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RESEARCH NOTES AND COMMENTARIES

THE FIRST TWENTY YEARS OF THE *STRATEGIC MANAGEMENT JOURNAL*

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The Strategic Management Journal (SMJ) *has now entered its third decade of publication and consistently ranks among the most influential journals in management. While several authors have examined the impact of* SMJ vis-à-vis *other management publications, few studies have examined the internal changes in the publication over time, particularly with regard to the diversity and content of the journal. The current study finds that there has been a significant shift in the number of authors, publication lags, reference lists, and page lengths in* SMJ *over the past 20 years, while the diversity of authorship has stayed relatively constant. There has also been a marked rise in the proportion of empirical papers being published. The implications of these results are discussed.*

INTRODUCTION

The *Strategic Management Journal* (*SMJ*) has now entered its third decade of publication and consistently ranks in the top five most influential journals in management (Franke, Edlund, and Oster, 1990; Johnson and Podsakoff, 1994; Tahai and Meyer, 1999). The dominance of the journal in its chosen field can be gauged by comparing strategy journals on Bill Starbuck's widely cited ranking of social science journals (Starbuck, 1999a). *SMJ* ranks 24th on the list while its closest competitor, *Long Range Planning*, ranks 243rd.

While a plethora of studies have investigated the relative citations of journals over time (Fowler, Bushardt, and Brooking, 1985; Johnson and Podsakoff, 1994; Martinsons, Everett, and Chan, 2001; Stahl, Leap, and Wei, 1988; Tahai and Meyer, 1999), few studies have focused on the changes in individual journal content over several years.[1] Casual observation reveals that the articles published in *SMJ* in 1999 differ markedly from those that appeared in the first issue of *SMJ* in 1980. This paper serves to communicate to the readership the broad changes in content of *SMJ* over the past 20 years.

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[1] Exceptions include Kerin's history of the *Journal of Marketing* (Kerin, 1996), economic psychology (van Raaij, 1986), and recent work in operations research (Ormerod and Kiossis, 1997; Reisman and Kirschnick, 1994).

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There are several reasons why such a study may prove useful. First, it may act as a guide to potential authors on changes in content, article length, and authorship that could help to shape their future efforts. Second, because *SMJ* has enjoyed a single editor (Dan Schendel) for the past 20 years, it is possible to assess the actual content of the journal against stated editorial policy (Schendel, 1991, 1994; Schendel, Ansoff, and Chandler, 1980; Schendel and Channon, 1986) and related statements made by the editor regarding content requirements in the field (Rumelt, Schendel, and Hofer, 1994; Schendel and Hofer, 1979). Finally, the study of historical trends may reveal new opportunities and directions for the journal that have hitherto been unexplored.

The remainder of the paper contains a description of the variables collected and the method used to collect the data, the results of our analysis, and a brief discussion on the implications of the results. The data are deliberately presented in simple descriptive form without formal hypotheses to allow the reader to form his or her own conclusions and to stimulate conversation within the discipline. The limitations of the data prohibit any strict causal attributions although the discussion reflects several possible interpretations of the results.

METHOD

The coding process, for the most part, involved systematically working through paper issues of the *Strategic Management Journal* held at the University of Texas at Dallas library. Much of the data (year, volume, article type, number of authors, page numbers, and submission and final revision dates) were collected from the first page of each article or note. The publication date was recorded as the first day of the month in which the issue appeared. Judgment was required to assign the affiliations of the authors to geographic regions (North America, United Kingdom, Rest of Europe, Rest of World), determine the sample size (operationally defined as the largest single sample in the study), record the data source of the study (primary data, secondary data, or both), and establish the number of references used in the article. From 1980 to 1989, a hand count was conducted to determine the total references in each article and the number of references to *SMJ* articles. From 1990, the online version of the *Social Sciences Citation Index* provided this information.

The two coders jointly coded all issues of Volume 11 (1990) to investigate the level of interrater reliability in the coding process. The coders reported 95 percent agreement in their first trial. The key area of disagreement centered on how to measure sample size and data source when multiple samples were used in the same paper. It was agreed to record the size of the largest sample in a given paper and create a category for *mixed* primary and secondary data. Papers were classified as 'nonempirical' if they contained no empirical data. The remaining papers were classified as empirical. A paper was classified as a case study if the sample size was one or the paper was explicitly referred to as a case study by the author. Once the coders agreed on a final coding scheme the level of interrater reliability rose to 100 percent in a second trial.

RESULTS

The results section is divided into five sections: descriptive statistics, composition, impact, geographic diversity, and empirical content.

Descriptive statistics

The population of articles in this study comprised 994 entries, including 645 regular articles, 187 regular notes, 152 special issue articles, and eight special issue notes (the remaining entries were editorials and communications). The 994 entries generated 14,600 pages of content with contributions by 1754 authors. The entries were further classified into 626 empirical studies, 308 nonempirical papers, and 23 case studies. Some 583 articles had references to previous *SMJ* articles. There was a significant variation in the number of articles in special issues from year to year. To control for significant differences between the composition of regular articles and special issues, we resolved to conduct our data analysis on regular articles (unless otherwise stated). Descriptive statistics for the 645 regular articles are presented in Table 1.

Composition

In this article, we have used the term 'composition' as an umbrella term for the trends in article

Table 1. Descriptive statistics for 645 regular articles (1980–99)

Variable	Mean	S.D.	Max.	Min.	Median	Notes
Number of authors	1.82	0.79	7	1	2	
Number of pages	16.60	4.60	33	4	16	
Lag1 (days)	720.65	332.38	2376	90	676	Submission to publication
Lag2 (days)	431.07	313.86	2148	0	364	Submission to acceptance
Lag3 (days)	288.91	124.52	816	42	280	Acceptance to publication
Sample size	658.80	3410.88	61 615	1	124	Excludes 166 nonempirical papers
References	51.47	30.32	263	1	47	
SMJ references	4.91	5.84	59	0	3	

Table 2. Descriptive statistics and correlations for composition variables

Variable	Mean	S.D.	Mean	S.D.	Year	Authors	Pages
Year	(1980)	(1980)	(1999)	(1999)			
Authors	1.76	0.70	2.19	1.02	0.82		
Pages	15.67	4.92	21.00	4.97	0.79	0.78	
References	25.57	19.84	75.27	34.49	0.96	0.82	0.83

$N(1980) = 21$ articles; $N(1999) = 48$ articles

types, numbers of authors, pages, and references over time. Analysis of the data indicated that the number of authors, pages, and references have significantly increased over time (means, standard deviations, and correlations are presented in Table 2). All of the reported correlations in Table 2 were significant at the $\alpha = 0.05$ level. Thus, we can conclude that over the past two decades there has been an obvious and considerable increase in the length of articles, the number of references per article, and number of authors collaborating on an article.

Publication lag

The median publication lag has increased fourfold between 1980 and 1999. The trends in the three types of publication lag are depicted graphically in Figure 1. The period from submission/receipt of a manuscript until the publication of an article (Lag1) has increased from 200 days in 1980 to around 800 days in 1999. The lag from acceptance to publication (Lag3) rose initially in the 1980s but has subsequently stabilized to around 250 days since 1990, while the lag from submission to acceptance (Lag2) has risen steadily over the past 20 years.

Impact

A self-citation is a reference by the focal *SMJ* article to a previous *SMJ* article. Figure 2 shows a clear trend towards more intrajournal citations. In fact, by 1999, the average *SMJ* article was citing 10 previous *SMJ* articles and *SMJ* articles comprised almost 15 percent of all references in an article.

Geographic diversity

Membership of the Strategic Management Society and Academy of Management has become increasingly global over the past 20 years (Starbuck, 1999b). Interestingly, the proportion of North American authors in *SMJ* has remained fairly constant (around 80% of all authors) over the survey period. This is not to imply that a lack of trend in the aggregate does not hide some interesting developments at the regional level. For instance, U.K. authors comprised 16 percent of the authorship in the first 10 years but only 6 percent in the last 10 years. Similarly, Europe and the rest of the world averaged around 20 percent of all authorships in the last 3 years of the sample (1997–99), up from 9 percent between 1990 and 1996.

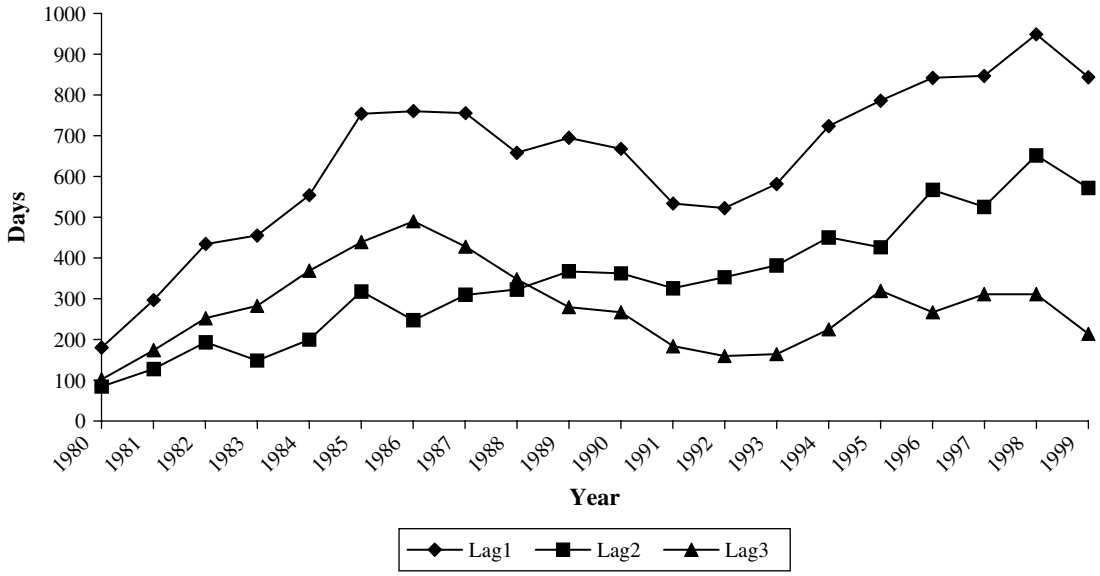

Figure 1. Trends in publication lags

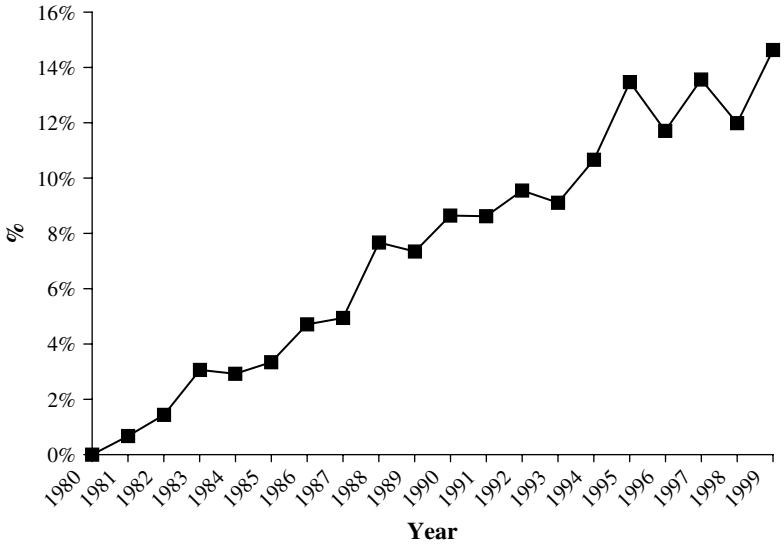

Figure 2. Trend in proportion of *SMJ* citations per article

The extent of growing international collaboration is presented in Table 3. In 1980, only one article featured collaboration between at least one American and one non-American author. By 1999, that figure had grown to 10 articles reflecting a trend towards greater international collaboration. It is also noteworthy that the number of American-only authored papers increased dramatically over the same period while papers with no American authors stayed at a similar level to 1980.

Table 3. Number of articles by source of authorship[a]

Authorship	All	1980	1999
No authors (editorial comment)	3	0	0
No American authors	189	12	13
Only American authors	724	15	40
American and non-American authors	78	1	10

[a] Includes special and regular issues.

Empirical content

The number of nonempirical and empirical papers by year for regular articles is presented in Figure 3. In the early years of *SMJ*, the ratio of nonempirical to empirical papers was approximately 1 : 1 but over time empirical papers have dominated, reaching a 7 : 1 ratio to nonempirical papers in 1999. (However, the original 1 : 1 ratio continues in special issues.)

The increase in empirical papers has also been accompanied by an increase in sample sizes. The median sample size has seen a modest increase from 100 cases in the 1980s to around 200 cases in the late 1990s. This in no way validates the view that strategic management research is being dominated by large database research (Lampel and Shapiro, 1995). Most studies in strategic management continue to use small samples. For instance, in 1999, 90 percent of all empirical articles had sample sizes less than 1500 cases. Only two studies had sample sizes in excess of 10 000 cases.

While sample sizes have not increased dramatically there is more use of secondary data. According to the information in Figure 4, over 20 studies relied exclusively on secondary data in 1999—up markedly from the previous decade. Also surprising is the relative infrequency of studies that mix primary and secondary data. The use of primary data has stayed constant since the mid-1980s at around 10 studies per year. Much of the growth

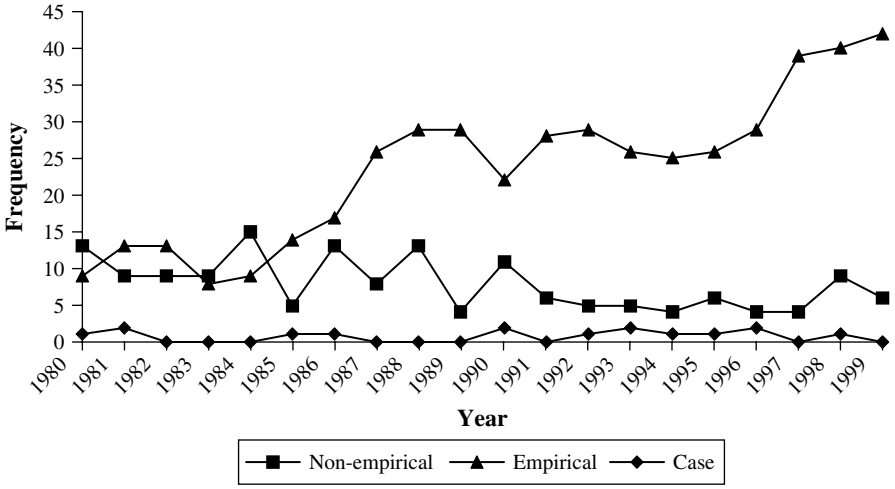

Figure 3. Type of paper by year

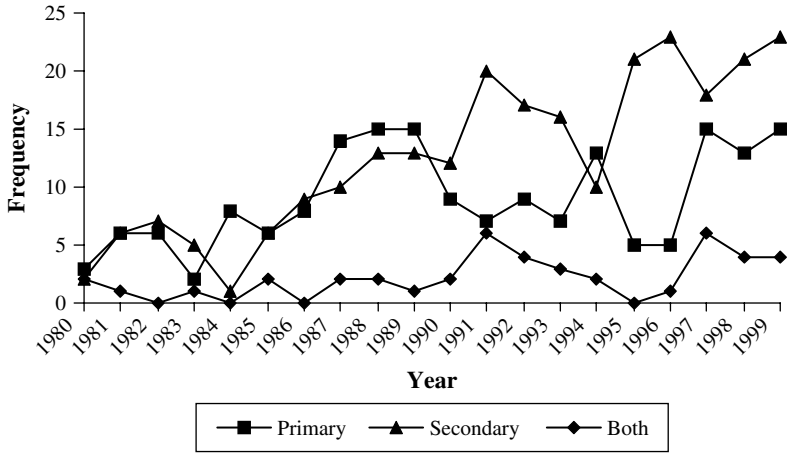

Figure 4. Data sources by year

in empirical research can therefore be attributed to studies relying on secondary data.

The sample sizes of studies using secondary data were significantly larger than those using primary and mixed data sources. An analysis of variance analysis conducted across the three independent groups of primary, secondary, and mixed data found significant differences in sample size between the groups ($F = 6.02,\ p < 0.005$). Applying post hoc Tukey tests discovered significant differences between secondary and primary data sources. On average, primary data users utilized 175 cases per study whereas secondary data averaged 1250 cases. No significant difference was found between mixed and secondary data even though mixed data users averaged only 182 cases per study. The result was attributed to the low number of mixed data cases resulting in low statistical power. Suspecting that the result may have been affected by skewness created by a few very large samples in the data set, we repeated the analysis using a nonparametric Wilcoxon rank sum test but also found significant differences in sample size between primary and secondary data sources (chi-square $= 47.06,\ p < 0.001$).

Finally, we investigated whether empirical papers were cited more often than nonempirical works. The answer appeared to be no. Both parametric and nonparametric statistical techniques failed to find a significant difference in citation rates between nonempirical and empirical papers in a subset of papers published between 1989 and 1991. The median number of citations (from 1992 to 1999) for 106 nonempirical papers was 15.0 and 15.5 for 270 empirical papers.

DISCUSSION AND CONCLUSION

The current study has conclusively demonstrated marked changes in the composition of the average *SMJ* article over the last 20 years. A typical article in 1980 was a 15-page single-authored theory piece using 20 references that probably took less than a year to appear in print after submission. A typical article in 1999 was a multi-authored empirical piece using hundreds of cases, 70 or more references, and running to more than 20 pages in length. The authors could expect to wait over 2 years for their submission to appear in print.

These results are not inconsistent with information from other fields. For instance, a recent study in economics found a major increase in the number of co-authored papers (Durden and Perri, 1995). Similarly, a recent review of the *Journal of Marketing* over the past 60 years noted that article length had doubled since 1975 and references per article had increased sixfold (Kerin, 1996). It is not clear what is driving these trends. Durden (1995) cites increased research productivity as a result of co-authorship. We suspect that the competition for increasingly scarce slots in reputable journals is increasing both the quantity and quality of work. Hopefully these results will provide an insight for prospective authors on the trends in composition over time.

The large increase in publication lags over the past 20 years invites several interpretations. *SMJ* has expanded the number of issues from four per volume in 1980 to 12 per volume in 1999 and 13 per volume in 2002. The increase in available publishing volume has thus served to minimize the delay between acceptance of a manuscript and its publication. Lags are therefore primarily attributable to delays between submission and acceptance. A combination of factors may play a role. It may be that longer, more complex articles are taking longer to review and revise. It is also possible that the editorial board may not have expanded to match the increase in submissions,[2] or that editorial standards have risen over time so that more revisions are now being required. No doubt other interpretations are also possible.

We also discovered that *SMJ* publications continue to be dominated by North American authors with little trend towards more overseas participation. Arguably, the North American promotion system has encouraged researchers to focus more on quality journal publications than may be the case in other continents but there are signs of increasing international collaboration between America and the rest of the world. We expect greater international participation in the pages of *SMJ* as more countries start to demand quality journal publications for tenure and ranking purposes.

Finally, there has been a clear trend toward greater empirical content in *SMJ* over the past 20 years. Not only does the proportion of empirical

[2] The editorial board had 41 members in 1980, 78 members in 1990, and 108 members in 1999. Published workload was approximately 300 pages in 1980, 500 pages in 1990, and 1100 pages in 1999. The journal also has a pool of approximately 600 ad hoc reviewers.

papers outnumber nonempirical articles 7 : 1 (compared with 1 : 1 in 1980), but sample sizes have also increased. There does seem to be support for the view that secondary data is accompanied by larger sample sizes and there has certainly been an increase in the proportion of papers relying exclusively on secondary data.

To some degree, these changes may reflect editorial policy. Consider the following quote from Schendel and Hofer (1979: 394): 'more empirical research is needed in the field. We do not want for theories, but we do want for theories that have been adequately tested against empirical data... future research should, wherever possible, be normative in character... future research should be more rigorous.' If this editorial direction has been progressively implemented over the past 20 years then we would expect an increase in the dominance of empirical papers. This claim must be weighed against later statements by the editor in favor of a broad, rich conceptualization of the strategic management domain that is not limited by narrow empiricism (Schendel, 1991).

It is quite possible that the shift to empirical papers may reflect, not so much a long-standing editorial policy, but a Kuhnian maturing of the field as prescience concepts are replaced by data-driven normal science (Kuhn, 1970; Lampel and Shapira, 1995). Fewer conceptual papers are being written because the 'low hanging fruit' have already been picked. There may be a degree of consensus among editors and reviewers that a certain level of theoretical and empirical work is required to make a relevant contribution. This level has been increasing over time and is reflected in longer articles, more references, and larger sample sizes. The fact that empirical papers and nonempirical papers in *SMJ* are equally likely to be cited suggests that both types of papers are important influences on the work of later authors. However, the relative infrequency of nonempirical papers in recent years suggests that it has become harder to make a competitive contribution with this type of paper.

In conclusion, this paper has clearly demonstrated some major changes in the composition of articles in the *Strategic Management Journal* over the last 20 years. Articles have generally become longer, more empirical, cite more references, use larger samples, and are more likely to be co-authored. While the trends are clear, the underlying reasons for these changes are not. While a number of conjectures were explored in the discussion section, they remain, in the absence of a formal study, only speculation. Nevertheless, we hope that the availability of this data will initiate a conversation that will help to shape the next 20 years in the field.

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