The Structural Influence of Marketing Journals: A Citation Analysis of the Discipline and Its Subareas Over Time

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Hans Baumgartner & Rik Pieters

The Structural Influence of Marketing Journals: A Citation Analysis of the Discipline and Its Subareas Over Time

The authors investigate the overall and subarea influence of a comprehensive set of marketing and marketing-related journals at three points in time during a 30-year period using a citation-based measure of structural influence. The results show that a few journals wield a disproportionate amount of influence in the marketing journal network as a whole and that influential journals tend to derive their influence from many different journals. Different journals are most influential in different subareas of marketing; general business and managerially oriented journals have lost influence, whereas more specialized marketing journals have gained in influence over time. The *Journal of Marketing* emerges as the most influential marketing journal in the final period (1996–97) and as the journal with the broadest span of influence across all subareas. Yet the *Journal of Marketing* is notably influential among applied marketing journals, which themselves are of lesser influence. The index of structural influence is significantly correlated with other objective and subjective measures of influence but least so with the impact factors reported in the *Social Sciences Citation Index*. Overall, the findings demonstrate the rapid maturation of the marketing discipline and the changing role of key journals in the process.

Journals have become the primary medium to communicate 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 before the 1960s, 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 topics such as advertising, brand management, consumer behavior, 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 and the proliferation of outlets in which research relevant to marketing is published make it increasingly important to gain insights into the relative influence of marketing-related journals (Doreian 1988; Garfield 1972; Kerin 1996; Singleton 1976). Journal influence affects many important decisions and is of interest to a variety of constituents (Borokhovich et al. 1995; Corrado and Ferris 1997; Fry, Walters, and Scheuermann 1985; Myers, Greyser, and Massy 1979; Tahai and Meyer 1999; Trieschmann et al. 2000). First, researchers, educators, practitioners, and other students of marketing, all with limited time budgets, need to know which journals are most likely to contain useful information based on content and quality criteria. Similarly, university and corporate libraries with limited financial budgets must decide which journals to subscribe to on the basis of patrons' interest in different publications and journals' contribution to scholarly discourse and practical impact. Second, authors seeking publishing opportunities want to know which journals are most apt 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 journals' influence in particular subareas or niches of the discipline. Third, 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 obtain research grants are closely tied to the number of publications in prestigious journals. Journal rankings are particularly important when a scholar's research is evaluated by people who are not specialists in the discipline and who thus must rely on a journal's reputation as a proxy for article and research quality. Fourth, 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. Fifth, journal editors want to know about the relative standing of their journals in the discipline and the effects of editorial policies on the journal's influence. The rapid growth of the journal

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market makes this information increasingly difficult to discern.

Studying the structure of influence in a discipline, both cross-sectionally and longitudinally, is also important because it provides valuable insights into the development and current status of a discipline (Franke, Edlund, and Oster 1990; Lukka and Kasanen 1996; Zinkhan, Roth, and Saxton 1992). Such an analysis shows which journals contribute significantly to the exchange of ideas in a field of inquiry and how concentrated or dispersed the diffusion of knowledge is. It also indicates whether there are important differences in the influence of journals in various subareas of the discipline and how journal influence has evolved over time.

Unfortunately, at present little is known about the relative influence of the huge volume of journals that contain marketing-related research. Most published work is relatively old or has examined a restricted set of journals, often in narrowly defined areas (for an exception, see Hult, Neese, and Bashaw 1997, which we describe subsequently). In addition, there are alternative measurement approaches and specific indices of journal influence, all with their own strengths and weaknesses, and it is not obvious which influence measure is most appropriate. Moreover, no study in the marketing discipline has systematically examined the evolution of journal influence over time, either overall or in specific subareas of marketing. This has led to conflicting assessments of the development of journal influence over time. For example, some time ago Grether (1976) surmised that the establishment of specialized journals with distinctive positioning and homogeneous constituencies, such as the *Journal of Consumer Research*, might reduce the influence of broader journals such as the *Journal of Marketing*. 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." In contrast, Kerin (1996) argued that the reputation of the *Journal of Marketing* among marketing academicians had grown over the years and that it was one of the premier repositories of marketing literature. Yet the important questions whether and how the influence of specific journals in marketing has changed over time have not been investigated empirically.

To address these gaps in the literature, we rely on citation analysis to investigate the structure of influence in a comprehensive set of marketing and marketing-related journals over time. We assess the influence of each journal in the marketing discipline as a whole and in five specific subareas of the marketing discipline, and we ascertain how concentrated or dispersed each journal's influence is. To track journal influence over time, we consider citation exchanges among 11 journals in 1966–67, 25 journals in 1981–82, and 49 journals in 1996–97. We use the index of structural influence proposed by Salancik (1986) to assess journal influence, which is based on a substantive theory of influence, has desirable properties, and has rarely been used in marketing. To illustrate its validity, we compare the index with previously published objective and subjective measures of journal influence in marketing.

Our research aims to make several contributions to the marketing literature. First, it is the only study to provide a comprehensive ranking of the influence of marketing journals based on objective, citation-based data. Of the 49 journals for which we collected citation data for the final time period, 26 are not contained in the *Social Sciences Citation Index (SSCI),* 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 journals are in the marketing discipline as a whole but also how narrow or broad their influence is and how influential they are in specific subareas of marketing. This provides new insights into the role that journals play in the creation and dissemination of knowledge in the marketing discipline and indicates whether a journal is a generalist or a niche player. Fourth, the analysis during a 30-year time period establishes which journals have gained or lost influence and how the marketing discipline has matured.

In the next section, we describe the strengths and weaknesses of objective and subjective measures of journal influence. Next, we introduce the measure of structural influence and compare it with other citation-based measures of journal influence. Then, we present the methodology and findings of our study.

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 previous 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 works of this approach in marketing are Browne and Becker (1979, 1985, 1991), Coe and Weinstock (1983), Fry, Walters, and Scheuermann (1985), Gordon and Heischmidt (1992), Hult, Neese, and Bashaw (1997), and Luke and Doke (1987). In the most recent study of this kind, Hult, Neese, and Bashaw (1997) surveyed 309 marketing faculty members (assistant, associate, and full professors) and asked them to indicate their top-10 most important journals from a list of 63 marketing-related journals. Respondents could also add to the list if a journal was not listed. The results show 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*. Hult, Neese, and Bashaw (1997) also computed separate rankings for American Association of Collegiate Schools of Business (AACSB)–accredited and non–AACSB-accredited, as well as doctorate-granting and non–doctorate-granting, institutions. Although the overall correlation among the different rankings was quite high, some 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 the 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 nonresponse 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 have published or for which they review, and they may overstate the role of journals in their own area of expertise. In addition, informants may not be familiar with all the journals 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, which promotes 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 based mostly on citation counts. The basic idea is that influential journals are 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 citations received to citations made (Doreian 1988). Representative studies in marketing using this approach are Leong (1989), Pieters and colleagues (1999), and Zinkhan, Roth, and Saxton (1992).

Citation-based methods of assessing journal influence also have several limitations (see Brown and Gardner 1985; Pierce 1990). One important issue is that articles may be cited for a variety of reasons, not all of which reflect 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) reviews seven studies that examine the functions that citations serve on the basis of 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. The various functions of references reflect the differential influence of the cited document, and some references, for example, perfunctory mention (Kotler 1972), may not be good indicators of influence. Perfunctory mentions were found to account for, on average, 20% to 60% 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.

Although these limitations are important, citation-based measures appear less prone to systematic biases than subjective measures and are more readily available. Thus, they are becoming the preferred measures of journal influence in many disciplines (e.g., Doreian 1988; Johnson and Podsakoff 1994; Laband and Piette 1994; Pieters and Baumgartner 2002). 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 one another's articles form a social network in which knowledge is the valued resource and references are the medium of exchange. On the basis of theories of organizational influence, Salancik (1986) formulates 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 that 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 does the dependence of less influential members. In other words, a citation from a journal that is 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 indirectly exerts 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 receive credit for its indirect influence on A through B, even though it may not influence A directly.

On the basis of work by Katz (1953) and Hubbell (1965), Salancik (1986) proposes 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. The influence of the three journals can be expressed in matrix notation, as follows:

$$(1)\quad \begin{bmatrix} \text{Influence}_A \\ \text{Influence}_B \\ \text{Influence}_C \end{bmatrix} = \begin{bmatrix} 0 & \text{Dependence}_{AB} & \text{Dependence}_{AC} \\ \text{Dependence}_{BA} & 0 & \text{Dependence}_{BC} \\ \text{Dependence}_{CA} & \text{Dependence}_{CB} & 0 \end{bmatrix} \times \begin{bmatrix} \text{Influence}_A \\ \text{Influence}_B \\ \text{Influence}_C \end{bmatrix} + \begin{bmatrix} \text{Intrinsic}_A \\ \text{Intrinsic}_B \\ \text{Intrinsic}_C \end{bmatrix}.$$

Thus, the influence of Journal A (Influence_A) is the sum of (1) the dependency of Journal B on Journal A (Dependence_{AB}) weighted by the influence of Journal B (Influence_B), (2) the dependency of Journal C on Journal A (Dependence_{AC}) weighted by the influence of Journal C (Influence_C), and (3) the intrinsic influence of Journal A (Intrinsic_A). 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 Dependence_{AB} is .1.

The general solution to the system of simultaneous linear equations in Equation 1 is given by

$$(2)\quad \text{Influence} = [I - D]^{-1}\ \text{Intrinsic}.$$

Influence 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 Intrinsic is a vector containing the intrinsic influences of each journal. The intrinsic influences are usually fixed at 1 for computational purposes (Salancik 1986). Then, the minimum influence of any journal is 1, but the index has no upper bound (in practice, the influence scores are much smaller than the number of journals).

The index of structural influence is based on dependencies (requirement 1). Because the dependencies are weighted by the dependent journal's influence, citations are not treated equally in calculating this index (requirement 2). Furthermore, by solving the system of equations in Equation 1 algebraically, we can show 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 of allowing an analysis of the influence of journals in the discipline as a whole, as well as in specific subareas. 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 subareas of marketing have a broader influence base than do journals that exert their influence in one or a few subareas. To analyze journals' span of influence, we partition the total set of journals into nonoverlapping subareas, and we calculate separate influence scores for each subarea, as follows:

$$(3)\quad \text{Influence}_{Sub} = [I - D]^{-1}\ DM,$$

where Influence_{Sub} is an $N \times K$ matrix of subarea influence scores (K is the number of subareas), 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 subareas. The sum of a journal's influence scores in each of the K subareas yields the journal's total influence in the network minus 1 (its intrinsic influence). In the empirical section, we specify how subareas in marketing are identified in this study.

Comparing Citation-Based Measures of Journal Influence

The most popular citation-based measure of journal influence is the impact factor reported in the *SSCI* (e.g., 1997 Social Sciences Citation Index 1998). The *SSCI* impact factor measures the number of citations received by the average article in a journal two years after publication. A journal's impact factor in year t is the number of times articles published in the journal during (t – 1) and (t – 2) were cited during t by other journals included in the *SSCI*, 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 *SSCI* impact factors in several ways.

First, structural influence takes into account citations received by all the articles published in a journal, not only articles published during the previous two years. Therefore, the index of structural influence captures total journal influence, whereas impact factors capture recent influence.

Second, the index of structural influence measures overall journal influence, whereas the impact factors assess the influence of the average article in a journal (see Harter and Nisonger 1997). Thus, 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 number of citations sent to another journal as a proportion of the total number of citations made. The impact factors are based on the raw number of citations made. That is, of two journals that receive the same number of citations from other journals, one is more influential than the other if it receives a higher proportion of the citations made by the citing journals.

Fourth, the structural influence 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 of a journal's 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, which is an undesirable factor if the objective is to establish the influence of a journal in a network.

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 among more than 1500 journals covered by the *SSCI*, whereas the citation network considered in this study consists of only 49 marketing-related journals. Although this appears to be a limitation, most of the journals listed in the *SSCI* are not relevant to marketing, and many journals that are members of the marketing network are not included in the *SSCI*. Specifically, 26 of the 49 journals studied in this article 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 seems more relevant than the journal network on which the impact factors are based.

Although our discussion indicates important conceptual differences between the structural influence index and impact factors and between objective and subjective influence measures, the important question is whether it really matters how journal influence is measured. Research in a related field shows that it does. Johnson and Podsakoff (1994) compare the structural influence index with various objective and subjective influence measures for a large set of journals in management. They find that the *SSCI* impact factors correlated quite poorly with other objective influence measures, including the structural influence index. Furthermore, the structural influence index correlated more highly with the subjective influence measures than with the *SSCI* impact factors.

In summary, the index of structural influence captures the total weighted influence of a journal in a specific network of journals, whereas *SSCI* impact factors capture the recent, direct influence of the average article published, including self-citations. Therefore, and in view of Johnson and Podsakoff's (1994) results, we chose the index of structural influence as a starting point for our research on journal influence in marketing. We use the index to document journal influence in the marketing discipline as a whole, as well as in specific subareas of marketing, and examine journal influence over time. To identify the subareas in marketing, we build on recent developments in citation research (e.g., Pieters and Baumgartner 2002), as explained subsequently. In addition, we assess the correspondence among the structural influence index, impact factors, and a recently reported subjective measure of journal influence to provide evidence of the degree of convergence among alternative influence measures.

Method

To document journal influence in the discipline across a 30-year period, a total of 49 marketing-related journals were included in the citation analysis. Citation exchanges among each of the 49 journals were collected for the period 1996–97. Of the 49 journals, only 11 existed in 1966–67 and 25 in 1981–82. For these, we collected citations for the earlier time periods.

The journal selection procedure was as follows: In the first stage, the top-40 marketing journals from the study by Hult, Neese, and Bashaw (1997) were sampled. As mentioned previously, these authors conducted a survey of 309 marketing faculty members who were asked to name their top 10 journals. Respondents were provided with a list of 63 journals, which were selected on the basis of frequency of citations in the marketing literature, appearance in previous marketing journal hierarchies, popularity, and readership. Respondents could also include journals that were not on the list. Because 2 journals were tied for 40th place in Hult, Neese, and Bashaw's study, we included 41 journals in our sample. 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 Hult, Neese, and Bashaw's article and were listed in the *SSCI* (*Journal of Consumer Affairs*, *Journal of Economic Psychology*, *Journal of the Market Research Society*). Second, Hult, Neese, and Bashaw 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 included in the citation study by Zinkhan, Roth, and Saxton (1992). Following this procedure, the final list contained 49 marketing and marketing-related journals. The final list includes some bibliometric sources that are not journals in the narrow sense, such as the proceedings of the American Marketing Association and *Advances in Consumer Research*. They were included in keeping with previous research in marketing (Hult, Neese, and Bashaw 1997; Phillips, Baumgartner, and Pieters 1999; Zinkhan, Roth, and Saxton 1992) and because they are published periodically, which the *SSCI* honors by including them in its list of periodicals.

To avoid instability of citation patterns due to short-term fluctuations, data were collected and summed across two years (1996–97, 1981–82, 1966–67). 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 for 1996–97. 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 the articles cited the 49 journals in the sample. A similar procedure was used for the earlier time periods. Our findings are based on the 42,023 citations that the sampled journals made to one another in the three time periods we study.

Findings

The presentation of the findings proceeds as follows: First, we provide an initial description of citation patterns during the three time periods. Second, we calculate the index of structural influence to establish the overall level of journal influence in each of the three time periods. Third, we identify five subareas in marketing on the basis of the citation patterns, and we investigate the influence of journals within each subarea. Fourth and finally, we examine the convergence of citation-based and subjective measures of journal influence and assess their association with two correlates of journal influence (the journal's age and the number of articles published per year).

Frequency of Citing and Being Cited

Table 1 reports descriptive statistics about the frequency of citations that the journals in the network made and received in each of the three two-year periods within the network of journals. The number of citations made and received has increased steadily over time. In 1966–67, the average per journal was 117; in 1981–82, it was 301; and in 1996–97, it was 678.

The number of citations received from other journals (including self-citations) provides a rough measure of how important a journal is in the network. *Management Science*, *Harvard Business Review*, and *Journal of Marketing* received the greatest number of citations in the first period. The *Journal of Marketing Research*, *Journal of Marketing*, and *Journal of Consumer Research* received the most citations in the second period. The *Journal of Marketing* was by far the most popular recipient of citations in the third period, followed by the *Journal of Marketing Research* and the *Journal of Consumer Research*.

Overall Influence of Marketing Journals Over Time

Table 2 reports the influence of journals for those time periods during which they were in existence. We emphasize journal influence shares (i.e., relative influence) rather than absolute journal influence scores to facilitate interpretation of the results and to make comparisons over time meaningful.[1] To determine the influence shares, the intrinsic importance of each journal (which equals 1) was subtracted from the structural influence index (so that it has a minimum value of 0), and these influence scores were divided by the sum of the influence scores across journals in a particular time period, then multiplied by 100. The resulting index shows the percentage of the total influence in the network accounted for by a journal in each time period during which the journal existed. The rank of a journal's influence share in a time period is also reported for ease of interpretation.

[1]Increases in the size of the network (period 1 = 1285 citations; period 2 = 7525; period 3 = 33,213) and the average number of citations made and received require relative rather than absolute influence scores when influence over time is compared. This is consistent with the notion that status is a positional construct (Katz 1953).

During the first time period (1966–67), the *Harvard Business Review* was the most influential journal, accounting for 27% of the total influence available in the network. Other influential members were the *Journal of Marketing*, *Journal of Marketing Research*, *Management Science*, and, to a somewhat lesser degree, the *Journal of Advertising Research* and *Journal of Business*.

During the second period (1981–82), the *Journal of Marketing Research* was the most influential journal, accounting for 28% of the total influence. Other influential journals were the *Journal of Marketing*, *Journal of Consumer Research*, *Harvard Business Review*, *Advances in Consumer Research*, *Management Science*, and *Journal of Advertising Research*.

During the third period (1996–97), the *Journal of Marketing* was the most influential journal, followed by the *Journal of Marketing Research* and the *Journal of Consumer Research*. Other influential journals were *Harvard Business Review*, *Management Science*, *Advances in Consumer Research*, *Marketing Science*, *Journal of the Academy of Marketing Science*, *Journal of Retailing*, and *Industrial Marketing Management*. Figure 1 depicts the evolution of influence shares over time for the ten journals that had the highest influence share in the third time period.

We can draw several conclusions from Table 2 and Figure 1. First, the overall ranking of journals in terms of influence shows remarkable stability over time. The Spearman rank–order correlation between the 1966–67 influence scores of the 11 journals that were already in existence during that time period and the influence scores of these same journals in 1981–82 and 1996–97 is .89 and .81, respectively; the corresponding correlation between the 1981–82 and 1996–97 scores is .90. In particular, the journals that were most influential in 1966–67 were also among the most influential journals in 1981–82 and 1996–97.

Second, despite this overall stability, some journals substantially lost or gained influence. Although the *Journal of Consumer Research* and *Marketing Science* are relatively young journals, they quickly acquired an influential position in the field. In contrast, journals such as the *Harvard Business Review*, *Journal of Business*, and *Management Science*, as well as *Advances in Consumer Research* and *Journal of Advertising Research*, suffered considerable influence loss over time. The influence of the *Journal of Marketing Research* has fluctuated noticeably across the three periods; its share of influence more than doubled from 1966–67 to 1981–82, but then it almost dropped to its 1966–67 level in 1996–97. The influence share of the *Journal of Marketing* has held steady at approximately 19% across the 30-year period. This finding is inconsistent with the claims of some authors that the establishment of increasingly specialized journals has eroded the influence of general interest marketing journals. Rather, it demonstrates the maturation of the discipline, with several general business journals losing influence, more specialized marketing journals gaining influence, and a general interest marketing journal such as the *Journal of Marketing* maintaining a dominant position.

Third, influence in this network of marketing and marketing-related journals is very concentrated. Whereas the number of journals more than quadrupled over the time

TABLE 1
Descriptive Citation Statistics for Each Journal

	1966–67		1981–82		1996–97	
	Citations Sent to Other Journals	Citations Received from Other Journals	Citations Sent to Other Journals	Citations Received from Other Journals	Citations Sent to Other Journals	Citations Received from Other Journals
ACR	—	—	1237	664	1625	1108
AMA	—	—	—	—	1611	163
BH	65	19	99	74	288	333
CMR	55	25	130	40	156	378
DS	—	—	39	26	113	117
EJM	—	—	130	20	1492	540
HBR	129	266	288	704	3	1765
IJRM	—	—	—	—	1092	258
IMM	—	—	20	46	1302	1029
JA	—	—	55	63	517	486
JAMS	—	—	371	18	1232	932
JAR	93	129	360	417	487	809
JB	89	108	84	248	74	184
JBBM	—	—	—	—	399	18
JBE	—	—	—	—	1583	1146
JBIM	—	—	—	—	837	110
JBL	—	—	33	3	415	248
JBR	—	—	387	37	1954	723
JCA	—	—	103	63	225	142
JCM	—	—	—	—	431	114
JCPO	—	—	6	0	138	102
JCPS	—	—	—	—	470	78
JCR	—	—	830	899	598	4119
JDM	—	—	—	—	360	185
JEP	—	—	—	—	304	196
JGM	—	—	—	—	620	59
JHCM	—	—	—	—	209	173
JIBS	—	—	103	41	662	910
JIM	—	—	—	—	352	50
JM	66	198	765	1036	1470	6043
JME	—	—	57	8	213	251
JMM	—	—	—	—	1249	192
JMR	157	124	974	2000	1292	4461
JMRS	24	0	81	41	239	128
JMTP	—	—	—	—	1145	17
JNPSM	—	—	—	—	337	14
JPIM	—	—	—	—	812	656
JPPM	—	—	—	—	579	324
JPSM	—	—	—	—	355	64
JPSSM	—	—	154	4	821	527
JR	37	27	326	276	766	895
JSM	—	—	—	—	699	135
MER	—	—	—	—	290	65
MKS	—	—	—	—	379	857
ML	—	—	—	—	648	148
MM	—	—	—	—	47	110
MNS	533	386	825	756	830	1208
PM	—	—	—	—	1237	169
SMR	37	3	68	41	256	474

Notes: Numbers include self-citations. Journal abbreviations are shown at the bottom of Figure 2.

period studied (from 11 in 1966–67 to 25 in 1981–82 to 49 in 1996–97), a small set of journals accounts for a disproportionate share of total influence and received most of the citations in the network. In contrast, many of the secondary journals exert no significant structural influence on other network members. For example, during the first time period, the first four journals accounted for 74% of the total influence and the first six for 94%. During the second period, the first four journals accounted for 70% of the total influence and the first six for 82%. During the third period, the first four journals accounted for 56% of the total influence and the first six for 63%. The concentration of influence has

TABLE 2
Journal Influence During Three Time Periods

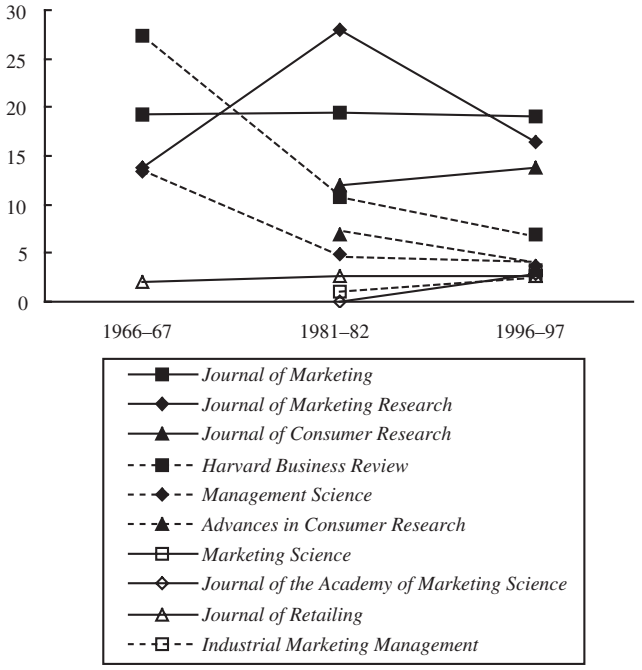
	1966–67		1981–82		1996–97	
	Share (%)	Rank	Share (%)	Rank	Share (%)	Rank
ACR	—	—	6.9	5	3.5	6
AMA	—	—	—	—	.5	27
BH	1.7	9	1.7	11	.8	20
CMR	2.4	7	.7	15	1.0	19
DS	—	—	.2	18	.3	37
EJM	—	—	.2	17	1.5	17
HBR	27.4	1	10.7	4	6.9	4
IJRM	—	—	—	—	.8	22
IMM	—	—	1.0	12	2.6	10
JA	—	—	.9	13	1.5	15
JAMS	—	—	.1	21	2.9	8
JAR	11.7	5	4.7	7	2.5	11
JB	8.2	6	2.5	9	.6	26
JBBM	—	—	—	—	.0	47
JBE	—	—	—	—	.7	23
JBIM	—	—	—	—	.2	39
JBL	—	—	.1	20	.1	44
JBR	—	—	.4	16	2.2	12
JCA	—	—	2.1	10	.4	30
JCM	—	—	—	—	.3	35
JCPO	—	—	.0	22	.1	43
JCPS	—	—	—	—	.2	40
JCR	—	—	12.0	3	13.7	3
JDM	—	—	—	—	.3	36
JEP	—	—	—	—	.4	32
JGM	—	—	—	—	.1	45
JHCM	—	—	—	—	.3	33
JIBS	—	—	.0	22	1.9	13
JIM	—	—	—	—	.2	42
JM	19.2	2	19.4	2	19.1	1
JME	—	—	.0	22	.6	24
JMM	—	—	—	—	.3	34
JMR	13.8	3	27.9	1	16.4	2
JMRS	.0	11	.2	18	.3	38
JMTP	—	—	—	—	.0	48
JNPSM	—	—	—	—	.0	49
JPIM	—	—	—	—	1.5	16
JPPM	—	—	—	—	.8	21
JPSM	—	—	—	—	.2	41
JPSSM	—	—	.0	22	1.4	18
JR	2.1	8	2.6	8	2.6	9
JSM	—	—	—	—	.4	31
MER	—	—	—	—	.1	46
MKS	—	—	—	—	3.3	7
ML	—	—	—	—	.6	25
MM	—	—	—	—	.4	28
MNS	13.4	4	4.9	6	3.6	5
PM	—	—	—	—	.4	29
SMR	.2	10	.8	14	1.8	14
Total influence	1.151		4.690		15.141	

Notes: Journal abbreviations are shown at the bottom of Figure 2.

remained rather high despite the dramatic increase in journal volume.

One question that arises is whether a journal's total influence depends on the number of journals from which it receives citations. We call this the *span of influence* of a journal. A journal's influence is narrow if relatively few journals are dependent on it; it is broad if many other journals are dependent on it. Specialized journals have a narrow span of influence, and general interest journals have a broad span. The matrix term $[I - D]^{-1}$ in Equation 2 indicates how much influence each journal in the network derives from other journals. It is thus possible to compute the share of a journal's influence obtained from other network members and investigate the breadth of its influence. A convenient

FIGURE 1
Influence Shares of the Top Ten Journals in 1996–97 for Three Time Periods



overall measure of a journal's span of influence can be defined with the Herfindahl index as proposed in economics (for a recent application in a related context, see Tellis, Chandy, and Ackerman 1999). The Herfindahl index is calculated as $H_i = \Sigma_j \alpha_{ij}^2$, where α_{ij} $(i \neq j)$ is the percentage share of journal i's total influence derived from journal j. Thus, the index ranges from 0 to 1. We define influence span as $1 - H_i$, so values close to 0 indicate narrow influence, and values close to 1 indicate broad influence.

The span of influence of each journal was calculated and correlated with its influence level. Although in principle the level and span of a journal's influence need not be highly correlated (i.e., specialized, narrow journals could have a high or low level of influence, as could general interest, broad journals), we find that there is a strong relationship between the two variables. The rank–order correlation between the level and span of influence in each of the three periods is .90 (n = 11, $p < .05$), .89 (n = 25, $p < .0001$), and .87 (n = 49, $p < .0001$), respectively. In other words, influential marketing journals tend to have a broad span of influence (i.e., derive their influence from many different journals), and specialized journals tend not to be very influential in marketing.

The journals with the broadest span of influence were the *Harvard Business Review*, *Journal of Marketing*, and *Journal of Business* in 1966–67 and the *Journal of Marketing*, *Journal of Marketing Research*, and *Harvard Business Review* in 1981–82 and 1996–97. Only a few journals show a marked deviation from the general pattern that level and span are strongly related, such that their level of influence is higher than would be expected from their span of influence (e.g., the *Journal of Consumer Affairs* in the second period and the *Journal of International Business Studies*, *Journal of Marketing Education*, and *Industrial Marketing Management* in the third period). However, in absolute terms, the influence of these journals is relatively small.[2]

Journal Influence in Subareas of Marketing

So far, the analysis of journal influence has dealt with the marketing discipline as a whole, represented by the 49 journals. Perhaps the influence of some journals differs systematically across various subareas in the marketing discipline. Such journals may be influential in one area but less influential in others. An overall analysis of the span of influence is an important first step, but only an analysis of subarea influence can show in which areas narrow journals exert most of their influence. To establish journal influence in subareas of marketing, the subareas must be established first. Then, influence scores can be calculated for each of the subareas.

Subareas of the marketing discipline. Following previous work in citation analysis (e.g., Pieters and Baumgartner 2002; Pieters et al. 1999), we identified subareas in marketing on the basis of 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 example, a journal that covers advertising is likely to cite journals that deal with advertising issues relatively frequently and journals devoted to, say, marketing education less frequently. Likewise, a marketing education journal will cite other marketing education journals more frequently than it cites advertising journals. Which subareas in marketing actually emerge depends on the extent to which specific journals cite one another.

To identify subareas in marketing on the basis of journal citation patterns, we estimated the log-multiplicative model recently proposed by Pieters and colleagues (1999) for citation analysis, which is based on the work of Goodman (1991) and other researchers in sociology (Clogg and Shihadeh 1994). The model, described in the Appendix, represents the journals in a low-dimensional space similar to multidimensional scaling and can be used to identify groups of journals with strong mutual citation relationships. Although we estimated a log-multiplicative model for each of the three two-year periods, meaningful subareas of marketing emerged only for the time period 1996–97. In the first

[2]In the current application, structural influence is highly correlated with the number of citations received (Spearman rank–order correlations of .92, .95, and .94 for periods 1 to 3), but for other disciplines and networks, this need not be the case. There are several reasons for this substantive finding. First, because influence is extremely concentrated in marketing (a few journals account for most of the influence, and the remaining journals vary relatively little in influence), weighting citations by influence has little effect. Second, even direct dependencies are relatively small in this journal network, so indirect dependencies (which are based on the products of direct dependencies) contribute little. Third, the high correlation between level and span of influence in marketing means that journals that are cited by many other journals have a large influence as well.

period, which included only 11 journals, the one-dimensional solution had a more parsimonious fit than the two-dimensional solution, and in the second period, it was difficult to identify discrete clusters of journals, even though the two-dimensional solution yielded an acceptable fit and was similar to the solution for the final period.[3] The two-dimensional solution for the third period, which was optimal, is shown in Figure 2. Journals that are close together in Figure 2 entertain strong mutual citation relationships, and journals that are distant entertain weak or no mutual citation relationships.

The two dimensions in the citation map are readily interpretable. The horizontal dimension distinguishes journals with a managerial orientation (right) from those with a consumer orientation (left). On the right-hand side of the map are journals with a managerial perspective, such as *California Management Review*, *Sloan Management Review*, and *Harvard Business Review*. On the left-hand side of the map are consumer journals (and journal-like publications) such as *Advances in Consumer Research*, *Journal of Consumer Psychology*, and *Journal of Consumer Research*. In the middle of the citation plot, where the firm meets the consumer, 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, quantitative, or more theoretical orientation (top) from journals with an application, qualitative, or more descriptive orientation (bottom). At the top are modeling-oriented and methodological journals such as *Decision Sciences*, *Marketing Science*, and *Management Science*. At the bottom are application-oriented, descriptive journals such as *Journal of Marketing Education*, *Journal of Global 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 subareas in marketing.[4] In Figure 2, we have drawn ellipses around the subareas.

Subarea 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*, and *International Journal of Research in Marketing* and several more quantitative marketing journals, such as *Marketing Science*, *Journal of Marketing Research*, and *Marketing Letters*.

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

Subarea 3 consists of the managerial marketing 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 that cover marketing issues, such as *Management Science*, *Journal of Business*, and *Journal of Product Innovation Management*.

Subarea 4 consists of journals oriented toward marketing applications (n = 21). Included in this subarea 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 have less influence. Their location in the middle to lower part of the citation map indicates that they cover general interest marketing issues with a focus on application.

Finally, subarea 5 consists of the two journals specializing in marketing education issues, the *Journal of Marketing Education* and *Marketing Education Review*.

Subarea influence analysis. We can now determine how the influence of journals varies by subareas in marketing using Equation 3. The subarea influence shares and ranks of journals are shown in Table 3.

Several findings stand out. Note that in each of the five subareas in marketing, a different journal attains the top influence rank. 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. However, the *Journal of Marketing* and *Journal of Marketing Research* have particularly broad spans of influence, attaining a top-five position in each of the subareas.

Also note that influence is concentrated most heavily in the consumer behavior area, in which the *Journal of Consumer Research* itself accounts for 32% of the total influence. The *Harvard Business Review* is almost as dominant in the managerial marketing area (29%).

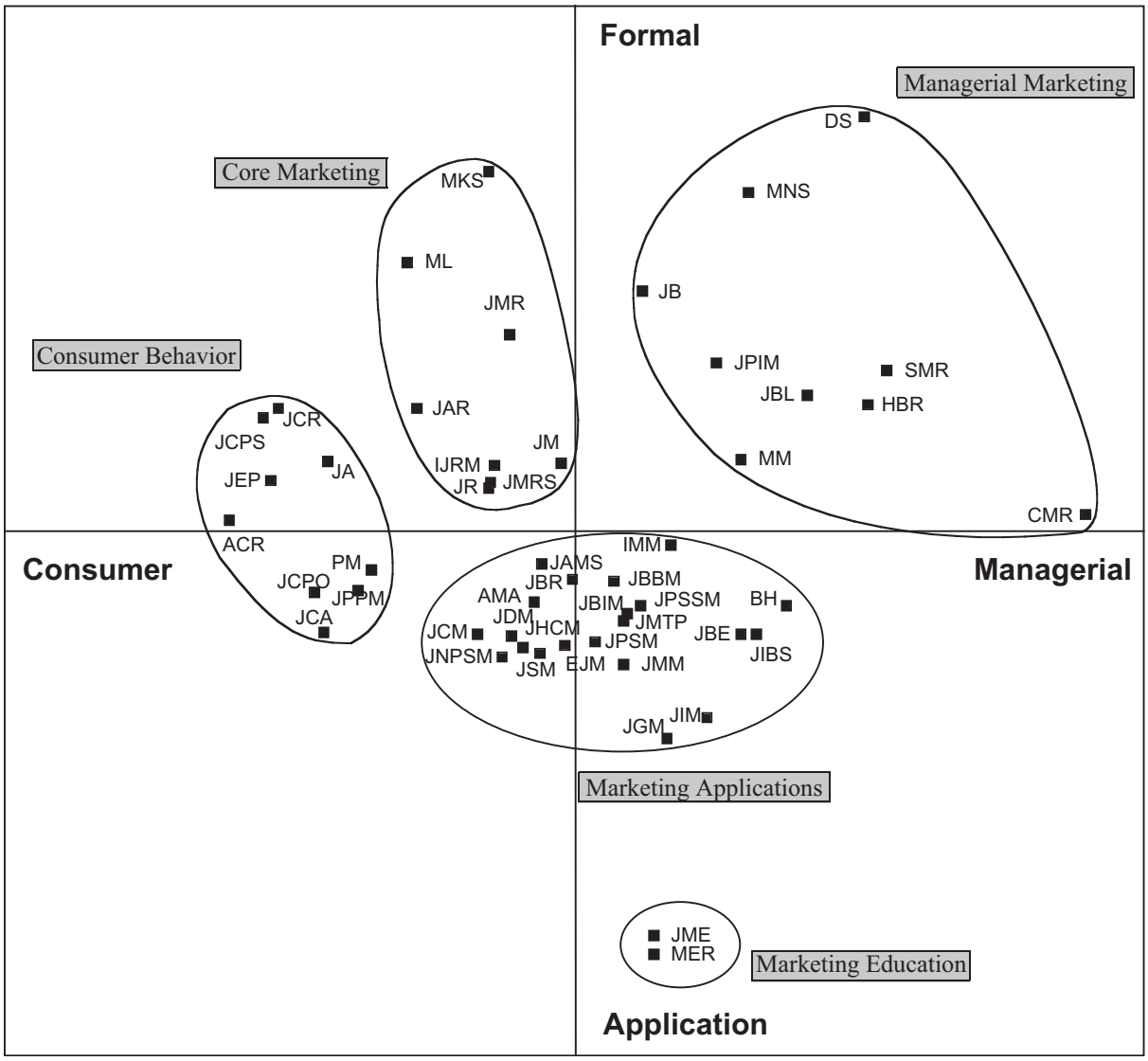
The *Journal of Marketing Research* is the most influential journal in the subgroup of core marketing journals (23%), followed by the *Journal of Consumer Research* and the *Journal of Marketing*. *Marketing Science* is fourth, and *Management Science* is fifth in this cluster. The journals that are typically considered "A journals" in research-oriented universities are ranked as the top-five influential journals in the core marketing subarea. Together, these five journals account for 69% of the total influence in this area.

The *Journal of Marketing* is the dominant journal in the marketing application area (23%). Other influential journals in this area are the *Journal of Marketing Research*, *Journal of Consumer Research*, *Harvard Business Review*, and *Jour-*

[3]A Procrustes analysis (Peay 1988), which assesses how well two sets of solutions coincide, between the dimension coefficients for the common journals in 1981–82 and 1996–97 accounted for 92% of the variance (n = 25, $p < .001$).

[4]Visual inspection of the dendrogram clearly indicates five clusters, the R^2 of .78 is acceptable, and interpretation of the five clusters is straightforward. To validate the solution, we calculated citation exchanges among journals both within and between clusters. Journals that belong to the same cluster on average cite one another four times more frequently than they cite journals that belong to a different cluster. The only exception occurs for the applied marketing journals, which form a relatively diffuse cluster of journals dealing with specific marketing topics.

FIGURE 2
Subareas in Marketing Based on Journal Citation Patterns



Notes: *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; IJRM - International Journal of Research in Marketing; IMM - Industrial Marketing Management; JA - Journal of Advertising; JAMS - Journal of the Academy of Marketing Science; JAR - Journal of Advertising Research; JB - Journal of Business; JBBM - Journal of Business to Business Marketing; JBE - Journal of Business Ethics; JBIM - Journal of Business and Industrial Marketing; JBL - Journal of Business Logistics; JBR - Journal of Business Research; 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; JMRS - Journal of the Market Research Society; JMTP - Journal of Marketing Theory and Practice; JNPSM - Journal of Nonprofit and Public Sector Marketing; JPIM - Journal of Product Innovation Management; JPPM - Journal of Public Policy and Marketing; JPSM - Journal of Professional Services Marketing; JPSSM - Journal of Personal Selling and Sales Management; JR - Journal of Retailing; JSM - Journal of Services Marketing; MER - Marketing Education Review; MKS - Marketing Science; ML - Marketing Letters; MM - Marketing Management; MNS - Management Science; PM - Psychology and Marketing; SMR - Sloan Management Review.*

nal of the Academy of Marketing Science. These five journals account for 58% of the total influence.

Now that we have described the evolution of influence in the disciple as a whole and identified specific subareas in marketing, we can analyze how the subareas have changed over time. Despite the small numbers of journals in the first two periods, which calls for caution in interpreting the findings, some fascinating trends can be discerned. First, the largest growth in journals during the 30-year period has taken place in the marketing applications subarea. This subarea went from a single representative in 1966–67 (*Business Horizons*) to 21 journals in 1996–97 and became the largest

TABLE 3
Journal Influence: Overall and by Subarea (1996–97)

	Overall Influence		Subarea 1: Core Marketing		Subarea 2: Consumer Behavior		Subarea 3: Managerial Marketing		Subarea 4: Marketing Applications		Subarea 5: Marketing Education	
	Share (%)	Rank	Share (%)	Rank	Share (%)	Rank	Share (%)	Rank	Share (%)	Rank	Share (%)	Rank
JM	19.1	1	15.3	3	14.5	3	15.1	2	22.8	1	12.0	2
JMR	16.4	2	23.2	1	16.5	2	10.8	4	15.1	2	6.9	3
JCR	13.7	3	16.2	2	32.0	1	4.2	6	9.1	3	4.6	6
HBR	6.9	4	3.7	6	1.6	11	28.5	1	6.7	4	6.1	4
MNS	3.6	5	5.9	5	1.5	12	11.6	3	2.4	11	1.3	19
ACR	3.5	6	3.0	9	8.3	4	.4	22	2.8	10	.8	25
MKS	3.3	7	7.9	4	2.5	6	2.6	9	2.1	13	1.3	19
JAMS	2.9	8	1.6	13	1.3	13	.7	15	4.0	5	5.9	5
JR	2.6	9	2.3	10	2.0	7	1.0	13	3.2	7	1.0	22
IMM	2.6	10	.8	18	.3	24	3.0	7	3.8	6	4.3	8
JAR	2.5	11	3.4	7	4.6	5	.5	18	1.9	15	.8	25
JBR	2.2	12	1.7	12	1.6	11	.2	25	2.8	9	2.0	15
JIBS	1.9	13	3.0	27	.5	21	.7	15	2.9	8	4.1	10
SMR	1.8	14	1.0	17	.3	29	9.1	5	1.5	17	2.0	15
JA	1.5	15	3.0	8	1.9	9	.2	25	1.1	20	.8	25
JPIM	1.5	16	1.9	11	.5	21	2.2	10	1.6	16	.5	29
EJM	1.5	17	.5	21	.3	24	.4	20	2.2	12	4.1	10
JPSSM	1.4	18	.6	19	.2	31	1.2	12	2.0	14	4.3	8
CMR	1.0	19	.2	32	.2	33	2.9	8	1.2	19	2.0	15
BH	.8	20	.1	37	.1	36	.4	22	1.4	18	.3	35
JPPM	.8	21	.5	21	2.0	8	.1	29	.6	23	.3	35
IJRM	.8	22	1.1	16	.3	24	.1	29	.8	21	.5	29
JBE	.7	23	.2	32	.9	15	.2	25	.8	22	1.8	17
JME	.6	24	.2	34	.0	45	.0	40	.2	39	17.1	1
ML	.6	25	1.2	14	.6	18	.2	25	.4	33	.3	35
JB	.6	26	1.1	16	.3	29	.5	18	.4	30	1.0	22
AMA	.5	27	.3	29	.3	27	.0	40	.6	24	3.6	11
MM	.4	28	.4	23	.1	36	.6	16	.5	28	1.3	19
PM	.4	29	.2	34	.7	17	.0	40	.5	27	.0	44
JCA	.4	30	.3	29	1.1	14	.0	40	.3	37	.0	44
JSM	.4	31	.3	25	.2	31	.0	40	.5	26	.3	35
JEP	.4	32	.4	24	.8	16	.0	40	.3	35	.0	44
JHCM	.3	33	.1	37	.2	33	.0	40	.5	26	.0	44
JMM	.3	34	.2	34	.0	39	.4	20	.4	30	.5	29
JCM	.3	35	.0	42	.3	27	.0	40	.4	31	.0	44
JDM	.3	36	.1	37	.1	36	.0	40	.4	33	.3	35
DS	.3	37	.2	30	.0	39	1.9	11	.1	43	.5	29
JMRS	.3	38	.4	23	.2	33	.0	40	.3	38	.0	44
JBIM	.2	39	.0	42	.0	39	.1	29	.3	34	1.0	22
JCPS	.2	40	.3	27	.5	21	.0	40	.1	44	.0	44
JPSM	.2	41	.0	47	.0	45	.0	40	.3	37	.5	29
JIM	.2	42	.0	47	.0	45	.0	40	.2	42	2.8	13
JCPO	.1	43	.1	39	.5	21	.0	40	.1	45	.3	35
JBL	.1	44	.0	47	.0	45	.0	40	.2	40	.0	44
JGM	.1	45	.0	47	.0	45	.0	40	.2	41	.0	44
MER	.1	46	.0	42	.0	45	.0	40	.0	49	2.8	13
JBBM	.0	47	.0	47	.0	45	.2	25	.1	46	.0	44
JMTP	.0	48	.0	47	.0	45	.0	40	.0	47	.3	35
JNPSM	.0	49	.0	42	.0	45	.0	40	.0	48	.0	44
Total influence	15.141		3.031		2.387		1.116		8.210		.392	

Notes: Journal abbreviations are shown at the bottom of Figure 2.

subarea in the final period. Similarly, though less spectacular, there were no journals in the subarea of consumer behavior in 1966–67 but 9 in 1996–97. In contrast, the core marketing and managerial subareas only grew from 5 to 8 and from 5 to 9 journals, respectively, during the 30-year period. This development in marketing is similar to the gen-

eral tendency of maturing markets to become more differentiated.

Second, although the core marketing journals have retained their influence shares during the 30-year time span, the managerial marketing-related journals have lost influence in marketing. The five core marketing journals that existed in 1966–67 jointly had a 47% influence share in the first period. The same five journals had an influence share of 55% in 1981–82. The eight that existed in 1996–97 had an influence share of 46% in the final period. In sharp contrast, the five managerial marketing-related journals that existed in 1966–67 had an influence share of 52% during the first period, but the seven journals that existed in 1981–82 had an influence share of only 22% during that period, and the nine journals that existed in 1996–97 had an influence share of 16% in the final period. This downward trend for the managerial marketing-related journals is particularly noteworthy because the influence of the core marketing journals remained quite stable.

Relationships Among Measures of Journal Influence

On the basis of the work of Salancik (1986), we argue that structural influence is the preferred theory-based measure of journal influence. Yet to the extent that various measures of journal influence capture the same underlying construct, we still expect sizable correlations among alternative measures. To examine the convergence of journal influence measures, we correlated the structural influence index with alternative measures of journal influence for the most recent time period (1996–97).

The impact factor reported in the *SSCI* was 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.

In addition, we included a subjective measure of journal influence derived by Hult, Neese, and Bashaw (1997). These authors asked 309 marketing faculty members at U.S. universities to list their top-ten marketing-related journals in order of decreasing importance. From this information, they computed the popularity/familiarity index (PFI). The PFI is the number of top-ten votes divided by the number of top-ten votes received by the most popular journal. Scores are available for 41 of our 49 journals.

Zero–order correlations between the two citation-based measures and the subjective influence measure appear in the lower part of the correlation matrix in Table 4. We report Spearman rank–order correlations because most of the measures are skewed.

As we expected, the index of structural influence is significantly and substantially correlated with the impact factors and the subjective measure of journal influence. The *SSCI* impact factor, however, is not significantly correlated with the subjective measure of journal influence (r = .37, not significant [n.s.]), and it has a lower correlation (r = .54, $p < .01$) with the index of structural influence than does the subjective measure (r = .80, $p < .001$).

One possible explanation for the lower correlation of the impact factor with structural influence and subjective influence is that the former captures recent influence of the average article in a journal, whereas the latter capture the influence of a journal, which may be based on a longer publication history and a larger article base. That is, a journal's age and the number of articles it publishes annually should be positively correlated with structural influence and subjective influence, such that older journals and journals with a higher annual article production are more influential. The impact factor should not be correlated with these variables, because it is based on recent, average article influence.

If the correlation of structural influence and subjective influence with journal age and annual article production accounts for the lower correlations of the impact factor with structural influence and subjective influence, then controlling for these variables should increase the correlations among the influence measures. If, however, the lower correlation of the impact factor with the other influence measures is due to other variables, the correlations among influence measures should remain largely unchanged. In that case, structural influence and impact factors are, as we have argued, fundamentally different and cannot be readily converted from one to the other.

TABLE 4
Spearman Rank–Order Correlations Among Measures of Journal Influence, Journal Age, and Number of Articles

	Index of Structural Influence	*SSCI* Impact Factor	PFI Index
Index of structural influence	1.00	.55[c]	.70[a]
	(49)	(23)	(41)
SSCI impact factor	.54[b]	1.00	.26
	(23)	(23)	(20)
PFI index	.80[a]	.37	1.00
	(41)	(20)	(41)
Age of journal	.67[a]	.35	.60[a]
	(49)	(23)	(41)
Number of articles published during 1996–97	.41[a]	–.02	.04
	(49)	(23)	(41)

[a]$p < .001$.
[b]$p < .01$.
[c]$p < .05$.
Notes: Zero–order correlations among journal influence measures are shown below the diagonal, and partial correlations (adjusted for age of journal and number of articles published) are above the diagonal (for first three variables). Numbers in parentheses are sample sizes.

To examine this issue, we calculated partial correlations among the three influence measures while controlling for journal age and annual article production. We used rank–order correlations again because of the skewed distributions of the influence measures. Zero–order correlations of journal age and annual article production with the three influence measures appear in the last two rows of Table 4. Partial correlations among the three influence measures (controlling for journal age and annual article production) are in the upper half of the correlation matrix in Table 4.

As we predicted, structural influence is positively correlated with a journal's age (r = .67, $p < .001$) and a journal's annual article production (r = .41, $p < .001$). Also as expected, the impact factor is uncorrelated with these two variables. Furthermore, subjective influence is positively correlated with a journal's age (r = .60, $p < .001$), but the correlation with annual article production is not significant (r = .04, n.s.).

The partial correlations in the upper half of Table 4 show that controlling for a journal's age and annual article production does not significantly change the pattern of correlations among the three influence measures. That is, none of the correlations increases, the correlation between structural influence and subjective influence remains highest (r = .70, $p < .001$), and the correlation between the impact factor and subjective influence remains insignificant (r = .26, n.s.). On the basis of theoretical considerations, previous findings in related disciplines (Johnson and Podsakoff 1994), and these results, we suggest that structural influence is the preferred citation-based measure of overall journal influence in a discipline.

Discussion

This study demonstrates the new insights that citation analysis can provide about the structure of journal influence and, more broadly, the creation and diffusion of scholarly knowledge in a discipline. A clear portrait of a maturing marketing discipline emerges when the various findings are integrated. The sheer volume of journals that currently exist, their specific content areas and theoretical/methodological perspectives, and the extent to which the number of journals has grown over the years are indicative of a rapidly evolving field. Marketing is not a homogeneous field of inquiry with a single broad group of tightly knit journals, but rather a diverse discipline consisting of specific subareas. In addition to the core marketing area, specific areas of consumer behavior, managerial marketing, marketing applications, and marketing education can be distinguished. These distinct subareas illustrate the level of specialization that has taken place in the discipline. Whereas in the 1960s, there were only a handful of journals that dealt with marketing issues and journal space was scarce, the number of marketing and marketing-related journals has since grown considerably. It has even become a challenge to be aware of all the journals and assess how influential they are in generating and disseminating marketing knowledge.

There have been distinct shifts in the influence of specific journals over time. On the one hand, the influence share of the more general business and management-oriented journals, such as the *Harvard Business Review*, *Journal of Business*, *California Management Review*, and *Management Science*, has declined systematically in marketing. On the other hand, there has been a simultaneous increase in the influence of specialized marketing journals such as the *Journal of Consumer Research*, *Marketing Science*, and *Journal of the Academy of Marketing Science*. The concentration of influence in marketing in a select set of leading journals is high and, despite the increasing number of journals, has remained quite stable during the 30-year time period studied. In the third time period, 1996–97, the top-5 journals accounted for more than 60% of the total influence available in the network of 49 marketing journals. That is, a small group of journals dominates the scientific discourse, and most other journals exert no noticeable structural influence in the marketing network. Jointly, these trends reveal a rapid specialization in marketing and a loosening of ties with the broader discipline of management and business.

The increasing number of specialized marketing journals, the fragmentation of the discipline into subareas, the stronger interdependencies among journals, the greater influence of specialized marketing journals, and the smaller influence of general business and management-oriented journals are evidence of the maturation of marketing into an independent, segmented academic discipline, which is indebted to, but separate from, related fields such as management.

The findings also clarify the role of the *Journal of Marketing* in the marketing discipline. Our bibliometric analysis confirms Kerin's (1996) view of its large and pervasive influence. It is the most influential marketing journal overall, and true to its editorial policy and focus, it spans the entire discipline. Moreover, it is the only journal to serve this role. The *Journal of Marketing* is unique in occupying a top-three position in each of the five subareas in marketing. In addition, the influence share of the journal is high and has remained stable during the 30-year period studied. This high and steady influence share is remarkable in view of the dynamics of the marketing journal market and the increases and decreases in influence of various other journals over time. These findings go against Day's (1996) speculation that the emergence of new, specialized marketing journals has reduced the influence of the *Journal of Marketing* as an overall thought leader. Rather, the introduction of several new marketing journals appears to have added to its influence in the discipline. However, there is evidence for a change in its role in the marketing discipline. Whereas previously, it exerted a dominant influence on the core marketing journals, which presumably produce the most fundamental marketing knowledge, the journal now ranks only third in the core marketing subarea. It currently receives most of its influence from journals in the marketing applications field, many of which are of recent origin. From a thought leader at the forefront of generating specific marketing knowledge, the *Journal of Marketing* appears to have grown into an integrator, with the more global role of piecing individual parts of the marketing puzzle together and balancing academic rigor with managerial relevance. Some time ago, Lazer (1976, p. 78) argued that its weakness was

that it had tried to be "an everything publication for everyone in marketing." Rather than a weakness, this is perhaps the responsibility and strength of a journal that tries to integrate the multifaceted discipline that marketing has become.

Our research supports the usefulness of the index of structural influence to assess journal influence in a discipline. The index is based on a substantive theory of influence in exchange networks and identifies both the level and span of journal influence. It also shows convergence with alternative influence measures. The ability to decompose journal influence into various subareas provides insights that cannot easily be obtained from alternative influence measures. The joint application of the log-multiplicative model to identify subareas in marketing and the index of structural influence to assess journal influence have proved fruitful. The log-multiplicative model captures reciprocity in journal citations (i.e., citation symmetry), whereas the index of structural influence captures dependence in journal citations (i.e., citation asymmetry). Used in combination, these techniques reveal which journals are influential, both longitudinally and in different subareas of marketing.

Further Research and Implications

This study examines the influence of marketing journals in the diffusion of scholarly knowledge in a network of marketing journals rather than other types of journal influence. Journals may be influential in other domains, for example, by offering a forum for discussion within a professional or academic organization, transferring academic knowledge to marketing professionals, being included in the marketing curricula of universities, being a source of knowledge for marketing textbooks, and so forth. The influence of journals may vary across domains, and to the extent that this occurs, our analysis underestimates the influence of journals that serve these other functions. For example, some journals may be influential in inspiring other marketing journals, whereas others may inspire marketing curricula or have a large readership among marketing practitioners. Building on the experience of other business administration disciplines, such as finance (Corrado and Ferris 1997), it seems worthwhile to examine marketing journals' influence across multiple domains to gain greater insight into the diverse roles that specific journals play in the development and propagation of scientific knowledge in the discipline.

The current research examines journal influence in the marketing discipline only. Some journals may have an influence in other disciplines as well. Thus, the current analysis underestimates the total structural influence of interdisciplinary journals. This is particularly true for management-oriented journals, such as the *Harvard Business Review*, and broad journals, such as the *Journal of Business* and *Management Science*. It raises the more general issues of the interdisciplinary influence of journals and the cross-fertilization of related disciplines, which was recently explored by Pieters and Baumgartner (2002). They examine citation patterns among ten social science and business administration disciplines, each represented by five key journals. Marketing was represented by the *Journal of Consumer Research*, *Journal of Marketing*, *Journal of Marketing Research*, *Journal of Retailing*, and *Marketing Science*. It appears that the other disciplines build only to a small extent on knowledge developed in marketing journals, with the exception of management information systems/operations research (which included *Management Science*, a journal that frequently contains marketing-oriented articles). The five top marketing journals were cited only 53 times by the five top journals in psychology between 1995 and 1997 and not at all by top journals in economics, sociology, or anthropology. In other words, marketing knowledge does not yet have much influence on its sister disciplines, at least as reflected in citation patterns. It is therefore unlikely that including nonmarketing journals in the citation network would have much of an effect on the ranking of marketing journals.

Pieters and Baumgartner (2002) find that marketing journals rely significantly on knowledge from several other disciplines, notably management, psychology, management information systems/operations research, and economics, though there were few citations from marketing to finance, accounting, political science, sociology, and anthropology. In their analysis, citation patterns were examined after aggregation across the five journals that represented each discipline. A more fine-grained investigation of interdisciplinary citation patterns among specific marketing journals and specific journals in other disciplines would be promising. It might identify marketing journals that are more or less mono- or multidisciplinary or those that serve as strong or weak ties in knowledge development and dissemination across disciplines.

It would also be worthwhile to explore in greater detail why some journals are more influential than others. Our findings indicate that structural influence is correlated with a journal's age and the number of articles it publishes per year. The relationship with age, which also held for a subjective measure of influence, may indicate a first-mover advantage, by which journals that launch a discipline or a subarea of a discipline are able to establish a position of leadership that is difficult to challenge in the future. This might also be the reason for the rapid ascent of the *Journal of Consumer Research* and *Marketing Science*, which succeeded, during a time when the journal market grew fairly rapidly, in positioning themselves as the thought leaders in areas that were of central concern to the discipline (i.e., consumer behavior, analytical modeling) but were not covered adequately by existing journals. The findings also show that, in marketing at least, a journal's overall level of influence is strongly related to its breadth of influence. That is, a journal is influential to the extent that many other journals cite it. At present, we do not know why some journals succeed in attracting citations from many other journals, and further research will need to show whether the correlation between level and span of influence is a general phenomenon that is typical of other fields. It is likely that methods other than citation analysis will need to be used to uncover the whys of journal influence, because there are probably intricate social processes at work that require in-depth longitudinal analyses of individual journal histories.

Our findings may be employed in several ways, two of which we discuss in more detail. Marketing researchers, educators, professionals, students, and libraries can use rankings of journals by structural influence when deciding

which journals to read or subscribe to. Although structural influence should not be the only factor on which such decisions are based, it is an important indicator of the likelihood that a journal will contain information that may affect the discipline or specific subareas. This should be helpful to prospective consumers of scientific marketing knowledge. Rankings of journals by structural influence can also be useful to potential producers of knowledge, such as authors considering to which journals to submit their work. Authors want to have their manuscripts published in journals that are likely to enhance the visibility and impact of their research. The journal ranking reported here is based on a theory-based measure of structural influence that has good convergence with a recent expert rating of journal reputation, and it is more complete than other influence rankings. Furthermore, rankings are available by subareas in marketing. This may help prospective authors who work in particular areas of marketing, because there are important differences in journal rankings by area.

The results of this study might also be useful for hiring and tenure decisions. Although articles in the "big 3" (*Journal of Marketing*, *Journal of Marketing Research*, and *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 appropriate weight in tenure decisions.

Appendix

The following symmetric log-multiplicative citation model was estimated:

$$\text{(A1)} \qquad \log F_{ij} = u + u_i^S + u_j^R + \delta_{ij} + \sum_{m=1}^{M} \xi_i^m \psi^m \xi_j^m.$$

The expected number of citations from journal i to journal j is denoted by F_{ij}, and the u's are standard log-linear parameters. The u parameter is a constant, the u^S parameters control for differences among journals in the overall volume of citing other journals in the network, and the u^R parameters account for differences among journals in the overall volume of being cited by other journals in the network. The δ_{ij} parameter represents the effects of self-citations in the diagonal of the citation matrix (i.e., $\delta_{ij} = 0$ for $i \neq j$ and free otherwise), and the last term is a symmetric log-multiplicative effect. Specifically, ξ_i^m and ξ_j^m are the scores of journals i and j on the mth dimension, and ψ^m is a scaling factor. Details are provided by Clogg and Shihadeh (1994), Goodman (1991), Pieters and colleagues (1999), and Pieters and Baumgartner (2002).

We estimated the citation model in Equation A1 for 1 to 7 dimensions (M = 1 to 7) using routines available in the LEM program (Vermunt 1998). The following benchmark models were estimated: an independence or main-effects model (containing the first three terms in Equation A1) and a model of modified independence accounting for self-citations (containing the first four terms in Equation A1). Model selection was based on fit (Bayesian information criterion and percentage inertia accounted) and interpretability of the solution. We selected the two-dimensional solution because it fit the data well and yielded the most meaningful interpretation of the data. It decreased the L^2 statistic of the independence model by 79% and that of the modified independence model by 55% (Bayesian information criterion = –12479.40, L^2 = 9997.30 with 2159 degrees of freedom).

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