their products for services rendered by the publishers. In this regard journal publishers are service providers to authors just as much as content providers to readers. Because of this situation, and because there is no price differentiation between bad and good manuscripts, the competition for good manuscripts is sometimes fierce, as experienced in the proliferation of calls for special issues.

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In most other situations where consumers or companies face economic choices such as choosing between cars or home cinema equipment they are able to find a lot of data and market comparisons to help them make informed choices. This is not the case in the scientific journal market. How many of us know the number of subscribers or today, more importantly, the size of readership of the journals we submit to? If the publishers are asked for these data they usually regard them as trade secrets, partly motivated by the fear that low numbers would scare potential authors. Equally authors often have only a vague feeling for the rejection rates of journals. The only measurable factors that are well known are whether the journal is indexed by the ISI or not, and if it is, what its impact factor is.

Despite the lack of robust data on the performance of journals the ‘invisible colleges’ of a particular research field usually have established ranking orders of the journals in the field, whether unofficial or published ones. These are usually based on an assessment of the rigour of the review process of a journal and the academic quality of its papers. Sporadically, there have been studies of construction management journals. A pioneering study of the first decade of articles in *Construction Management and Economics* was published by Betts and Lansley in 1993, who also analysed the *International Journal of Project Management* (Betts and Lansley 1995). Chau (1997) ranked 22 construction management journals based on email responses from the CNBR network. More recently, Pietroforte and Stefani (2004) have analysed contents in articles published in the *ASCE Journal of Construction Engineering and Management*. Recently, Adeli (2007) discussed ISI impact factors for journals in a closely related field, civil and infrastructure engineering research.

Aspects not usually taken into account in traditional rankings are the speed of publication (from submission to publication) and how well the journals are reaching out to practitioners. Such factors can be important in fast-moving fields such as biotechnology or IT.

The purpose of this study is to analyse author perceptions of leading journals in construction management and author attitudes to open access publishing. An email survey with a web questionnaire has been made, and the responses are analysed. Finally, we discuss the outlook for open access and its consequences for construction management authors.

## RESEARCH METHOD

Björk *et al.* (2006) have designed a methodology for benchmarking scientific journals from the submitting author’s viewpoint. The methodology has been initially tested on construction IT journals and proposes the use of four different data collection methods:

1. Data openly and directly available in printed issues and from the websites of publishers, for instance subscription rates of journals.
2. Data available openly but which need to be calculated. In some journals the submission dates for articles are given in the published articles. From these data the average time from submission to publication can be calculated.
3. Data which can be obtained from publishers. Typical examples would be number of paper issues printed, usage statistics for web downloads.

4. Asking authors about their experiences with journals and perceptions of different journals. This method is excellent for instance to find out about the service level of the journals to authors.

The earlier study by Björk *et al.* (2005) on construction IT journals used methods (1) and (2) above. The present study of journals in the field of construction management and economics relies on the fourth method, asking authors in the field.

Our author-based survey proceeded in several stages. First, the relevant set of journals had to be defined. Initially, four top journals in the field of construction management were chosen: *Construction Management and Economics* (CME); *Journal of Construction Engineering and Management* (JCEM); *Engineering, Construction and Architectural Management* (ECAM); *Building Research and Information* (BRI; in this case, only articles of a CM content). Using Google Scholar for construction management articles in BRI and for all articles in CME and ECAM, while Scopus was relied on for JCEM (where the Google Scholar chronology errs), the five authors for each journal with the most cited articles published 2000–04 were identified. Two of the five most cited CME authors are also among the five most cited ECAM authors; the following two most cited ECAM authors have been brought into the analysis, given a total of 20 authors.

Next, since a main idea of this investigation is to support authors when they are choosing between publication outlets, for each of the 20 authors, their (up to) five other journals with their most cited articles published elsewhere have been identified using Google Scholar and the same time period, 2000–04. All of these authors had not appeared in all five of the other journals, but most of them actually had.

The final criteria for selecting among 41 journals thus identified in addition to the four initially chosen were that at least three of the top five cited authors among the original set of four journals appear with highly cited articles in the journal; the journal should primarily aim at an academic readership; and that construction management should belong to the core area of the journal.

Applying these criteria raises the number of journals from four to seven (see Table 1).

**Table 1:** Selected journals

Journal	Publisher	Number of articles (2006)
<i>Automation in Construction</i> (AIC)	Elsevier	65
<i>Building Research and Information</i> (BRI)	Taylor & Francis	44
<i>Construction Innovation</i> (CI)	Emerald	16
<i>Construction Management and Economics</i> (CME)	Taylor & Francis	107
<i>Engineering, Construction and Architectural Management</i> (ECAM)	Emerald	36
<i>International Journal of Project Management</i> (IJPM)	Elsevier	72
<i>Journal of Construction Engineering and Management</i> (JCEM)	ASCE	135

The second stage was the identification of authors. The total number of articles published in 2006 was 475 for the seven journals, and for each article, an email address to the corresponding author was recorded (alternatively the first author with an email address given in the article; exceptionally, when no email address was given, an author email address was located on the web). After deleting multiple occurrences of author names, 397 author addresses were located.

A web questionnaire was designed with 21 questions, including six with five-degree Likert scales. Emails with links to the questionnaire were sent out in February 2007,

and after one reminder, a total of 140 answers had been received, corresponding to a 35% response rate. Error messages were received for 8% of the email addresses.

## RESULTS

### Respondent profiles

The personal information provided by the 140 respondents shows that an overwhelming majority (93%) are university employees, although five respondents are employed by private companies and the remaining five by other organizations outside the university system. Almost half (41%) of respondents in academia are employed in a permanent professorial position, and the same percentage applies to those in untenured positions; in addition, 10% are PhD students. There is a good spread geographically with authors from no fewer than 39 countries being represented; US responses make up 19% of the total, followed by the UK (14%), Australia (8%) and China (7%). In regional terms, both the European continent (4%) and Africa (4%) are comparatively poorly represented.

### Readership of journal articles

Respondents were asked about the number of scientific articles they either browse through or read in detail per year. The overwhelming majority browsed through 20–199 articles: 21% browsed through 20–49, 27% 50–99 and 17% 100–199 articles. For full reading the majority of respondents belonged to the 10–99 articles range, where 29% read 10–19, 28% read 20–49 and 21% read 50–99. An earlier study by Björk and Turk (2000) of researchers in construction IT and construction management showed that academics in these fields browse through or read in detail 107 papers per year, which is in accordance with the present results.

However, this can be contrasted with data provided by Tenopir and King (2000), who have made extensive longitudinal studies over multiple research fields. They have found that academics report on average 370 hours per year reading and that university-based academics read on average 188 articles per year. The latter figure is higher than our study shows for construction management authors. There are some possible explanations for this discrepancy. First, Tenopir and King talk of ‘reading going beyond the contents page, title and abstract to the text of the document’, leaving to interpretation whether it is closer to browsing through or reading in detail. The second explanation is that scientific fields differ in their dependence on various publication channels. In some fields publishing is highly concentrated on journal articles, while in others such as construction management conference publishing, monographs and technical reports are frequent.

### Criteria for choice of journal

Respondent were asked what relative weight (on a Likert scale of 1–5) they attached to a number of factors when choosing where to submit a manuscript. The results are shown in Table 2. Not surprisingly, ‘high academic status’ receives the highest score (4.5 average). But more interestingly number two on the list, ‘relevant readership’ (4.0) is felt to be much more important than large circulation. Although respondent interpretations of ‘academic status’ and ‘relevance’ may vary, we interpret this as showing that the authors care less about reaching a wide audience than being read by the core CM academic community, where they hope to have an impact on peers with their results. The fact that many authors seem to care little about articles being

'available freely on the web' (2.3), which could increase readership outside the core community, supports this interpretation.

**Table 2:** Criteria for choice of journal when submitting a paper

Criteria	Average score
High academic status	4.5
Relevant readership	4.0
Journal indexed by the ISI	3.5
Short lead time from submission to publication	3.4
Likelihood of acceptance	3.3
Large circulation	3.2
Level of impact factor (for ISI indexed journals)	3.1
Journal recommendation from author's university	2.9
Journal articles freely available on the web	2.3

Two more pragmatic variables affecting the fate of a submission, namely likelihood of acceptance (3.3) and short lead time from submission to final publication (3.5) seem to matter considerably to authors. Nevertheless, this is where there is usually a lack of available statistics and authors have to rely on word of mouth or guesswork.

Finally the factors immediately connected to the reward systems of universities, tenure, committees, etc., have medium importance on average. These include ISI indexing (3.4), level of impact factors (3.0) and journal recommendation from the author's university (2.9). It is suggestive that ISI indexing as such is deemed more important than the actual level of the journal impact factor, which would be a better indicator of the quality of a journal. This downplaying of the impact factor may have to do with the fact that, in contrast with most other research fields, few of the journals and conferences in which CM authors publish are indexed by the ISI and also that the impact factors of most indexed journals within this field are low, reflecting that there are no clear top journals according to the impact factor criterion. This is unlike research fields such as management science or information systems where top journals with high impact factors have emerged.

### Readership and impact of the journals in the sample

When asked about how often they read each of the seven journals identified in the survey, three journals (CME, JCEM and IJPM) emerged as 'core journals' that at least half the respondents follow regularly (Table 3). The other four journals, which also cover topic areas other than the central construction management and economics ones, were less regularly followed and unknown to a higher proportion of authors.

**Table 3:** Reader habits and impact assessment (% of responding authors)

Variables	AIC	BRI	CI	CME	ECAM	IJPM	JCEM
Not familiar with journal	42	36	49	11	31	19	16
Read regularly or almost regularly	23	23	11	57	28	47	66
<b>Impact on researchers of articles in the journal</b>							
<i>Don't know</i>	51	45	57	21	39	28	26
<i>For those who know:</i>	48	46	20	81	49	61	86
High, or almost high (4–5 on the 5-degree scale)							
<b>Career value of publishing in the journal</b>							
<i>Don't know</i>	48	44	54	21	38	27	26
<i>For those who know:</i>	47	49	31	73	55	60	85
High, or almost high (4–5 on the 5-degree scale)							

Owing to the high proportion of answers revealing a lack of knowledge with the service characteristics of any of the seven journals, the following figures should be treated with caution.

Across journals, there is a broad similarity in the number of respondents who are familiar or unfamiliar with the impact and career value of choosing a particular journal.

### Assessing service levels

When respondents assess the level of service offered by a publisher or the helpfulness of the review process for submitted articles, we can assume that opinions are based on their own experiences or those of close colleagues. This is probably why the ‘don’t know’ percentages are higher in Table 4 than in Table 3.

**Table 4:** Assessments of service level and review process (% of responding authors)

Service level and review process	AIC	BRI	CI	CME	ECAM	IJPM	JCEM
<b>Publisher service level</b>							
<i>Don't know</i>	67	67	77	33	59	53	41
<i>For those who know the journal:</i>	52	60	38	79	42	61	57
High, or almost high (4–5 on the 5-degree scale)							
<b>Helpfulness of review process</b>							
<i>Don't know</i>	67	65	78	32	57	48	39
<i>For those who know:</i>	57	57	35	77	48	57	74
High, or almost high (4–5 on the 5-degree scale)							

### Submission rejection risk

According to Table 5, the respondent estimates of the average submission rejection risks were typically concentrated in the 25–50% and 50–75% ranges. A few observations can be made about the results. *Construction Innovation* was deemed to be the easiest journal to get published in with a clear dominance of answers in the <25% and 25–50% ranges. *Building Research and Information* attracted the widest spread of estimates, with 16% of the respondents guessing for less than 25%, while at the other end of the range 11% guessing at a rejection rate in excess of 90%. Guesses for *Construction Management and Economics* were highly concentrated in the 50–75% range. The explanation for this more narrow range might be that CME has made available on its web pages annual statistics for submissions and published articles; it is thus likely that many authors know that the average CME rejection rate has been around 50% for a number of years.

**Table 5:** Perceived risk of rejection (% of responding authors)

Submission rejection risk	AIC	BRI	CI	CME	ECAM	IJPM	JCEM
<i>Don't know [% of authors]</i>	73	71	79	48	62	54	48
<i>For those who think they know:</i>							
<25%	17	16	44	8	16	20	6
25–50%	43	21	30	21	49	33	32
50–75%	29	29	19	57	27	35	37
75–90%	11	24	7	14	6	8	18
>90%	0	10	0	0	2	3	7

Although there are no reliable statistics for scientific journals in general it is worth mentioning that the Director of Strategy of Elsevier, the biggest scientific publisher, recently revealed (Fowler 2007) that they process more than 500 000 submissions per

year resulting in more than 200 000 published articles, which amounts to an overall rejection rate of about 60%.

### **Posting copies of manuscripts or articles openly on the web**

There are currently strong demands for changes in the scholarly publishing systems to better take into account the opportunities offered by the Internet. Open Access, as this alternative to the traditional dissemination model is termed, can be achieved in two ways. The first route is that journals themselves start posting the articles totally openly on the web, this being run as an open source like operation with no budgets, or journals recoup their costs by other means than subscriptions, for instance by publishing charges. The *Lean Construction Journal* and the *Journal of Information Technology in Construction* (ITcon) are examples of the former type. The use of author charges is practised in particular by two biomedical publishers, BioMedCentral and Public Library of Science.

The second route is that authors publish in the same journals as usual, but themselves post copies of their manuscripts prior to or after peer review on their own web pages, in the institutional repositories of their universities or in subject-based repositories such as the ITC Digital Library (<http://itc.scix.net/>) for construction informatics. Contrary to a widespread belief among scientists many publishers allow this practice in their copyright agreements with authors. The Sherpa/Romeo database (<http://www.sherpa.ac.uk/romeo.php>) contains information about the policies of all major publishers, and according to it a vast majority of journals allow posting of even the final corrected manuscript after peer review but before final publishers' copyediting and layout.

We asked the authors in our survey if they have put up copies of their manuscripts or final versions of conference papers or journal papers on the web. Very few had done so. The most popular location for manuscripts was the author's own home pages where 18% had posted at least one manuscript, and for final publications, the institutional repository of the author, where again 18% had posted at least one publication. It appears that 3% had posted all their manuscripts and also 3% all their final publications openly on the web. These results are in line with broader studies of authorial behaviour in general (JISC 2004), which indicate that open access copies are available for only about 5–10% of all journal articles.

## **CONCLUSIONS**

Our survey results show that researchers who publish scientific articles in the field of construction management do not differ markedly from academic authors in general. They do read slightly fewer articles, and they are little concerned with journal impact factors. Much like in other fields they enjoy being read by a narrow circle of peers. Scientific publishing fills an important role as a reasonably neutral and global system of talent assessment that influences decisions on promotion and tenure in many university cultures. It is possible to detect profiles of CM journals that could be used as a broader base for benchmarking from the viewpoint of authors. This should also be helpful for journal publishers and editors who wish to make their journals more attractive as outlets for research in the field.

From our analysis a cluster of three core journals emerges (CME, IJPM and JCEM). These three are regularly followed by at least half the respondents, which also could indicate that they have personal subscriptions or institutionally paid access to them. Unfortunately only one of these (JCEM) is indexed in the Science Citations Index,

which makes citations-based comparisons difficult. The other four journals receive lower scores on readership as well as on some of the other perceived characteristics.

At present, construction management authors rely on open access publishing to about the same extent as authors in other academic fields. The slow convergence of traditional paper-based publishing and digital publishing leads to new patterns and business models.

Although the response rate is high for this type of email survey, bias in favour of email readers is probably something that has to be kept in mind when interpreting the results. Thus our responses might overstate the proportion of authors who actually post their texts on the web.

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