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Key questions in the development and use of survey-based journal rankings

William H. Walters

Mary Alice & Tom O'Malley Library, Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, USA

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ABSTRACT

This paper presents five key questions that should be considered by researchers and librarians who develop or use survey-based (stated preference) journal rankings. Many of the distinctions among the various rankings—their attributes, strengths, and weaknesses—are captured in the responses to these five questions: What construct is being measured? How are differences in the construct expressed and recorded? Who are the respondents? Which journals are included in the rankings? How is respondents' familiarity with the journals taken into account? The paper also summarizes the problems that may require attention when survey-based rankings are used.

Introduction

Scholarly journals vary widely in their reputation and impact (Bradford, 1934; Nisonger, 2008). Journal rankings, developed in response to these differences in impact, have been used for nearly a century to identify the foremost journals, to evaluate the differences between journals, and to track changes in reputation and impact over time (Nisonger, 1999, 2004). They have proven useful to authors seeking to maximize the impact of their research; to committees evaluating the research contributions of individual faculty; to accreditors and funding agencies assessing the work of academic departments, research groups, and institutions; to librarians making selection and deselection decisions; and to scholars studying topics such as scientific communication and the impact of national research policies.

Two types of journal rankings can be identified: revealed preference rankings and stated preference rankings (Tahai & Meyer, 1999). Revealed preference rankings are based on actual behaviors such as publishing, indexing, and citing. Most utilize citation metrics such as the impact factor and the *h* index, which represent the extent to which each journal is cited in the scholarly literature. Scholarly impact is the central construct, even when it is couched in terms of journal quality, reputation, popularity, or prestige. Revealed preference rankings are most common in the natural and social sciences.

In contrast, stated preference journal rankings are based on surveys that ask respondents about their opinions, choices, or hypothetical behaviors (e.g., "Which of these journals are most important to your work? Which carry the most weight in tenure and promotion decisions?").[1] Although stated preference rankings are sometimes known as subjective or reputational rankings, many of them focus on constructs other than reputation: importance for research, importance for teaching, value for promotion and tenure, or perceived impact within a particular field or subfield. These rankings are most common in the arts and humanities, for at least two reasons. First, many papers in the humanities appeal to relatively small audiences, so high-quality scholarship may not be highly cited. Second, the major citation databases provide relatively poor coverage of the arts and humanities. Journal rankings in these fields therefore require the use of methods that do not draw on citation data (Archambault & Larivière, 2010; Jacsó, 2011; Nederhof, 2006; Nisonger, 2004).

Stated preference rankings also differ from citation-based rankings in how they are developed and reported. Indicators such as the impact factor and the *h* index have attracted the attention of research institutes and scientific publishers that make their citation data available online. Rankings for thousands of journals can be downloaded quickly and easily.[2] In contrast, most stated preference rankings are based on surveys of scholars in a single discipline—on ratings of a few dozen journals by a few hundred respondents—and most have appeared as articles in the journals of particular fields. These rankings are far more common in some disciplines than in others. In business administration, for instance, at least 15 stated preference rankings have been published since January 2007 (Harzing, 2017), and many more were undertaken in earlier years (Association to Advance Collegiate Schools of Business, 2009).

Although a few large-scale stated preference rankings have been

E-mail address: william.walters@manhattan.edu.

[1] Although a few stated preference rankings have made use of interviews or focus groups rather than surveys, no distinction is made here between *stated preference rankings* and *survey-based rankings*.

[2] See, for example, Centre for Science and Technology Studies (2017), Clarivate Analytics (2017), Elsevier (2017), Google (2017), SCImago Research Group (2017), and University of Washington (2017).

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evaluated in terms of their technical characteristics and potential biases (e.g., Haslam & Koval, 2010; Smith, 2011), most have attracted little attention outside their own subject areas.[3] Discussions of particular stated preference studies tend to focus on the rankings themselves—on the results for particular journals or subject areas—rather than the methods that underlie the statistics. Again, the situation is different for citation metrics, many of which have been examined in great detail (Öchsner, 2013; Waltman, 2016). Because they cover many disciplines, citation metrics may be critiqued independently of any particular journal ranking study.

This paper presents five key questions that should be considered by researchers and librarians who develop or use stated preference journal rankings. It also provides an overview of the potential problems that may require attention when survey-based rankings are used. A better understanding of these issues may help scholars and practitioners

- use stated preference rankings appropriately,
- assess the advantages and disadvantages of particular survey methods,
- improve the methodological rigor of stated preference journal ranking studies,
- facilitate comparative research, and
- encourage the development of stated preference rankings for a wider range of subject areas.

The last two points have special relevance for the natural sciences, where survey-based rankings are perhaps underutilized. Citation-based rankings gain both validity and depth of meaning if they can be viewed in a comparative context that accounts for scholars' perspectives and attitudes (Cohn & Farrington, 2011; Martin, 1996; So, 1998; Walters, 2017; Weisheit & Regoli, 1984).

Key questions

Five key questions can be used to describe and evaluate the stated preference rankings that have appeared in the scholarly literature since the 1970s. (See Table 1.) Each of the five key questions involves a set of subsidiary questions or choices that must be addressed during the survey development process. The answers to these questions influence the characteristics of the resulting journal ranking metrics (indicators)—in particular, their relative advantages and disadvantages.

Table 1 may not show every methodological possibility, but it does represent a review of more than 200 journal ranking studies in the natural sciences, social sciences, and humanities. Searches were conducted in LISTA, ABI/INFORM, Academic Search Complete, ERIC, Google Scholar, the International Bibliography of the Social Sciences, ProQuest Central, Science Citation Index, Scopus, Social Sciences Citation Index, and SocINDEX. Each search—(*journal* as subject heading OR *journal** as keyword) AND (*rating** as keyword OR *rank** as keyword OR *impact** as keyword)—was intended to maximize recall rather than precision. If a particular database had no subject heading for academic journals, the subject heading for periodicals was used. The studies cited here include methodological critiques, especially good examples of common ranking practices, and rankings that that make use of unique or otherwise interesting methods.

[3] Just one organization, the Australian Research Council, has developed a large-scale stated preference ranking of journals in all subject areas. Their 2010 Excellence in Research for Australia (ERA) project involved the placement of more than 20,000 journals into four quality categories. Subsequent ERA assessments, conducted in 2012 and 2015, did not involve the rating of journals. Although the 2010 ratings are no longer available on the ERA web site, they have been archived and made available online by the University of New South Wales (2013), the University of South Australia (2011), and Deakin University (Lamp, 2010).

Table 1
Five key questions in the development and use of stated preference journal rankings, with subsidiary questions and choices.

1. What construct is being measured?
General construct
Reputation
Scholarly impact
Coverage of recent innovations
Usefulness for research
Usefulness for teaching
Usefulness for practice
Value for tenure and promotion
With regard to what disciplinary group?
The respondent
The scholarly community, overall
A particular field of study (e.g., economics)
A particular subfield (e.g., labor economics)
With regard to what geographical or cultural group?
International
Regional (e.g., Southeast Asia)
National
Sub-national (e.g., Francophone Canada)
2. How are differences in the construct expressed and recorded?
Ratings and rankings
Rating scales (e.g., 1–5 or A–F)
Without descriptive labels for each value
With descriptive labels only for the endpoints
With descriptive labels for each value
Rating categories (e.g., top journals, other recommended journals, journals not recommended)
Ordered rankings (e.g., *Place these eight journals in rank order*)
Paired comparisons (e.g., *For each pair, select the journal with the better reputation*)
Journals presented to each respondent for rating/ranking
All the journals
A subset of the journals
Respondent-supplied journal lists (e.g., *Name the five most important journals in your field*)
3. Who are the respondents?
By group membership
Faculty in particular disciplines
Full-time faculty
Tenured faculty
Faculty in departments or programs with particular characteristics (e.g., doctoral programs)
Individuals in particular professional or administrative positions (e.g., library directors, law school deans)
Authors (e.g., those who have published in a particular set of journals)
All authors
Authors who meet a designated standard of productivity or citation impact
Members of scholarly or professional societies
Subscribers to electronic mailing lists
Award winners or nominees
Grant recipients
By geographical area
International
Regional (e.g., Southeast Asia)
National
Sub-national (e.g., Francophone Canada)
Sampling
Random sample
Stratified random sample (by geographical region, type of institution, etc.)
No sample; surveys sent to entire population of interest
4. Which journals are included in the rankings?
Those identified in previous studies
Those covered by major citation databases (Web of Science, Scopus, etc.)
Those mentioned by respondents (e.g., *Name the 10 most important journals in your field*)

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