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By Hans Baumgartner and Rik Pieters

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Hans Baumgartner and Rik Pieters *

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* Hans Baumgartner is associate professor of marketing, Smeal College of Business Administration, The Pennsylvania State University, 707-F BAB, University Park, PA, 16803, USA. Rik Pieters is professor of marketing, Department of Marketing. Tilburg University, P.O. Box 90153, 5000 LE Tilburg, Netherlands.

THE INFLUENCE OF MARKETING JOURNALS: A CITATION ANALYSIS OF THE DISCIPLINE AND ITS SUB-AREAS

ABSTRACT

An important characteristic of journals is how influential they are in the generation and dissemination of scholarly knowledge in a discipline. We report a citation analysis of 49 marketing and marketing-related journals to assess their relative influence based on the index of structural influence proposed by Salancik (1986). We investigate the level and span of influence of the 49 journals, both in the marketing discipline as a whole and in five specific sub-areas of marketing. As expected, the *Journal of Marketing* emerges as the most influential journal in the discipline and as the journal with the broadest span of influence across all sub-areas of marketing. However, different journals are most influential in each of the sub-areas, and the *Journal of Marketing* is particularly influential among the applied marketing journals. We also find that the index of structural influence is significantly correlated with all other measures of influence but least so with the impact factors reported in the *Social Sciences Citation Index*.

JEL-code: M30, M31

Key words: Citation analysis, journal influence.

INTRODUCTION

Journals have become the primary medium of communicating scholarly knowledge in marketing, and the number of marketing-related journals has increased rapidly in recent years. Only a handful of journals covered marketing issues up to the 1960's, the foremost being the *Harvard Business Review* (established in 1920), *Journal of Retailing* (1925), *Journal of Business* (1928), and *Journal of Marketing* (1936). Since then the number of journals in which research relevant to marketing is published has mushroomed. Currently, there are 551 journals listed in *Cabell's Directory of Publishing Opportunities in Management and Marketing* (Cabell 1997-98). Of these, 59 have the word marketing in the title and an additional 41 cover such topics as advertising, brand management, consumer behavior and consumer policy, purchasing, and retailing. Many other, more general journals frequently contain marketing-related research as well (e.g., *Journal of Business Research*, *Management Science*).

The rapid growth of the journal market makes it increasingly important to gain insight into the relative influence of marketing-related journals (Doreian 1988; Garfield 1972; Kerin 1996; Singleton 1976; Trieschmann et al., in press). There are several reasons for this. First, scholars seeking publishing opportunities have to decide which journals are most likely to enhance the visibility and impact of their research. Although the premier journals of a discipline are usually well established, there is generally less consensus about the other journals. Second, promotion and tenure decisions in research-oriented universities depend almost exclusively on publications in well-respected journals, and salary levels, author reputation, and the ability to get research grants are closely tied to the number of publications in prestigious journals. Journal rankings are particularly important when an individual's research is evaluated by people who are not specialists in the discipline and who thus have to rely on a journal's reputation as a proxy for article and research quality. Third, rankings of the quality of universities, schools, and academic departments are strongly influenced by evaluations of research productivity, and productivity is usually assessed by publications in a limited set of high-quality journals. Fourth, as the number of journals becomes larger and larger, researchers, educators and students of marketing with limited time budgets have to be more selective about which journals they read. Likewise, libraries with limited financial budgets have to decide which journals to subscribe to based on patrons' interest in different publications. Finally, journal editors want to know about the relative standing of their journal in the discipline and the effects of editorial policies on the journal's influence.

Despite these important needs, we know very little about the relative influence of the large number of journals that publish marketing-related research. Most published work about the influence of marketing journals is relatively old or has examined a limited set of journals, often in narrowly defined areas (the study by Hult et al., 1997, to be described later, is an exception). Moreover, there are various measurement approaches and specific measures of journal influence, all with their own strengths and weaknesses, and it is not obvious which influence measure is most appropriate.

Sixty years ago, Agnew (1941, p. 378) stated that the *Journal of Marketing* was "scientific in method and outlook, and an organ of which any scientific society might justly be proud." Kerin (1996) provided evidence that in the 55 years since its inception the *Journal of Marketing* has grown in reputation among marketing academics and that it is among the leading business journals and one of the premier repositories of marketing literature. In contrast, Day (1996, p.14) expressed concern about the "gradual erosion of the *Journal of Marketing*'s traditional role as a thought-leader within the academic discipline of marketing." According to Day, the increasing number of specialized journals with more distinctive positioning and homogenous constituencies has diluted the influence of the *Journal of Marketing* in the marketing discipline.

Our research was partly stimulated by these conflicting assessments. Specifically, we set out to identify the level and span of influence of a comprehensive set of 49 marketing and marketing-related journals, 60 years after the *Journal of Marketing* was established. To this end, we examine the influence of each journal in the marketing discipline as a whole and in five specific sub-areas of the marketing discipline, and we ascertain for each journal to what extent its influence is concentrated or dispersed. To assess journal influence we apply the index of structural influence proposed by Salancik (1986) in a large-scale citation analysis. This index of structural influence has desirable features for assessing journal influence and has rarely been used in marketing. To illustrate its validity, the index is compared with previously published objective and subjective measures of journal influence in marketing.

Our research makes several contributions to the marketing literature. First, it is the first study to provide a comprehensive ranking of the influence of marketing journals based on objective, citation-based data. Despite the apparent need for such a comprehensive ranking, it is currently not available. Of the 49 journals in our sample, 26 are not contained in the *Social Sciences Citation Index*, which provides information about journal influence based on citation counts. Second, we

employ a theory-based measure of structural influence that has been proposed in management, and apply it in a citation analysis of the influence of marketing journals. We illustrate the validity of the measure and show its advantages over popular alternative subjective and objective measures of journal influence. Third, this study is the first to examine both the level and span of journal influence. It shows not only how influential different journals are in the marketing discipline as a whole and in particular sub-areas of marketing, and but also how narrow or broad their span of influence is. This provides new insights into the roles that journals play in the diffusion of scholarly knowledge in the marketing discipline and indicates whether a journal is a generalist or a niche player. Particular emphasis will be placed on the *Journal of Marketing* as the oldest general marketing journal and the presumed leader of academic marketing thought.

JOURNAL INFLUENCE

A scholarly journal is influential to the extent that it publishes articles that contribute significantly to the exchange of ideas in some field of inquiry. This is variously referred to as influence, importance, impact or quality. To identify a journal's influence, subjective and objective approaches have been proposed.

Key Informants' Judgments of Journal Influence

The subjective approach to assessing journal influence is based on key informant opinion surveys. Key informants in past research have been deans, department heads, faculty members, and academic and practitioner members of professional organizations (e.g., the American Marketing Association). Typically, informants are asked to rank or rate different journals according to quality, or to list a certain number of important or influential journals. Representative examples of this approach are Browne and Becker (1979, 1985, 1991), Coe and Weinstock (1983), Fry, Walters, and Scheuerman (1985), Gordon and Heischmidt (1992), Hult, Neese, and Bashaw (1997), and Luke and Doke (1987). In the most recent study of this kind, Hult et al. (1997) surveyed 309 marketing faculty members (assistant, associate, and full professors) and asked them to indicate their top 10 most important journals based on a list of 63 marketing-related journals. Respondents could also add to the list if a journal was not listed. The results showed that the *Journal of Marketing* was ranked in the top 10 most often, followed by the *Journal of Marketing Research*, *Journal of Consumer Research*, *Journal of Retailing*, and *Journal of the Academy of Marketing Science*. The authors also computed separate rankings for AACSB-accredited and non-AACSB-accredited, as well as doctorate-granting and non-doctorate-granting institutions. Although the overall correlation

between the different rankings was quite high, some interesting differences emerged. For example, *Marketing Science* was ranked fourth among doctorate-granting institutions but only tenth among non-doctorate-granting institutions.

The primary advantage of key informant surveys is that, in principle, they can capture the multifaceted construct of *perceived status* of journals in a discipline. Perceived status encompasses various aspects of journal influence that objective measures cannot easily condense into a single judgment, such as the publication and editorial history of the journal, the quality of its review process, and the size and characteristics of its user base. However, key informant surveys have several serious shortcomings. One issue is that the ranking of journals depends on the quality of the survey (i.e., whether the population of respondents was defined appropriately, whether respondents were sampled correctly, and whether non-response and measurement error distorted the findings). Another problem is that expert ratings might be influenced by strategic responding and self-serving biases. For example, respondents may exaggerate the influence of journals in which they themselves have published, or overrate the role of journals in their own area of expertise. In addition, informants may not be familiar with all the journals that they are asked to rate, and they may systematically underrate unfamiliar and overrate familiar journals. The latter problem can be addressed by taking into account respondents' familiarity with journals, but such judgments may be prone to similar biases and strategic responding. These mechanisms may systematically distort the resulting assessments of journal influence, such that some journals are overrated and others are underrated. This threatens the construct validity of subjective influence measures. Finally, if rankings or ratings for a comprehensive sample of journals are required, the burden on key informants may quickly become excessive, promoting measurement unreliability. These problems have stimulated researchers to consider objective measures of journal influence.

Citation-Based Measures of Journal Influence

Objective measures of journal influence are mostly based on citation counts. The basic idea is that influential journals will be the recipients of many citations from other journals. If a journal publishes an article that is cited by articles in other journals, it contributes to the exchange of ideas in a field of inquiry and is thus considered influential. Several objective measures of journal influence based on citation counts are available, such as the volume of citations received, the number of citations received per average article published, and the ratio of sending-to-receiving

citations (e.g., Doreian 1988). Representative studies in marketing using this approach are Leong (1989), Pieters et al. (1999), and Zinkhan, Roth and Saxton (1992).

Citation-based methods of assessing journal influence also have several limitations (cf. Brown and Gardner 1985; Pierce 1990). One important issue is that articles may be cited for a variety of reasons, not all reflecting a transfer of knowledge or true acknowledgment of intellectual indebtedness. Although it is usually assumed that citing others' work signifies that the cited document served as a relevant source of information, other motives are possible. Small (1982) reviewed seven studies that examined the functions that citations serve, based on an analysis of the context in which they appear. Although the schemes to classify the functions of citations vary, they usually contain functions such as use/application, affirmation/support, review, perfunctory mention, and negation. It is clear that the various functions of references reflect differential influence of the cited document and that some references, for example, perfunctory mention (Kotler 1972), may not be good indicators of influence. In fact, perfunctory mentions were found to account for, on average, 20 to 60 percent of references. Related to this, authors may cite an article without using it, for example, when a cited source has not been consulted or is irrelevant to the argument (Wertsch 1995). In addition, authors may cite articles for strategic reasons, for example, because the authors of the cited articles are potential reviewers of the research (Tellis, Chandy and Ackerman 1999). To the extent that these mechanisms affect the journals in a discipline similarly, they lower the validity and reliability of citation-based measures of journal influence.

While these limitations are important, citation-based measures appear less prone to systematic biases than subjective measures and are more readily available, and thus are becoming the preferred measures of journal influence in many disciplines (e.g., Doreian 1988; Johnson and Podsakoff 1994; Laband and Piette 1994). The specific citation-based measure used in this study and its conceptual background are described next.

THE STRUCTURAL INFLUENCE OF JOURNALS

In social networks members exchange valued resources. Journals that cite each other's articles form a social network in which knowledge is the valued resource and references are the medium of exchange. Based on theories of organizational influence, Salancik (1986) formulated three general requirements that a measure of influence in social networks should possess.

First, influence in a network should be based on dependency. That is, a member's influence in a network is proportional to other participants' dependency on the member for their resources. A

citation indicates that the citing journal depends on the cited journal for its knowledge. Therefore, journal A is more influential than journal B if A depends less on B than B depends on A. In that case, the proportion of citations that journal A sends to journal B is lower than the proportion of citations that journal B sends to journal A.

Second, dependencies require different weights. That is, a member's influence in a network depends on the influence of the members that are dependent on it. When multiple others are dependent on a member of the network, the dependence of influential members contributes more to influence than the dependence of less influential members. In other words, a citation from a journal that is itself influential should count more heavily than a citation from a relatively minor journal.

Third, indirect dependencies should be accounted for. That is, a member's influence in the network should be a function of both the influence that it directly exerts on other network members and the influence that it exerts indirectly through other members. In other words, if journal A is strongly influenced by journal B, which in turn is strongly influenced by journal C, C should get credit for its indirect influence on A via B, even though it may not influence A directly.

Based on earlier work by Katz (1953) and Hubbell (1965), Salancik (1986) proposed a measure of structural influence that meets all three requirements. Assume, for simplicity, that a citation network consists of only three journals, A, B, and C. Then the influence of the three journals can be expressed as follows:

$$\begin{aligned} Inf_A &= \text{-----} \quad D_{AB}\, Inf_B + D_{AC}\, Inf_C + Int_A \\ Inf_B &= D_{BA}\, Inf_A + \text{-----} + D_{BC}\, Inf_C + Int_B \\ Inf_C &= D_{CA}\, Inf_A + D_{CB}\, Inf_B + \text{-----} + Int_C \end{aligned} \qquad (1)$$

In these equations, *Inf* refers to influence, *D* to dependency (e.g., D_{AB} is the extent to which B is dependent on A), and *Int* to intrinsic influence. Operationally, dependencies are defined as the proportion of a journal's citations that go to another journal. For example, if journal B made 1000 citations to other sources (including itself) during a given time period and 100 of these went to journal A, then D_{AB} is 0.1

The general solution to the system of simultaneous linear equations in (1) is given by:

$$Inf = [\, I - D \,]^{-1}\, Int \qquad (2)$$

where *Inf* is an $N \times 1$ vector of overall influence scores for a network of *N* journals, *I* is an $N \times N$ identity matrix, *D* is an $N \times N$ dependency matrix, and *Int* is a vector containing the intrinsic influences of each journal. The intrinsic influences are usually fixed at one for computational

purposes (Salancik 1986). In this case, the minimum influence of any journal is 1, but the index has no upper bound. However, in actual applications the maximum influence is generally well below the number of journals in the network. Since the dependencies are weighted by the dependent journal's influence, it is apparent that citations are not treated equally in calculating this index (requirement 2). Furthermore, by solving the system of equations in (1) algebraically it can be shown that a journal's influence does not only depend on direct dependencies but also incorporates indirect dependencies (requirement 3).

The measure has the additional advantage that it allows an analysis of the influence of journals in the discipline as a whole as well as in specific sub-areas. This is an attractive feature that makes it possible to examine the span (or breadth) of journal influence. Journals that exert an influence in multiple sub-areas of marketing have a broader influence than journals that exert their influence in one or a small number of sub-areas. To analyze the span of influence, the total set of journals is partitioned into non-overlapping sub-areas and separate influence scores are calculated for each sub-area as follows:

$$Inf_{Sub} = [\, I - D \,]^{-1} \, D \, M \qquad (3)$$

where Inf_{Sub} is an $N \times K$ matrix of sub-area influence scores (K being the number of sub-areas), D is as defined previously, and M is an $N \times K$ matrix of zeros and ones (with one nonzero entry per row) representing a journal's membership in one of the K sub-areas. The sum of a journal's influence scores in each of the K sub-areas yields the journal's total influence in the network minus 1 (its intrinsic influence). In the empirical part we indicate how sub-areas in marketing are identified in this study.

DIFFERENCES BETWEEN MEASURES OF JOURNAL INFLUENCE

The most popular citation-based measure of journal influence is the impact factor reported in the *Social Sciences Citation Index* (*SSCI*). The impact factor measures the number of citations received by the average article in a journal within two years after publication. Specifically, a journal's impact factor in year t is the number of times that articles published in the journal during (t-1) and (t-2) were cited by other journals included in the *SSCI* during t, divided by the total number of articles that the target journal published in (t-1) and (t-2).

The index of structural influence differs from the impact factors in several ways. First, structural influence measures the influence of all articles published, not only articles published during the previous two years (Harter and Nisonger 1997). Hence, the index of structural influence

captures total influence and impact factors capture recent influence. Second, the index does not correct for the number of articles published whereas impact factors do. Hence, journals with the same structural influence score may differ in impact if they publish different numbers of articles. Third, the index is based on the notion of dependency, which refers to the proportion of citations that a journal receives from another journal, while impact factors are based on the numbers of citations that a journal receives. Fourth, the structural index takes into account the influence of the dependent journal and incorporates indirect dependencies. In contrast, impact factors do not consider the influence of the source of a citation and ignore indirect effects of citations. Fifth, the structural influence index does not use self-citations (citations to the journals' own articles), whereas impact factors are based on all citations that journals receive, including self-citations. Theoretically, a journal that is not cited by other journals may still have a high impact factor if it cites itself frequently. Sixth, in practical applications the structural influence index is always based on a smaller network of journals than the impact factors. For example, the impact factors for 1996 are derived from citation exchanges between over 1500 journals covered by the *SSCI*, whereas the citation network considered in this study consists only of 49 marketing-related journals. Although this appears to be a limitation, it should be remembered that most of the journals listed in the *SSCI* are not relevant to marketing and that many journals that <u>are</u> members of the marketing network are not included in the *SSCI*. Specifically, 26 of the 49 journals studied in this paper are not covered by the *SSCI*. When the goal is to assess the influence of marketing and marketing-related journals in the marketing discipline, the journal network considered in this study would seem to be more relevant than the journal network on which the impact factors are based.

Although the previous discussion shows that there are important conceptual differences between the structural influence index and impact factors, and between objective and subjective influence measures, the question is whether it really matters how journal influence is measured? Johnson and Podsakoff (1994) compared the structural influence index with various objective and subjective influence measures, for a large set of journals in management. Interestingly, they found that impact factors correlated relatively poorly with other objective influence measures, including the structural influence index. Furthermore, the index correlated more highly with the subjective influence measures than the impact factors did.

Since the structural influence index is based on a substantive theory of influence in social networks, and in view of the results of Johnson and Podsakoff (1994), we chose it to study journal

influence in marketing. However, in order to provide evidence of the degree of convergence among alternative influence measures and to gain insights into the specific discrepancies, we also assess the correspondence between the structural influence index, impact factors, and several subjective measures of journal influence.

METHOD

A total of 49 marketing-related journals were included in the citation analysis. The journal selection procedure was as follows. In the first stage the top-40 marketing journals from the study by Hult et al. (1997) were sampled. As mentioned earlier, these authors conducted a survey of 309 marketing faculty who were asked to name their top-10 journals. Respondents were provided with a list of 63 journals, which were selected based on frequency of citations in the marketing literature, appearance in previous marketing journal hierarchies, and popularity and readership. Respondents could also include journals that were not on the list. Because two journals were tied for 40th place in the Hult et al. study, this yielded 41 journals. In the second stage we added journals that met the following criteria. First, journals were included that appeared on the original list of 63 journals in the Hult et al. paper and that were listed in the *SSCI* (*Journal of Consumer Affairs*, *Journal of Economic Psychology*, *Journal of the Market Research Society*). Second, Hult et al. presented rankings for various subgroups of respondents (e.g., respondents from doctorate-granting and non-doctorate-granting institutions). If a journal was listed in the top-40 of one of the subgroups, the journal was included (*Journal of Business to Business Marketing*, *Journal of Direct Marketing*, *Journal of Nonprofit and Public Sector Marketing*, *Journal of Professional Services Marketing*). Third, the *Journal of Consumer Policy* was added because it was also included in the citation study by Zinkhan et al. (1992). Following this procedure, the final list contained 49 marketing and marketing-related journals, which are shown in Table 1. The final list includes some bibliometric sources that are not journals in the narrow sense, such as the proceedings of the *American Marketing Association* (*AMA*) and the proceedings of the *Association for Consumer Research* (*ACR*). They were included in keeping with previous research in marketing (Hult et al. 1997; Philips et al. 1999; Zinkhan et al. 1992) and because they are published periodically, which the *SSCI* honors by including them in their list of periodicals.

-- Insert Table 1 about here --

To avoid instability of citation patterns due to short-term fluctuations, data were collected and summed across two years (1996-1997). If a journal was listed in the *SSCI*, the relevant citation

counts were compiled from data provided in the *Journal Citation Reports.* However, this was only the case for 23 of the 49 journals in our sample. The citation data for the 26 remaining journals were collected manually. To this end, we counted, for all articles that were published in the journals in 1996 and 1997, how often they cited the 49 journals in the sample. Thus, the findings are based on the frequencies with which each of the 49 journals in our sample cited the other journals in the sample (including self-citations) during 1996 and 1997, sixty years after the *Journal of Marketing* was established.

FINDINGS

Frequency of Citing and Being Cited

Table 2 reports descriptive statistics about how many citations the journals in the network made and received over the two-year period. As shown in the first column, there are substantial differences between journals in the frequency of citing other journals, ranging from a low of 91 for *Harvard Business Review* to a high of 7489 for the *Journal of Business Ethics* (the mean is 2190). These differences are a function of the number of issues published per year, the number of articles appearing in each issue, and the number of references per paper. The latter depends on such factors as the type of article (e.g., review articles tend to have more references) and the editorial policy of the journal (e.g., some journals have an explicit policy to keep the number of references to a minimum).

-- Insert Table 2 about here --

On average, 30 percent of all citations went to journals in this network of 49 marketing-related journals, but the figures range from a low 3 percent for *Harvard Business Review* to a high 48 percent for the *Journal of Services Marketing* (see columns 2 and 3 of Table 2). In other words, the marketing network captures 30 percent of the citations that the 49 marketing journals made. The other 70 percent of citations go to a diverse set of other marketing journals, journals in other disciplines such as economics or psychology, as well as other bibliometric sources such as books (see Pieters et al. 1999; Philips et al. 1999; Zinkhan et al. 1992). The percentages of citations made in the network are lowest for journals that publish marketing-related articles but are not marketing journals in the narrow sense (e.g., *Harvard Business Review*, *Journal of Business*, *California Management Review*, *Decision Sciences*, *Business Horizons*, *Journal of Economic Psychology*, *Management Science*, *Sloan Management Review*). As the fourth column of Table 2 shows, there

are also substantial differences in how often journals cite themselves. The average for the network is 24 percent, with a range of 1 to 100 percent.

Column 5 reports the number of citations that each journal received from other journals in the network (including self-citations). These figures provide a rough measure of how important a journal is in the network. The *Journal of Marketing* received by far the greatest number of citations (6043), followed by the *Journal of Marketing Research* (4461) and the *Journal of Consumer Research* (4119). The last column shows the number of self-citations as a proportion of the total number of citations received. The average for the network is 33 percent, with a range of 0 to 84 percent.

Level of Influence of Marketing Journals

The first column of Table 3 reports the level of influence of marketing journals in the discipline as a whole. To ease interpretation, the intrinsic importance of each journal (which equals 1) was subtracted from the structural influence index so that it has a minimum value of zero. Journals are listed in decreasing order of influence, as indicated by the ranks reported in the second column.

-- Insert Table 3 about here --

Several findings in Table 3 attract attention. As expected, the *Journal of Marketing*, *Journal of Marketing Research* and *Journal of Consumer Research*, in that order, are by far the three most influential journals in marketing. Surprisingly, the fourth most influential journal in the marketing discipline as a whole is the *Harvard Business Review*. This journal is not an academic journal in the conventional sense and does not have a regular review process. Yet, it is very influential in this network of mostly academically oriented marketing journals. Another intriguing result is the substantial influence of *Advances in Consumer Research*, which ranks sixth in the marketing discipline as a whole. Apparently, research reported in these annual conference proceedings is cited frequently and by influential sources. Also unexpected are the relatively high rankings of *Industrial Marketing Management* (rank 10) and the *Journal of International Business Studies* (rank 13). In a subsequent section, a more detailed comparison of these influence rankings with other journal influence measures is provided.

The dominant influence of the three top journals is remarkable. If the sum of the influence scores of all 49 marketing journals is taken as a measure of the total influence available in this network, then the first three journals alone account for nearly half of the total influence (49

percent). Furthermore, the first ten journals account for 75 percent of the total influence and the first 19 journals for 90 percent. Thus, influence is extremely concentrated in this network, and many of the secondary journals exert no significant impact on the marketing discipline.

As an illustration of the large differences in the influence of journals, the following statistics are revealing. The *Journal of Marketing* is about 17 percent more influential than the *Journal of Marketing Research* and about 40 percent more influential than the *Journal of Consumer Research*. It is also nearly six times more influential than *Management Science* or *Marketing Science*, and more than seven times more influential than *Industrial Marketing Management*.

Span of Influence of Marketing Journals

Journals do not only differ with regard to their level of influence in a discipline (low or high), but also with respect to their span of influence (narrow or broad). A journal's influence is narrow if only a relatively small number of other journals are dependent on it. A journal's influence is broad if many other journals are dependent on it. We call this the span of influence of a journal. Specialized journals have a narrow span of influence, and general interest journals have a broad span.

The term $[I - D]^{-1}$ in equation (2) indicates how much influence each journal in the network exerts on each of the other journals. It is thus possible to compute the share of a journal's influence derived from other network members and to investigate how narrow or broad its influence is. A convenient overall measure of a journal's span of influence is the Herfindahl index as proposed in economics (see Tellis, Chandy, and Ackerman, 1999, for a recent application in a related context). It is calculated as $H_i = S_j a_{ij}^2$, where a_{ij} $(j = 1, .., 48, i \neq j)$ is the percentage share of journal i's total influence derived from journal j. The index ranges from 0 to 1, with smaller values indicating broader and larger values indicating narrower influence span.

Findings about the span of influence are indicated in the third and fourth column of Table 3. Clearly, the *Journal of Marketing* has the broadest span of influence in marketing, followed by the *Journal of Marketing Research*, *Harvard Business Review*, *Journal of Consumer Research*, and *Advances in Consumer Research*. The journals with the narrowest span of influence are the *Journal of Business Logistics*, *Marketing Education Review*, and *Journal of Marketing Education*.

In principle, the level and span of a journal's influence are independent. That is, specialized, narrow journals could have a high or low level of influence, and general interest, broad journals could have a high or low level of influence as well. However, our findings show that this is not the

case in the marketing discipline. We find a strong correlation between the level and span of journal influence ($r = .87$, $p < .001$), which means that influential marketing journals also tend to have a broad span of influence. Put differently, very specialized and focused marketing journals tend not to be influential in marketing. The most notable exceptions to this general pattern are *Marketing Science* (ranked 7th in level of influence, but 19th in span of influence), *Industrial Marketing Management* (10/28), the *Journal of International Business Studies* (13/37), and the *Journal of Marketing Education* (24/47). These journals tend to have a narrow influence span, yet their level of influence in the marketing discipline is relatively high.

Sub-Areas of the Marketing Discipline

So far the analysis of the level and span of journal influence dealt with the marketing discipline as a whole, represented by the 49 journals. But perhaps the influence of some journals differs systematically across various sub-areas in the marketing discipline. Such journals may be influential in one sub-area but less influential in other sub-areas of marketing. An overall analysis of the span of influence is an important first step, but only an analysis of sub-area influence can show where narrow journals exert most of their influence.

To establish journal influence in sub-areas of marketing, the sub-areas have to be established first. Following earlier work in citation analysis (e.g., Pieters et al. 1999; Zinkhan et al. 1992), sub-areas in marketing were identified based on the volume of citations that journals send to and receive from other journals. The idea is that journals with strong mutual citation relationships are likely to be similar in substantive content or theoretical and/or methodological approach. For instance, journals that cover advertising are likely to cite each other more frequently and journals devoted to marketing education less frequently. Likewise, the latter journals will cite each other more frequently than they cite the advertising journals. Which specific sub-areas in marketing actually emerge depends on the extent to which specific journals cite each other.

To identify sub-areas in marketing based on journal citation patterns, we estimated the log-multiplicative model recently used by Pieters et al. (1999) based on the work of Goodman (1979, 1991) and other researchers in sociology (e.g., Clogg and Shidadeh 1994). The model, described in the Appendix, identifies groups of journals with strong mutual citation relationships and represents the journals in a low-dimensional space similar to multidimensional scaling. Figure 1 shows the two-dimensional solution that yielded the best results. Journals that are close together entertain

strong mutual citation relationships, and journals that are distant entertain weak or no mutual citation relationships.

-- Insert Figure 1 about here --

The two dimensions in the citation map are readily interpretable. The horizontal dimension distinguishes journals with a "firm" perspective (right) from journals with a "consumer" perspective (left). On the right side of the map are journals with a firm perspective such as *California Management Review*, *Sloan Management Review*, or *Harvard Business Review*. On the left side of the map are consumer journals (and journal-like publications) such as *Advances in Consumer Research*, *Journal of Consumer Psychology*, or *Journal of Consumer Research*. In the middle of the citation plot, where the firm meets the consumer, the typical marketing journals are located, such as the *Journal of Marketing*, *Journal of Marketing Research*, and *European Journal of Marketing*.

The vertical dimension distinguishes journals with a formal, theoretical approach (top) from journals with a descriptive, applied approach (bottom). At the top are theoretical and methodological journals such as *Decision Sciences*, *Marketing Science*, and *Management Science*. At the bottom are descriptive and applied journals such *Journal of Marketing Education*, *Marketing Education Review*, *Journal of Global Marketing*, *Journal of Services Marketing*, and *Journal of Health Care Marketing*. A cluster analysis (using Ward's method based on the coordinates of the journals in the map) identified five groups of cohesive journals in the citation map, which constitute our sub-areas in marketing.[1] In Figure 2, ellipses have been drawn around the sub-areas.

Sub-area 1 comprises the core marketing journals (n = 8). This cluster consists of the general interest marketing journals such as *Journal of Marketing*, *Journal of Retailing*, *International Journal of Research in Marketing*, and the more purely quantitative marketing journals, such as *Marketing Science*, *Journal of Marketing Research*, and *Marketing Letters*.

Sub-area 2 represents the consumer journals (n = 9). It consists of the consumer behavior journals such as *Journal of Consumer Research*, *Journal of Consumer Psychology*, and *Journal of Economic Psychology*, and the consumer policy journals such as *Journal of Consumer Affairs*, *Journal of Consumer Policy*, and *Journal of Public Policy and Marketing*.

Sub-area 3 consists of the firm-oriented journals (n = 9). It includes managerial journals such as *California Management Review*, *Sloan Management Review*, and *Harvard Business Review*,

and inter- and multidisciplinary academic journals, such as *Management Science, Journal of Business*, and *Journal of Product Innovation Management*.

Sub-area 4 consists of a large number of application-oriented journals in marketing (n = 21). Included in this sub-area are general marketing-related journals (*Journal of Business Research)*, industrial marketing journals (e.g., *Industrial Marketing Management*, *Journal of Business and Industrial Marketing*), international marketing journals (e.g., *Journal of International Business Studies*, *Journal of Global Marketing*), and service marketing journals (*Journal of Services Marketing*, *Journal of Professional Services Marketing*). These journals deal with specific marketing tactics, target groups, or application areas, and they tend to be lower in influence. Their location in the middle to lower part of the citation map indicates that they cover general interest marketing issues with a descriptive focus.

Finally, sub-area 5 consists of the two marketing journals specializing in educational issues, the *Journal of Marketing Education* and *Marketing Education Review*.

Building on these results, we can now determine how the influence of journals extends over sub-areas in marketing.

Journal Influence in Sub-areas of Marketing

We calculated the influence of the 49 journals in each of the five sub-areas in marketing, using equation (3). The sub-area influence scores are shown in Table 4, along with the influence ranks of the journals. To interpret the results, note that the influence scores of a particular journal in the five sub-areas sum to the overall score of the journal in the marketing discipline.

-- Insert Table 4 about here --

Several interesting findings emerge. In each of the five sub-areas in marketing, a different journal attains the top rank in influence. In the core marketing area, the *Journal of Marketing Research* is most influential. In the consumer behavior area, the *Journal of Consumer Research* is most influential. In the managerial marketing area, the *Harvard Business Review* is most influential. In the marketing applications area, the *Journal of Marketing* is most influential. Finally, in the marketing education area, the *Journal of Marketing Education* is most influential.

Table 4 reveals important differences in the rank-order of journals across sub-areas. If we focus on the top journals overall, whose ranks vary by at least five positions between sub-areas, the *Journal of Consumer Research* (rank 1 in consumer behavior, rank 6 in marketing applications), *Harvard Business Review* (1 in managerial marketing and 11 in consumer behavior), and

Management Science (3 in managerial marketing and 19 in marketing education) stand out. This expresses the level of journal specialization that has taken place in marketing, with several journals having a large influence in some sub-areas in marketing but not in others. Only the two most influential journals overall, the *Journal of Marketin*g and the *Journal of Marketing Research*, attain a top-4 position in each of the five sub-areas in marketing. These two journals truly cover the discipline and are important in all sub-areas of marketing.

The *Journal of Marketing Research* is by far the most influential journal in the group of core marketing journals, followed by the *Journal of Consumer Research* and the *Journal of Marketing*. *Marketing Science* is fourth and *Management Science* is fifth in this cluster. Thus, the journals that are usually considered as A-journals in research-oriented universities are ranked as the top-5 influential journals in the core marketing area.

Relationship between objective and subjective measures of journal influence

To examine their convergence and to investigate potential discrepancies in more detail, the structural influence index was correlated with other objective and subjective measures of journal influence. The impact factors reported in the *SSCI* were included in the analysis as an additional citation-based measure. We collected the impact factors for the 23 journals listed in the *SSCI* for the years 1996 and 1997 and averaged the two scores to obtain a single impact factor for the time period under consideration (referred to as *IMPACT*).

In addition, we considered three subjective influence measures derived by Hult et al. (1997). These authors asked 309 marketing faculty members at American universities to list their top-10 marketing-related journals in order of decreasing importance. From this information, they computed two measures of journal importance: the popularity/familiarity index (*PFI*) and the importance/prestige index (*IPI*). *PFI* is the number of top-10 votes divided by the number of top-10 votes received by the most popular journal. *IPI* is the average rank assigned to a journal by those respondents who ranked it in their top-10. *PFI* and *IPI* scores are available for 41 of our 49 journals. The *IPI* scores were reversed so that higher values indicate greater importance.

Hult et al. (1997) also conducted a follow-up survey with 69 respondents who rated the top-41 journals from the original study on a scale from 1 to 10 based on their importance in terms of generation and dissemination of scholarly marketing knowledge. The resulting index is referred to as *SI* (for subjective importance).

Correlations between the influence measures are reported in Table 5. Spearman rank-order correlations are reported since most of the measures have highly skewed distributions.

-- Insert Table 5 about here --

All journal influence measures are positively and substantially correlated, which is reassuring (the average correlation in Table 5 is .61, with a minimum of .37 and a maximum of .91). This indicates that the various measures of journal influence tap a similar underlying influence construct.

However, the correlations are not uniformly high. As expected, the structural influence index has the highest average correlation with the other measures (.68) and it is significantly correlated with every other influence measure. It is most strongly correlated with *PFI* and least strongly with *IMPACT* (.54). In fact, *IMPACT* has the lowest average correlation with all other influence measures (.49). These finding are consistent with the results reported by Johnson and Podsakoff (1994) in their study of journal influence in management, and they support the validity of the index of structural journal influence.

Impact factors are widely used measures of journal influence and it is instructive to look at the journals for which there are big discrepancies between the structural influence index and the impact factors. Journals that do much better on impact than relative influence include the *Journal of Business* (discrepancy in ranks of 12, with 22 being the maximum possible discrepancy), *Sloan Management Review* (10), *Journal of Product Innovation Management* (9), *California Management Review* (8), and *Decision Sciences* (6). These are all journals that are not marketing journals in the narrow sense, and their influence in the marketing discipline (as measured by structural influence) underestimates their total influence across disciplines (as measured by impact factors).

It is more fascinating to examine the divergence between structural and subjective journal influence in more detail. Discrepancies between structural and subjective influence indicate when the actual and perceived influence of marketing journals deviate. Being the most general, *PFI* was used for subjective journal influence. Interestingly, the top-3 journals are the same for structural and subjective influence. Up to rank 6 in structural influence, discrepancies remain small. Then, substantial discrepancies emerge.

Journals that are ranked much <u>higher</u> on structural influence than on subjective influence (ten ranks or more) include the *Journal of Product Innovation Management* (discrepancy in ranks of 20, with 40 being the maximum possible discrepancy), *Journal of Business Ethics* (15), *European*

Journal of Marketing (12), *Industrial Marketing Management* (11), and *Marketing Management* (10). These journals are more influential in the dissemination of marketing knowledge than their reputation among marketing academics suggests.

Journals that are ranked much lower on structural influence than on subjective influence include the *Journal of International Marketing* (13), the *Journal of Consumer Marketing* (13), *Psychology and Marketing* (13), *Journal of Marketing Theory and Practice* (12) and *Journal of Consumer Psychology* (10). The relatively good reputation that these journals have in the discipline is not supported by their contribution to the academic discourse in terms of other journals' dependency for their knowledge on articles published in these journals.

DISCUSSION

Kerin (1996) characterized the editorial policy and focus of the *Journal of Marketing* since the mid-80's as the era of marketing as an integrative science, and he pointed to the widespread influence of the journal in marketing and business in general. Our bibliometric analysis confirms this pervasive influence of the journal, both in its level and span. It shows not only that the *Journal of Marketing* is the most influential marketing journal overall but also that it has the largest span of influence across all sub-areas of marketing. The journal is by far the most influential marketing journal, followed at some distance by the *Journal of Marketing Research* and the *Journal of Consumer Research*. While the *Journal of Consumer Research* is most influential in the consumer behavior sub-area, and the *Journal of Marketing Research* is most influential in the core marketing sub-area, the *Journal of Marketing* is among the top-3 in each of the marketing sub-areas that this study identified, and it is most influential in the marketing applications area. The marketing applications sub-area comprises a large number of mostly recently established journals that focus on specific marketing tactics, target groups, or applications. Our analysis shows the important role that the *Journal of Marketing* has in disseminating marketing knowledge to these various specific sub-areas in marketing.

Day (1996) speculated that the emergence of many new specialized journals has reduced the influence of the *Journal of Marketing* as a thought-leader overall. On the one hand, the present findings fail to corroborate this claim by showing that the journal remains the dominant repository of marketing knowledge in the discipline. Consistent with its editorial policy, it seems to play an important role as an integrator of knowledge and as a source of information for many of the recently established, more applied marketing journals. On the other hand, the results also show that in the

core marketing area the *Journal of Marketing* is only ranked 3rd behind the *Journal of Marketing Research* and the *Journal of Consumer Research*. Thus, while the *Journal of Marketing* occupies a central position in the field as a whole, it may not be as influential in the core marketing area as it once was.

Our findings underscore the usefulness of citation-based indices of journal influence. Subjective measures of influence cannot provide the detail that is possible with indices derived from citation data, both with regard to level of influence within particular sub-areas and span of influence across journals in a discipline. In addition, our analysis supports the construct validity of the structural influence index employed in this study. Although the convergence among the various influence measures was generally high, the structural influence index had the highest average correlation with all other measures. The finding that the widely used impact factors had the lowest correlation with the other measures of journal influence indicates that they should not be used indiscriminately as a measure of journal influence. They may not be a good indicator of journal influence within a discipline and they do not take into account that journal influence varies by sub-area. These results are consistent with the findings of Podsakoff and Johnson (1994) in management

Although the degree of convergence between the structural and subjective journal influence measures was high overall, several interesting discrepancies emerged. Quite unexpectedly, we found several journals with a much higher structural influence than their reputation in the marketing discipline suggests. The relatively high ranks of *Industrial Marketing Management* and *Journal of Product Innovation Management* were most striking. We also found that several well-respected marketing journals (e.g., *Psychology and Marketing*, *Journal of Consumer Psychology*) had very low structural influence scores. These findings are interesting in themselves, but may also stimulate further research into the determinants of structural and subjective journal influence. For instance, it may be worthwhile to examine the impact of the location of the journal (US, non-US), the acceptance rate, and the content area on subjective influence. Likewise, it would be useful to examine growth rates of structural journal influence over time. Some journals have achieved a prominent position with the discipline within a relatively short period of time (e.g., *Marketing Science*), while others have been less successful in gaining influence.

The present findings may be employed in several ways, two of which we discuss in more detail. Rankings of journals by structural influence can be useful to authors considering which

journals to submit their work to. Authors want to have their papers published in journals that are likely to enhance the visibility and impact of their research. The journal ranking reported in this paper is based on a theory-based measure of structural influence that shows good convergence with a recent subjective evaluation of journal reputation, and it is more complete than the impact rankings reported in the *SSCI* (26 of the 49 journals included in our list are not covered by the *SSCI*). Furthermore, rankings are available by sub-area. This should be useful for authors who work in particular areas of marketing since there are important differences in rankings by area.

The results of the present study might also be useful in hiring and tenure decisions. While articles in the "Big 3" (*Journal of Marketing*, *Journal of Marketing Research*, *Journal of Consumer Research*) are universally regarded as top publications, articles in other journals may not be properly recognized, particularly if the candidate is working in a specific area. Consider, for example, a researcher in the managerial marketing area. In this field, the *Harvard Business Review* is the most influential journal, *Management Science* is third, and *Sloan Management Review* is fifth. For departments emphasizing managerial marketing and for professors with such a research focus, these journals should be among the premier publication outlets and articles in these journals should be given the appropriate weight in tenure decisions.

In summary, in the sixty years since its founding the *Journal of Marketing* has established and fortified its position as the dominant marketing journal in the discipline. Despite the maturation and attendant fragmentation of the field, the journal continues to be the most influential source of marketing knowledge and it serves an important integrative function in communicating information from the theoretical to the applied areas. An interesting avenue for future research would be to study this process of knowledge generation and dissemination in marketing in greater detail.

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FOOTNOTES

[1] To validate the five-cluster solution, we calculated citation exchanges between journals both within and between clusters. This was done by averaging citations exchanged by journals belonging to the same cluster, ignoring diagonal cells or self-citations, and by averaging citations exchanged by sets of journals belonging to different clusters. As implied by the notion of cohesion, within-cluster citation exchanges (mean of 29.7) were generally significantly larger than between-cluster citation exchanges (mean of 7.07). Journals that belong to the same cluster on average cite each other four times more frequently than they cite journals belonging to a different cluster. The only exception to this occurs for the applied marketing journals that, as indicated previously, form a relatively diffuse cluster of journals dealing with particular domains of marketing.

TABLE 1
JOURNALS INCLUDED IN THE STUDY

Journal abbreviation	Full journal name
ACR	Advances in Consumer Research
AMA	AMA Educators' Conference Proceedings
BH	Business Horizons
CMR	California Management Review
DS	Decision Sciences
EJM	European Journal of Marketing
HBR	Harvard Business Review
IMM	Industrial Marketing Management
IJRM	International Journal of Research in Marketing
JA	Journal of Advertising
JAR	Journal of Advertising Research
JB	Journal of Business
JBIM	Journal of Business and Industrial Marketing
JBE	Journal of Business Ethics
JBL	Journal of Business Logistics
JBR	Journal of Business Research
JBBM	Journal of Business to Business Marketing
JCA	Journal of Consumer Affairs
JCM	Journal of Consumer Marketing
JCPO	Journal of Consumer Policy
JCPS	Journal of Consumer Psychology
JCR	Journal of Consumer Research
JDM	Journal of Direct Marketing
JEP	Journal of Economic Psychology
JGM	Journal of Global Marketing
JHCM	Journal of Health Care Marketing
JIBS	Journal of International Business Studies
JIM	Journal of International Marketing
JM	Journal of Marketing
JME	Journal of Marketing Education
JMM	Journal of Marketing Management
JMR	Journal of Marketing Research
JMTP	Journal of Marketing Theory and Practice
JNPSM	Journal of Nonprofit and Public Sector Marketing
JPSSM	Journal of Personal Selling and Sales Management
JPIM	Journal of Product Innovation Management
JPSM	Journal of Professional Services Marketing
JPPM	Journal of Public Policy and Marketing
JR	Journal of Retailing
JSM	Journal of Services Marketing
JAMS	Journal of the Academy of Marketing Science
JMRS	Journal of the Market Research Society
MNS	Management Science
MER	Marketing Education Review
ML	Marketing Letters
MM	Marketing Management
MKS	Marketing Science
PM	Psychology and Marketing
SMR	Sloan Management Review

TABLE 2
DESCRIPTIVE CITATION STATISTICS

Journals	Citations made (Citing)				Citations received (Cited)	
	(1) Total number	(2) Number in network	(3) (2) as a % of (1)	(4) Self-citations as % of (2)	(5) Number in network	(6) Self-citations as % of (5)
ACR	4507	1625	.36	.14	1108	.20
AMA	4160	1611	.39	.02	163	.18
BH	2169	288	.13	.15	333	.13
CMR	1729	156	.09	.35	378	.15
DS	846	113	.13	.39	117	.38
EJM	4736	1492	.32	.07	540	.19
HBR	91	3	.03	1.00	1765	.00
IMM	3156	1302	.41	.16	1029	.20
IJRM	2735	1092	.40	.06	258	.24
JA	1505	517	.34	.20	486	.22
JAR	1448	487	.34	.41	809	.25
JB	1148	74	.06	.70	184	.28
JBIM	1959	837	.43	.03	110	.22
JBE	7489	1583	.21	.61	1146	.84
JBL	1233	415	.34	.48	248	.81
JBR	5401	1954	.36	.05	723	.14
JBBM	853	399	.47	.02	18	.33
JCA	1105	225	.20	.11	142	.17
JCM	1174	431	.37	.06	114	.23
JCPO	1004	138	.14	.38	102	.51
JCPS	1546	470	.30	.06	78	.37
JCR	2207	598	.27	.60	4119	.09
JDM	1278	360	.28	.32	185	.63
JEP	2199	304	.14	.31	196	.48
JGM	1620	620	.38	.05	59	.58
JHCM	696	209	.30	.41	173	.49
JIBS	3335	662	.20	.55	910	.40
JIM	1002	352	.35	.04	50	.26
JM	3657	1470	.40	.39	6043	.09
JME	962	213	.22	.46	251	.39
JMM	3858	1249	.32	.08	192	.52
JMR	3530	1292	.37	.27	4461	.08
JMTP	2881	1145	.40	.01	17	.59
JNPSM	1359	337	.25	.03	14	.79
JPSSM	2018	821	.41	.18	527	.27
JPIM	2183	812	.37	.42	656	.52
JPSM	1208	355	.29	.07	64	.38
JPPM	2531	579	.23	.25	324	.44
JR	1779	766	.43	.19	895	.16
JSM	1446	699	.48	.07	135	.35
JAMS	2819	1232	.44	.07	932	.10
JMRS	976	239	.24	.23	128	.43
MNS	5308	830	.16	.57	1208	.39
MER	1284	290	.23	.17	65	.75
ML	1536	648	.42	.05	148	.20
MM	194	47	.24	.09	110	.04
MKS	821	379	.46	.29	857	.13
PM	3104	1237	.40	.04	169	.30
SMR	1503	256	.17	.24	474	.13

TABLE 3
LEVEL AND SPAN OF JOURNAL INFLUENCE IN MARKETING

Journal	Level of Influence		Span of Influence		Sub-Area in Marketing
	Measure	Rank	Measure	Rank	
JM	2.897	1	.032	1	1
JMR	2.480	2	.032	2	1
JCR	2.068	3	.037	4	2
HBR	1.041	4	.034	3	3
MNS	.544	5	.041	7	3
ACR	.523	6	.038	5	2
MKS	.503	7	.056	19	1
JAMS	.441	8	.042	8	4
JR	.393	9	.044	9	1
IMM	.391	10	.072	28	4
JAR	.377	11	.051	13	1
JBR	.328	12	.039	6	4
JIBS	.283	13	.148	37	4
SMR	.268	14	.055	18	3
JA	.230	15	.053	15	2
JPIM	.227	16	.048	10	3
EJM	.222	17	.058	21	4
JPSSM	.216	18	.072	27	4
CMR	.144	19	.049	11	3
BH	.127	20	.058	20	4
JPPM	.116	21	.063	23	2
IJRM	.114	22	.050	12	1
JBE	.101	23	.054	17	4
JME	.093	24	.549	47	5
ML	.085	25	.053	14	1
JB	.084	26	.064	24	3
AMA	.079	27	.074	29	4
MM	.066	28	.054	16	3
PM	.065	29	.064	25	2
JCA	.060	30	.070	26	2
JSM	.059	31	.106	34	4
JEP	.056	32	.060	22	2
JHCM	.051	33	.246	41	4
JMM	.049	34	.084	31	4
JCM	.042	35	.080	30	4
JDM	.040	36	.228	40	4
DS	.039	37	.202	38	3
JMRS	.038	38	.099	33	1
JBIM	.035	39	.098	32	4
JCPS	.029	40	.133	35	2
JPSM	.027	41	.215	39	4
JIM	.025	42	.257	43	4
JCPO	.022	43	.148	36	2
JBL	.019	44	.617	49	3
JGM	.016	45	.432	45	4
MER	.014	46	.609	48	5
JBBM	.007	47	.278	44	4
JMTP	.004	48	.250	42	4
JNPSM	.003	49	.500	46	4

TABLE 4
LEVEL OF JOURNAL INFLUENCE: OVERALL AND IN MARKETING SUB-AREAS

Journal	Level of Influence		Sub-area 1: Core Marketing		Sub-area 2: Consumer Behavior		Sub-area 3: Managerial Marketing		Sub-area 4: Marketing Applications		Sub-area 5: Marketing Education	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
JM	2.897	1	.463	3	.345	3	.169	2	1.873	1	.047	2
JMR	2.480	2	.703	1	.393	2	.120	4	1.236	2	.027	3
JCR	2.068	3	.491	2	.765	1	.047	6	.748	3	.018	6
HBR	1.041	4	.113	6	.037	11	.318	1	.549	4	.024	4
MNS	.544	5	.179	5	.036	12	.130	3	.193	11	.005	19
ACR	.523	6	.091	9	.197	4	.004	22	.228	10	.003	25
MKS	.503	7	.238	4	.060	6	.029	9	.171	13	.005	19
JAMS	.441	8	.047	13	.032	13	.008	15	.332	5	.023	5
JR	.393	9	.069	10	.048	7	.011	13	.261	7	.004	22
IMM	.391	10	.023	18	.008	24	.033	7	.309	6	.017	8
JAR	.377	11	.102	7	.109	5	.006	18	.157	15	.003	25
JBR	.328	12	.051	12	.037	11	.002	25	.230	9	.008	15
JIBS	.283	13	.009	27	.013	21	.008	15	.238	8	.016	10
SMR	.268	14	.031	17	.006	29	.102	5	.120	17	.008	15
JA	.230	15	.092	8	.046	9	.002	25	.087	20	.003	25
JPIM	.227	16	.058	11	.013	21	.025	10	.130	16	.002	29
EJM	.222	17	.016	21	.008	24	.005	20	.178	12	.016	10
JPSSM	.216	18	.017	19	.005	31	.013	12	.164	14	.017	8
CMR	.144	19	.006	32	.004	33	.032	8	.095	19	.008	15
BH	.127	20	.003	37	.003	36	.004	22	.115	18	.001	35
JPPM	.116	21	.016	21	.047	8	.001	29	.051	23	.001	35
IJRM	.114	22	.034	16	.008	24	.001	29	.068	21	.002	29
JBE	.101	23	.006	32	.022	15	.002	25	.064	22	.007	17
JME	.093	24	.005	34	.000	45	.000	40	.020	39	.067	1
ML	.085	25	.035	14	.014	18	.002	25	.033	33	.001	35
JB	.084	26	.034	16	.006	29	.006	18	.035	30	.004	22
AMA	.079	27	.008	29	.007	27	.000	40	.049	24	.014	11
MM	.066	28	.012	23	.003	36	.007	16	.039	28	.005	19
PM	.065	29	.005	34	.017	17	.000	40	.042	27	.000	44
JCA	.060	30	.008	29	.027	14	.000	40	.025	37	.000	44
JSM	.059	31	.010	25	.005	31	.000	40	.043	26	.001	35
JEP	.056	32	.011	24	.019	16	.000	40	.026	35	.000	44
JHCM	.051	33	.003	37	.004	33	.000	40	.043	26	.000	44
JMM	.049	34	.005	34	.001	39	.005	20	.035	30	.002	29
JCM	.042	35	.001	42	.007	27	.000	40	.034	31	.000	44
JDM	.040	36	.003	37	.003	36	.000	40	.033	33	.001	35
DS	.039	37	.007	30	.001	39	.021	11	.008	43	.002	29
JMRS	.038	38	.012	23	.004	33	.000	40	.022	38	.000	44
JBIM	.035	39	.001	42	.001	39	.001	29	.028	34	.004	22
JCPS	.029	40	.009	27	.013	21	.000	40	.007	44	.000	44
JPSM	.027	41	.000	47	.000	45	.000	40	.025	37	.002	29
JIM	.025	42	.000	47	.000	45	.000	40	.014	42	.011	13
JCPO	.022	43	.002	39	.013	21	.000	40	.006	45	.001	35
JBL	.019	44	.000	47	.000	45	.000	40	.019	40	.000	44
JGM	.016	45	.000	47	.000	45	.000	40	.016	41	.000	44
MER	.014	46	.001	42	.000	45	.000	40	.001	49	.011	13
JBBM	.007	47	.000	47	.000	45	.002	25	.005	46	.000	44
JMTP	.004	48	.000	47	.000	45	.000	40	.003	47	.001	35
JNPSM	.003	49	.001	42	.000	45	.000	40	.002	48	.000	44

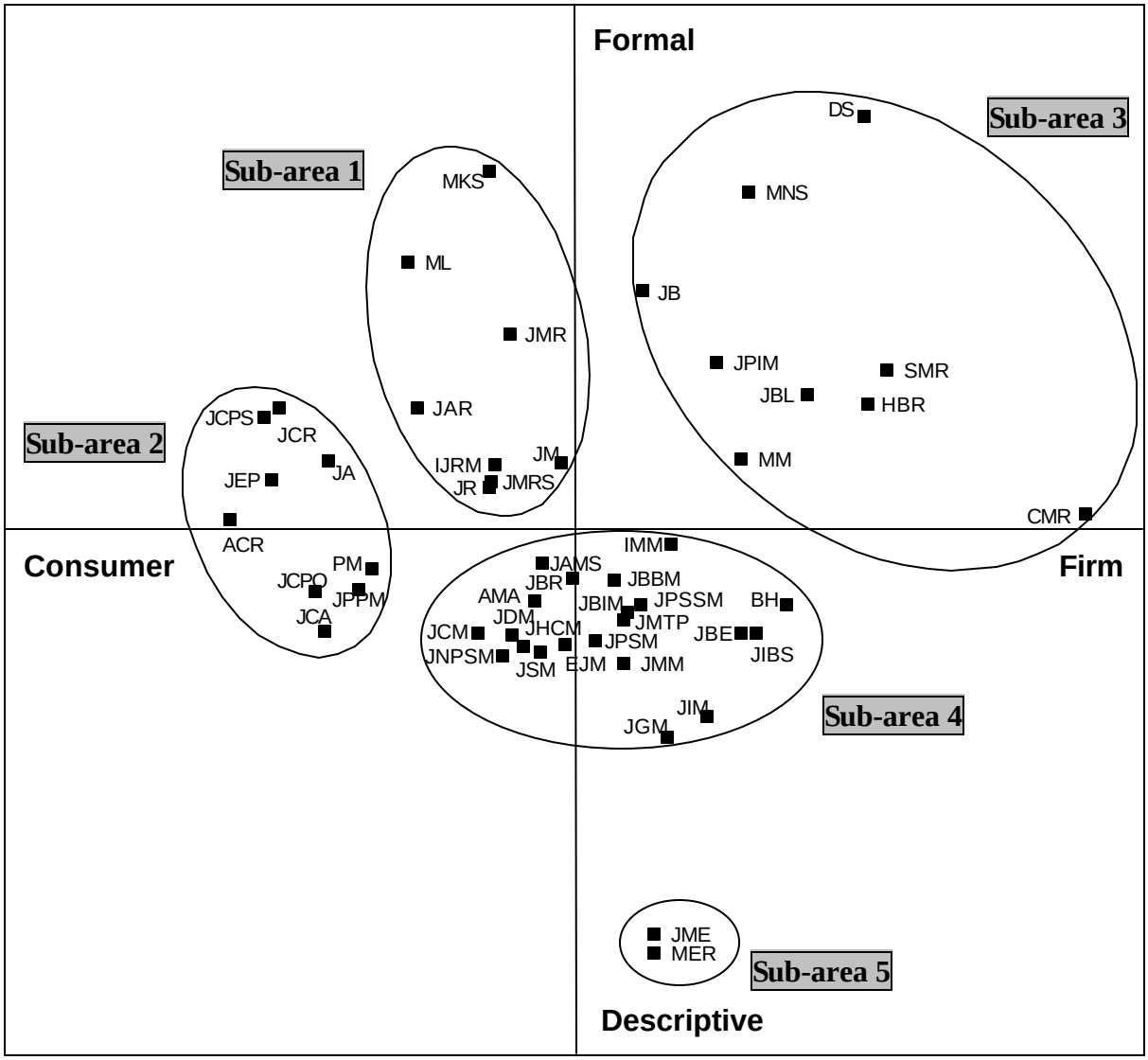
TABLE 5
CONVERGENCE BETWEEN OBJECTIVE AND SUBJECTIVE MEASURES OF JOURNAL INFLUENCE

Correlations of Measures of Journal Influence (Spearman)

	Salancik	IMPACT	PFI	IPI	SI
Salancik	1.00 (49)				
IMPACT	.54[b] (23)	1.00 (23)			
PFI	.80[a] (41)	.37 (20)	1.00 (41)		
IPI	.65[a] (41)	.57[b] (20)	.54[a] (41)	1.00 (41)	
SI	.74[a] (41)	.46[c] (20)	.91[a] (41)	.54[a] (41)	1.00 (41)

Note: *Salancik* is the structural influence index, *IMPACT* the average *ISI*-impact factor for 1996 and 1997, *PFI* and *IPI* are the measures used by Hult et al. (1997), *SI* is the subjective importance measure from Hult et al. (1997). Superscripts denote level of statistical significance: [a] $p<.001$, [b] $p<.01$, [c] $p<.05$. Numbers in parentheses are sample sizes.

FIGURE 1
SUB-AREAS IN MARKETING BASED ON JOURNAL CITATION PATTERNS



APPENDIX

The following log-multiplicative citation model was estimated:

$$\log F_{ij} = u + u_i^S + u_j^R + d_{ij} + \sum_{m=1}^{M} x_i^m y^m x_j^m \qquad (1)$$

F_{ij} denotes the expected number of citations from journal i to journal j and the u's are standard log-linear parameters. The u parameter is a constant, the u^S parameters control for differences between journals in the overall volume of citing other journals in the network, and the u^R parameters account for differences between journals in the overall volume of being cited by other journals in the network. The d_{ij} parameter represent the effects of self-citations in the diagonal of the citation matrix (i.e., $d_{ij} = 0$ for $i \neq j$ and free otherwise), and the last term is a symmetric log-multiplicative effect. Specifically, x_i^m and x_j^m are the scores of journals i and j on the mth dimension, and y^m is a scaling factor. Details are provided in Clogg and Shidadeh (1994), Goodman (1991) and Pieters et al. (1999).

Interpretation of the solution is similar to multidimensional scaling. The x_i scores of journals can be displayed in a spatial map and submitted to a cluster analysis program, and journals that have a similar score on a particular dimension of variation have strong mutual citation relationships for that dimension. Dimensions are interpreted based on knowledge of each journal's substantive area, theoretical perspective and methodological approach.

The citation model in equation (1) was estimated for 1 to 7 dimensions (M = 1 to 7) using routines written in the program *LEM* (Vermunt 1998). The following benchmark models were estimated: an independence or main-effects model (containing the first three terms in equation 1) and a model of modified independence accounting for self-citations (containing the first four terms in equation 1). Model selection was based on fit (Bayesian Information Criterion or *BIC*, percentage inertia accounted) and interpretability of the solution. The two-dimensional solution was selected. It fit the data well and yielded the most meaningful interpretation of the data. The two-dimensional solution decreased the L^2 statistic of the independence model by 79 percent and that of the modified independence model by 55 percent (*BIC*=-12479.40, L^2=9997.30 with 2159 degrees of freedom).