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Journal quality: A Google Scholar analysis

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ABSTRACT

Research quality has become a major issue in the Australian university system and journal quality, as determined by discipline committees, seems likely to play a major role in the government's new assessment system, which will have financial and reputational implications for disciplines and individual academics. The present study examined the Google citations, which are a measure of journal influence, obtained by all of the marketing journals rated as A* and A in the Government's recent journal list, as well as 10 B and 10 C rated journals to see how the journals differ. The implications of the results for Australian marketing academics are discussed.

1. Introduction

As governments around the world demand greater accountability from their educational institutions, the issue of research quality has become increasingly important in the higher education sector (Easton and Easton, 2003; Geuna and Martin, 2003). Research quality frameworks (RQFs), introduced in countries such as the United Kingdom and New Zealand, play a major role in funding, developing a university's reputation and even in individual academic's careers. Australia is no exception to this trend, although the Labor Government has changed how to measure research quality.

The new approach will rely more on bibliometric indexes and journal quality assessments than on peer assessment. This led the Australian Government to distribute a suggested quality ranking of over 19,000 journals for discussion. While it is unclear how these journal quality assessments were made, those in business related areas such as marketing seem based on the Business Academic Research Directors' Network (BARDsNET) list of 2498 journals. In addition to differences in list sizes, there are other differences such as the Journal of Hospitality and Tourism Education as a BARDsNET A journal but not on the government's list. Discrepancies in the lists raise an issue as to whether the suggested classifications align with the various journals' citation influence and role in the marketing discipline. The present study examines this issue.

ISI citations from Thomson Scientific's database of more than 8600 peer-reviewed journals (www.isinet.com) measure a journal's impact factor (JIF), which reflects the journal's influence and quality (King, 2004). Yet, the ISI database contains only about half the academic journals in the Australian Government's circulated list. Further, some areas have many more journals in the ISI list than others do. While economics has over 150 ISI indexed journals (Yeung, 2002), marketing has less than 30 (Baumgartner and Pieters, 2003). This has led some marketers to suggest Google Scholar (GS) may provide better information about marketing journals' influence than does the ISI list (e.g. Murphy et al., 2007). GS "has a much wider 'footprint' because it searches databases from a very wide range of academic publishers, professional societies, preprint repositories, universities and other scholarly organisations" (Soutar, 2007, p. 3516).

Indeed, Harzing and van der Wal (2008, p. 72) found GS "generally results in a more comprehensive coverage in the area of management (including marketing)..., which benefits academics publishing in sources that are not (well) covered in ISI." This impact can be seen in their suggestion that GS returns 2.5 times as many citations in the widely defined management area as found in the ISI database, providing a better indication of real influence. Consequently, the present study used GS in its examination of all A*, A journals and 10 each B and C list journals' influence.

A study before GS existed found almost three of four researchers used Google to find articles (Swan and Brown, 2005). Thus many scholars, particularly those who cannot afford online journal subscription services, as well as students and industry researchers, start their literature review at scholar.google.com. Launched in mid-November 2004, and still a beta version, GS is a free tool for finding articles, albeit usually abstracts rather than full text articles (Jacsó, 2006). GS searches databases from academic publishers, professional societies, preprint repositories, universities and other scholarly organisations in order to index theses, books, abstracts and articles. Beyond this general information on GS little is known, which has led to a suggestion that "Google is as secretive about its coverage as the North Korean government about the famine in the country" (Jacsó, 2006, p. 209).

In addition to helping find articles, Google Scholar provides the number of GS citations to an article. Emerging research suggests GS

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citation counts resemble traditional citation counts (Pauly and Stergiou, 2005; Bakkalbasi et al., 2006; Murphy et al., 2007) and a journal's presence in GS resembles that journal's ranking in traditional studies (Murphy and Law, 2008). Google Scholar's advanced search (scholar.google.com/advanced_scholar_search) provides researchers with the capacity to undertake journal-specific and year-specific queries, which the present study used. However, GS provides such data in a "primitive" form, which makes analysis difficult.

Fortunately, Harzing's (2007) "Publish or Perish" (POP) software provides a means to obtain and analyse GS information easily. Razzaque and Wilkinson (2007) used POP to examine Australian marketing scholars' citations. Soutar (2007) used the same software to obtain the GS citations obtained by all the 2001 articles in 12 "top quality" marketing journals, and subsequently, develop citation benchmarks for marketing scholars. The latter paper led to the present study as the use of a single year may have led to a bias if that year – the first year of the then suggested Research Quality Framework – happened to be an aberrant year for the examined journals. Further, as noted earlier, in May 2008 the Australian Government circulated a proposed list of marketing journals, which did not coincide with Soutar's (2007) list.

Thus the present study extends Soutar's (2007) analysis by examining the GS citations obtained by the new Government list of 24 A* or A marketing journals from 2001 to 2007. In addition the Government's list did not include Psychology and Marketing (P&M), although it has ranked highly in several studies (e.g. Hult et al., 1997; Sullivan-Mort et al., 2004; Guidry et al., 2004). Consequently, including P&M led to 25 A journals being examined. Ten B rated marketing journals well regarded by Australasian academics and the top 10 C rated journals (Sullivan-Mort et al., 2004) were included to see whether there was a separation between the A, B and C classifications of the 45 journals.

As noted earlier, there are several ways to examine a journal's citations. ISI's Journal Impact Factor (JIF) uses the mean number of citations obtained by all published papers in their database in the two years prior to the index's calculation. However, this may be too short a period for so-called "slow response" disciplines, as significant papers can take over two years to have an impact. Further, the JIF uses a mean citation score, even though it is clear that (at least marketing) journals' citations are negatively skewed and seem to have a Pareto type distribution (Soutar, 2007), which suggests using median scores.

Two recently developed bibliometric indexes – the h-index (Hirsch, 2005) and g-index (Egghe, 2006) – help overcome these problems. These indexes, which can measure individual researcher's impact and journal impact, have shown have valid results when compared with traditional citation impact scores (Harzing and van der Wal, 2008). A journal has an index h if h of the papers it has published in a period (from 2001 to 2007 in the present study) obtained at least h citations. For example, if a journal's top 20 papers each obtained at least 20 citations and the next paper had less than 20 citations, the journal's h-index would be 20. This methodology prevents highly cited papers, such as Vargo and Lusch's (2004) Journal of Marketing (JM) paper that has already obtained over 500 GS citations, impacting too strongly on a journal's ranking and removes the problem of deciding whether to use a mean or a median score as an impact index.

The g-index also overcomes the distribution issue and attenuates the impact of high impact papers. However, the g-index allows highly cited papers to have some impact as it uses a cumulative count – from the most cited paper to those not cited – to compute a citation score. In this case, a journal has an index of g if its g top cited articles sum to g^2. For example, if a journal's top 20 articles were cited a cumulative 400 times, a journal would have a g-index of 20. Thus, Vargo and Lusch's paper mentioned earlier would ensure that the JM had a g-index of over 20 in its own right, but would add only one unit score to the h-index. As Harzing and van der Wal (2008) have suggested the g-index is a useful complement to the h-index, the present study used both indexes to see whether they suggested different orderings. The results are discussed in the next section.

2. The results

2.1. The "A" list

The GS citations for each article published from 2001 to 2007 for each journal were determined using Harzing's (2007) "Publish or Perish" software. Soutar (2007, p. 3516) found there was "a significant issue as a number of the citations were incorrect... As examples, some citations had authors in incorrect order, others seemed to have titles that suited the citing researchers' own needs and journals and years of publication were occasionally wrong" and this was true in the present case as well. These citation errors were corrected and the h-index and g-index scores calculated for each of the 45 journals after this process are shown in Table 1, which suggested a similar orderings of the two indexes. Consequently, it was decided to compute the rank correlation between them. The Spearman rank correlation, 0.98, supports this view and suggests considering only the h-index as both indexes capture the same information when examining marketing journals.

The considerable disparity in the scores obtained by the included journals is immediately apparent. The Journal of Marketing stands out with an h-index of 62, while the Journal of Hospitality and Leisure Marketing rating as an A journal (with an h-index of six) is a mystery. The influence of the A* marketing journals is also clear. The mean h-index for these journals was 41 and their mean g-index was 63, while the same indexes were 19 and 30 for the A journals. A Mann–Whitney U test that compared the A* journals' h-index scores with the A journals' h-index scores confirmed a significant difference well beyond the 1% level.

However, two of the A journals (Industrial Marketing Management and the Journal of Advertising Research) seem to have more influence than their Government ratings suggest; their indexes place them 5th and 11th, respectively, ahead of some A* journals. Further, the International Journal of Research in Marketing's h-index score (25) suggests it would be better placed with the A journals. Clearly, their reclassification merits consideration. What is also clear is that P&M should be in the A list as its ranking is thirteenth in the overall list and fourth among the A journals. Consequently, it clearly should be included in the marketing journal list and given an A classification.

The B journals results also suggest those responsible for the various classifications may have got it wrong in this case as well. One of the B journals (the Journal of Interactive Marketing) has an h-index of 29, which is 10th overall and suggests its influence is very undervalued and that is it an A* journal on this criterion. Three other B journals fit within the A list rather than below such journals. Further, six of the A classified journals had h-index scores that placed them within the B journal band. A Mann–Whitney U test undertaken to examine the differences between the A and B groupings confirmed this, as the z statistic of -0.32 in this case was insignificant even at the 50% level. Clearly, the A and B journals cannot be distinguished in terms of their recent GS citations. Whatever criteria were used to make this distinction, they do not seem to be in line with the various journals' influence on the marketing discipline.

The C journals were generally less influential as a Mann–Whitney U test that compared found there was a significant difference between the B journals' h-index scores and the C journals' h-index

Table 1
Citation indexes for selected marketing journals.

Journal	h-index	g-index	h-index rank[a]	Rating
Journal of Marketing	62	95	1	A*
Journal of Marketing Research	47	74	2	A*
Journal of Consumer Research	46	73	3	A*
Journal of the Academy of Marketing Science	39	63	4	A
Industrial Marketing Management[b]	39	58	5	A*
Marketing Science	38	54	6	A*
Journal of Retailing	34	56	7	A*
Journal of Service Research	31	44	8	A*
European Journal of Marketing	29	45	9	A
Journal of Interactive Marketing[b]	29	46	10	B
Journal of Advertising Research[b]	29	44	11	A*
International Journal of Research in Marketing[b]	25	40	12	A
Journal of Consumer Psychology	25	39	13	A
Psychology and Marketing	25	38	14	A
Journal of Services Marketing[b]	25	34	15	B
Journal of Consumer Marketing[b]	24	37	16	B
Journal of Advertising	22	33	17	A
Journal of Brand Management[b]	22	33	18	B
International Marketing Review	21	31	19	A
Journal of Consumer Affairs	20	32	20	A
Journal of International Marketing	20	28	21	A
Marketing Letters	19	30	22	A
Journal of Marketing Education	19	25	23	B
Journal of Product and Brand Management	19	25	24	B
Journal of Retailing and Consumer Service	19	28	25	B
International Journal of Advertising[b]	17	21	26	C
Journal of Marketing Management[b]	16	23	27	A
Journal of Public Policy and Marketing[b]	16	26	28	A
Journal of Personal Selling and Sales Management	16	23	29	B
Journal of Targeting, Measurement and Analysis for Marketing[b]	16	19	30	C
Journal of Consumer Behaviour	15	21	31	B
Journal of Direct Marketing[b]	14	20	32	C
Marketing Theory[b]	13	22	33	A
Journal of Strategic Marketing[b]	13	20	34	A
International Journal of Public Opinion[b]	13	17	35	A
Public Relations Review[b]	12	22	36	A
Journal of Macro Marketing	12	16	37	B
Marketing Intelligence and Planning	12	15	38	C
International Journal of Bank Marketing	11	22	39	C
Journal of Global Marketing	10	12	40	C
Marketing Education Review	8	9	41	C
Journal of Hospitality and Leisure Marketing[b]	6	8	42	C
Journal of Marketing Channels	6	10	43	C
Journal of Euromarketing	5	6	44	C
Journal of International Marketing and Market Research	3	5	45	C

[a] Tie broken by looking at the journals' g-index.
[b] Journal misplaced in terms of GS influence.

scores well beyond the 1% level. Despite this, one C journal (Journal of Direct Marketing) ranked in the B journal band and, as was noted earlier, one A rated journal (Journal of Hospitality and Leisure Marketing) ranked in the C journal band. Thus, there were misclassifications at all levels, suggesting further evaluation is needed.

3. Conclusions

Given the Australian Government's focus on citations, the present study examined the GS citations of forty five well-known marketing journals during the first seven years of the 21st century and used two recently bibliometric indexes (the h-index and the g-index) to rank all A* and A journals, as well as 10 B and 10 C journals, to investigate differences in their citation impact. As the two indexes had a near perfect correlation, only the h-index was used to assess journal impact. The results suggested the A* list journals had significantly greater impact than did the A journals, although Industrial Marketing Management and the Journal of Advertising Research seemed more like A* journals than A journals, while the Journal of Interactive Marketing seemed more like an A* journal than a B journal, suggesting a basis for moving some journals up and other journals down. Further, the exclusion of Psychology and Marketing seems to have been an error as it was ranked well towards the top of the A list. It was also clear that one A journal, the Journal of Hospitality and Leisure Marketing, did not merit such a classification.

Even more interestingly, the h-indexes and g-indexes of a small sample of well-known B journals showed no clear differentiation from the A journals. Indeed, one B journal (the Journal of Services Marketing) ranked 14th overall and well towards the top of the A list. However, it did seem that the C rated journals were less influential than other journals. More discussion is clearly needed in determining the band in which many presently B classified journals sit as these journals are especially important as many Australian marketing academics publish in these journals. A lower journal classification, such as a B or a C, may affect how marketing groups are viewed within their university and how individual marketing academics are viewed for promotion or tenure. Consequently, correct journal classifications are critical.

The present study supports the use of GS as an alternative way to measure citations in marketing, but future research should revi-

sit this methodology using longitudinal studies, examine other academic disciplines. Further, the present paper used citations as a single measure of journal quality. Future research should compare GS citation results with subjective assessments of journal quality to see how they correlate and if the two approaches to measuring journal quality are complementary or substitute approaches.

References

Bakkalbasi, N., Bauer, K., Glover, J., Wang, L., 2006. Three options for citation tracking: Google Scholar, Scopus and Web of Science. Biomedical Digital Libraries, 3(7). <www.bio-diglib.com/content/3/1/7>.

Baumgartner, H., Pieters, R., 2003. The structural influence of marketing journals: a citation analysis of the discipline and its sub-areas over time. Journal of Marketing 67 (2), 123–139.

Geuna, A., Martin, B., 2003. University research evaluation and funding: an international comparison. Minerva 41 (4), 277–304.

Easton, G., Easton, D., 2003. Marketing journals and the research assessment exercise. Journal of Marketing Management 19 (1/2), 5–24.

Egghe, L., 2006. Theory and practise of the g-index. Scientometrics 69 (1), 131–152.

Guidry, J., Hollier, B., Johnson, L., Tanner, J., Veltsos, C., 2004. Surveying the cites: a ranking of marketing journals using citation analysis. Marketing Education Review 14 (1), 45–59.

Harzing, A.W., 2007. Publish or Perish Version 2.0.2673 (Software). <http://www.harzing.com.pop.htm>.

Harzing, A.W., van der Wal, R., 2008. Google Scholar as a new source for citation analysis. Ethics in Science and Environmental Politics 8, 61–63.

Hirsch, J.E., 2005. An index to quantify an individual's scientific research output. Proceedings of the National Academy of Sciences of the United States of America 102, 16569–16572.

Hult, G.T.M., Neese, W.T., Bashaw, R.E., 1997. Faculty perceptions of marketing journals. Journal of Marketing Education 19 (1), 37–52.

Jacsó, P., 2006. Google Scholar: the pros and the cons. Online Information Review 29 (2), 208–214.

King, D.A., 2004. The scientific impact of nations. Nature 430 (6997), 311–316.

Murphy, J., Law, R., 2008. Google Scholar visibility and tourism journals. Annals of Tourism Research 34 (3), 1078–1082.

Murphy, J., Soutar, G.N., Lee, R., Swilley, E., 2007. Online visibility: a complementary way to rank marketing journals. In: Paper Presented at the AMA Summer Conference.

Pauly, D., Stergiou, K.I., 2005. Equivalence of results from two citation analyses: Thomson ISI's citation index and Google's Scholar service. Ethics in Science and Environmental Politics 5, 33–35.

Razzaque, M.A., Wilkinson, I.F., 2007. Research performance of senior level marketing academics in the Australian universities: an exploratory study based on citation analysis. In: Proceedings of the 2007 ANZMAC Conference. Dunedin, New Zealand, pp. 3281–3286.

Swan, A., Brown, S., 2005. Open access self-archiving, pp. 1–104. An author study. Retrieved from eprints.ecs.soton.ac.uk/10999/01/jisc2.pdf.

Soutar, G.N., 2007. Citation benchmarks for article published by Australian marketing academics. In: Proceedings of the 2007 ANZMAC Conference. Dunedin, New Zealand, pp. 3515–3520.

Sullivan-Mort, G., McColl-Kennedy, J.R., Kiel, G., Soutar, G.N., 2004. Perceptions of marketing journals by senior academics in Australia and New Zealand. Australasian Marketing Journal 12 (2), 51–61.

Vargo, S.L., Lusch, R.F., 2004. Evolving to a new dominant logic for marketing. Journal of Marketing 68 (1), 1–17.

Yeung, T.A., 2002. Deciphering citations. Environment and Planning A 34 (12), 2093–2106.