GROWTH AND CONSOLIDATION OF STRATEGIC MANAGEMENT RESEARCH: INSIGHTS FOR THE FUTURE DEVELOPMENT OF STRATEGIC MANAGEMENT

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ABSTRACT

The purpose of this article is to evaluate the dynamics of the main lines of research that have emerged from the development of the strategic management discipline since its inception to the present day. Our analysis determines the level of maturity of each line of research in terms of their internal consistency and its influence to other lines to understand the past and trace the future development of the discipline. The methodology is based on the combination of content analysis and social network analysis to analyze the articles published in the SMJ since its inception in 1980 until 2013. One of the key contributions of this paper is the use of an analytical toolkit that helps to visualize the dynamics of the subfields and recognize the growth and demise of subfields. We evaluate each lines of research in terms of centrality (influence on other lines) and density (internal coherence of each line). Our findings suggest that the strategic management field has grown up considerable over a set of core lines of research but it is diversified into several clusters of research. The internal dynamics of the clusters show increasing coherence. We believe the future development of strategic management as an academic field of research can be supported using the internal analysis of each of its research lines with respect to the objectives and future strategies defined by the community through the Strategic Management Society.

INTRODUCTION

The strategic management as an academic discipline began to take shape in the early years of the 1960s and early authors such as Anshen et al. (1973) and Meyer (1978) noted the need to direct research efforts to shape the theoretical corpus of strategic management. In May 1977, Professors Dan Schendel and Charles Hofer run at the University of Pittsburg a conference entitled “The State of the Art Business Policy and Planning Research” which represented an important milestone in the consolidation of strategic management as an emergent academic field (Saunders et al, 1980). Schendel and Hofer (1979) recommended the segmentation of strategic management in research lines, which was fundamental to foster research on these topics: strategy concept, strategy formulation, strategy evaluation, strategy content, goal formulation/structures, social responsibility, environmental analysis, public policy, strategy implementation, formal planning systems, strategic control, strategic management process, board of directors, general management roles, entrepreneurship and new ventures, multibusiness/multicultural firms, strategic management in not-for-profit organizations, and research methods. Then, the Strategic Management Journal appeared in 1980 and quickly became the flagship of the scientific community in this area (Guerras-Martin et al, 2013). The growth of scientific production and the increased number of international journals on strategic management fostered the consolidation of
the research lines and also led to the emergence of diverse additional lines of research such as competitive advantage and resource based view of the firm among others. The initial efforts gave birth to the current structure and defined the internal dynamics of the strategic management field.

Many efforts have been devoted to trace the evolution of the discipline in order to contribute to its future development. For example, Ramos-Rodríguez and Ruiz-Navarro (2004) determined the changes in the intellectual structure of the discipline by analyzing co-citations. Later on, Nerur et al. (2008) employing of co-citations with multidimensional scaling and factor analysis expanded the results obtained. They employed publications and authors as the units of analysis. Both works are attempts to define the intellectual structure of the strategic management field using quantitative methods under the assumption that papers or authors who are frequently co-cited are somehow intellectually related. These works present interesting insights of the discipline and contributed to know how strategic management has developed between 1980 and early 2000s as well as defining distinct subfields and their relationships through the citations. However, the results do not address the consistency and interconnectedness between the lines of research that form the theoretical basis for the strategic management field and how advanced is each research line.

Other authors, e.g. Boyd et al. (2005), analyzed the development of the field of strategic management in the first 25 years of life. Interestingly, the authors found that many strategy faculty members never publish in their career and article writing activity, as well as success, may be determined by the orientation and prestige of the institution where faculty is based. Moreover, they found that strategic management has characteristics of a young and advanced discipline simultaneously due to weak consensus and low productivity but the research outcomes are based on merit, respectively. However, the conclusions provided are general and not focused on the lines that conform the discipline, which have different levels of maturity.

Therefore, there is a need to take stock of the development of the research lines that conform the strategic management field nowadays if we want to offer interpretation, evaluation, and challenges to existing areas of strategic management research. This paper will not only reflect the current state of the field but also have the potential to stimulate and guide future research efforts by illuminating and offering insight into the core strategy concepts and theoretical streams. To address what we know and do not know from the existing research and direct attention to development of the theories within and across the different subfields, we perform a content analysis of all articles published in the SMJ from its inception until 2013 by combining bibliometric and social network analysis. In short, this paper aims to answer the following research questions: What are the current research lines that form the theoretical framework of strategic management? How advanced are the research lines that make up the intellectual structure of strategic management as an academic field of research?

**METHOD**

We have conducted a content analysis of all articles published in the Strategic Management Journal from its founding to December 2013. The criteria for focusing on the Strategic Management Journal (SMJ) in this review are: 1) SMJ has been employed in source similar studies such as Nag et al (2007); Furrer et al (2008); and Ronda-Pupo et al (2012 ); 2) SMJ is recognized as the most influential journal on strategic management in the world (Azar et al, 2008; Franke et al, 1990) and is among the most influential journals in the field of business management (Tahai et al, 1999); and 3) the journal has contributed to the formation and development of the research community on strategic management in the world (Ronda-Pupo et
al, 2010 ). Other journals, such as Academy of Management Journal or Academy of Management Review, are not included because not all articles published in these journals address issues related to the discipline (Nag et al, 2007).

The collection, preparation and analysis of the data followed a five steps process.

**First**, we downloaded all articles and research notes published in SMJ from the database ISI Web of Knowledge. Then, we obtained the citation count using Social Sciences Citation Index. Since SMJ covers a time span of 33 years we decided to segment this time frame into 3 stages of approximately 11 years to trace the dynamics of the evolution of each line of investigation.

**Second**, using content analysis, we created a matrix of co-occurrence with concepts that appeared two or more times in the titles and/or abstracts of each paper. We defined a lower boundary of ten appearances for each term since a term appearing less than ten times in 33 years is not relevant. To avoid the possible omission of important concepts and to ensure the reliability of the terms we used the lexicon of the field of strategic management from previous work such as Nag et al. (2007: 942, table 2); Furrer et al. (2008: 7, table 2) and Ronda-Pupo et al. (2012: 187, Appendix 1a). We have added to the analysis 249 key words that co-appear in the abovementioned papers. The terms corresponding to each research lines can be observed in the appendix.

**Third**, the co-occurrence matrix was normalized using cosine. We employed VOS (van Eck et al, 2010), which is a multi-dimensional scaling technique, to cluster the terms, and manually ensure the correct assignation of terms to clusters. The objective of clustering terms was to identify groups that are tightly linked and may correspond to areas of interest or display strong levels of activity (Callon et al 1991). The terms in the matrix of co-occurrences were grouped into 14 research lines that make up the current field of strategic management (see appendix 1). The number of times each term appeared can be observed in appendix 2.

**Fourth**, using social network analysis, we calculated the internal cohesion of each research line considering the density of the network that conform each line. Density is the strength of the links that tie together the terms that makes up an investigation line. Then we compare the centrality of the research line in relation with other research lines to develop a map of the strategic management field. Centrality measures the strength of an investigation line’s interaction with other lines of investigation. Both operations were performed with Pajek (Batagelj et al, 1998). Then, we created a map clustering the terms belonging to a particular line of research and defining their importance in terms of centrality and density (Callon et al 1991). The x axis corresponds to the centrality of the research line and the y axis to its density, thereby forming four quadrants. The intersection point corresponds to the median of the centrality value, and the median of the density value. The top right quadrant shows lines which are central and with high density. The quadrant on bottom right side depicts lines that are central but they are still underdeveloped (low density). The top left quadrant presents peripheral but highly developed (high density) lines. Finally, the quadrant on the bottom left displays peripheral and under developed research lines.

**Fifth**, we followed Callon et al (1991: 166) for the spatial location of each research topic related to their level of development in the intellectual structure of the discipline. On the one hand, lines of research with high centrality are considered central to the field given their strong connection with other lines of research. On the other hand, lines of research with high density, or intense internal links, displayed high degree of development. We analyzed the dynamics of each
line of investigation during the three stages to understand the evolution of the field and offer interpretation, evaluation, and challenges to existing areas of strategic management research

RESULTS AND DISCUSSION

There are 3,549 articles and research notes published in SMJ, which have received 49764 citations. Strategic management is a field that has been consolidating rapidly with contributions from researchers all over the world.

Table 1 shows the values of centrality and density of each of the lines of research identified through social network analysis. Kuhn (1996) suggests that research activities and outcomes vary as a function of the level of maturity of a field. On the one hand, disciplines in the early-stage are expected to exhibit weaker levels of consensus among researchers, lower levels of research productivity, and research outcomes are often determined by factors such as prestige rather than merit. In other words, we expect to see disciplines with low centrality and density degrees when they are in the early stages of development. On the other hand, communities with more developed paradigms have stable structures and fewer debates over problems and standards of solution (Kuhn, 1996) so they may have higher density but their centrality differs. Centrality may be high if the discipline is considered highly relevant, but it may be low if the discipline occupies a niche within the broader community. We can observe in table 1 the diverse levels of development (density) and importance of the research lines (centrality) of diverse research lines, as well as their development over a period of 33 years. The highest values for centrality and density are highlighted in each set. Firm Performance, closely followed by the Theory of Firm, has the highest level of centrality in the early years of the field as the initial foundations were strongly based in economics. Then the attention of the field moved towards Strategic Management Processes, closely trailed by the area of Organizations and the Environment between 1994 and 2003, and the Resource-based view of the firm (RBV) between 2004 and 2013. While centrality of the research lines remains stable over time (see mean and median in Table 1), the field becomes mature as density increases substantially in the first 23 years. It is interesting to notice the slightly decline in the last 10 years as a potential indication of the emergence of new lines and potential renewal in the interest of the academic community. However, the overall assessment of the level of development shows the different disciplines comprising the strategic management field are still young, except Industrial Organization that has higher levels of density over time.

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<td>Density</td>
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<td>I</td>
<td>Competitive advantage</td>
<td>0.186</td>
<td>0.581</td>
<td>0.457</td>
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<td>II</td>
<td>Cooperative strategy</td>
<td>0.238</td>
<td>0.204</td>
<td>0.555</td>
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<tr>
<td>III</td>
<td>Corporate governance</td>
<td>0.311</td>
<td>0.568</td>
<td>0.500</td>
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<tr>
<td>IV</td>
<td>Corporate strategy</td>
<td>0.216</td>
<td>0.688</td>
<td>0.181</td>
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<td>V</td>
<td>Entrepreneurship</td>
<td>0.133</td>
<td>0.192</td>
<td>0.380</td>
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<td>VI</td>
<td>Firm performance</td>
<td>0.448</td>
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Figure 1 presents the map of the strategic management field in terms of centrality and density. Lines of research in quadrant I, such as Theory of Firm, Firm Performance, Industrial Organization, and RBV, have a strategic importance for the field since they have been investigated systematically over a long term. Lines of research in quadrant II, such as Organizational Behavior and Corporate Strategy, are central to the field but they need significant investment to become mature. Quadrant III represents lines, such as Innovation Management and Internationalization, that appear peripheral but the strength of their links indicates significant investments by a group of scholars to develop them. The lines in Quadrant IV are both peripheral and little developed, as they are located in the margins of the network. Their situation resulted from the evolution of the field over the three stages, e.g. cooperative strategy (Nielsen, 1988), or were not considered relevant, e.g. Entrepreneurship has launched its own journal in 2007.
From the standpoint of the analysis performed, each subfield can be defined in two different ways (Callon et al., 1991). First, it may be a point in a general network of different subfields comprising the field of Strategic Management, one that is characterized by its position or centrality. Centrality measures the intensity of the links of a subfield with other subfields (Callon et al., 1991). Numerous and stronger links indicate a set of research problems are considered central by the scientific community. Second, it can also be evaluated as a cluster, made up of words linked with each other defining a more or less dense network, which indicates its coherence and robustness. Density describes the strength of the links that tie the words making up the subfield together (Callon et al., 1991). It can be observed in two ways: stronger links are more coherent, integrated and mature subfield but weaker links may show the still emergent characteristics of the subfield. Thus, density indicates the capacity of a subfield to survive or develop over time (Callon et al., 1991). The double analytical perspective (centrality vs. density) helps to appreciate the dynamics of the field. Using this analytical lens, the development of the field can occur in different ways: 1) a reorganization of the relationships between subfields (centrality) with a stable internal composition (density); 2) a redefinition of
the subfields that conform the discipline (changing the internal composition); 3) the appearance of new subfields either progressively or from the fusion of existing clusters); or 4) the disappearance of subfields by elimination or partition (Callon et al, 1991).

Figure 1 illustrates the dynamics of the strategic management field as it develops over time by reorganizing relationships between subfields (centrality) and their internal composition (density). The evolution of the strategic management discipline shows the development of its theoretical body through the fragmentation in several lines of research. On the one hand, the increasing centrality and network density between the research lines (only two lines are categorized as outliers in quadrant IV – figure 1) shows an inclusive and multidisciplinary approach sustaining the field. Many reviews explaining the integration of research lines (e.g. Porter, 1981; Conner, 1991; Eisenhardt and Zbaracki, 1992; Hitt et al, 2001; Grant, 2003; Chng et al, 2012) are clear evidence of this development in the field. On the other hand, the field has stable building blocks: Theory of Firm, Firm Performance, Industrial Organization, RBV, and Competitive Advantage, and stable position of diverse field centrally, e.g. Strategic Management Processes, Organizations and the Environment, and aspects of Organizational Behavior, or with peripheral with stable compositions, e.g. Innovation Management and Internationalization. It is interesting to observe that two subfields considered peripheral in our analysis have received strong support in recent years by the community launching their own journals: Strategic Entrepreneurship Journal in 2007 and Global Strategy Journal in 2011 while they are, simultaneously, being kept independent.

CONCLUSION

The paper presents a longitudinal analysis of the strategic management field through the development of its subfields using content and network analyses. One of the key contributions of our paper is to offer insight in the relationships existing in a discipline by using an analytical toolkit. The toolkit can help scholars to visualize the dynamics of the subfields comprising a field and recognize the growth and demise of subfields in the interest of the academic community. Two key concepts are fundamental in our toolkit: Centrality and Density. Centrality measures the intensity of the links of a subfield with other subfields to indicate if a subfield is considered central by the scientific community. Density describes the strength of the links that make up the subfield together so stronger links show coherence, integration and maturity but weaker links may show emergent characteristics of the subfield.

Another important contribution of our study is the evaluation of the dynamics and evolution of the strategic management field over its life span. Table 1 and Figure 1 are compact but powerful illustrations of the field of strategic management from the initial ideas of the founders to the segmentation suggested by Schendel and Hofer (1979). Research interests, activities and outcomes changed as the field reaches maturity but not in a uniform way. Certain subfields are still young with weaker levels of consensus among researchers, e.g. organizational behavior, while other subfields show stable structures and fewer debates, e.g. theory of firm. It is clear that some subfields occupy niches lacking centrality in the field, e.g. Entrepreneurship.

We believe the future development of strategic management as an academic field should consider the objectives and future strategies defined by the academic community through the diverse societies existing in the field, e.g. Strategic Management Society. For example, the level of development of the subfields is expected to affect decisions about which articles are published and cited but subfields may never develop if the field takes a conservative perspective. The strategic management field should pay attention to the criteria for evaluating scientific
contributions to look for universalistic standards in mature subfields (Boyd et al, 2005). Exceptional actions in some subfields may be needed to foster their development, e.g. the launch of Strategic Entrepreneurship Journal to foster entrepreneurship, or the contribution from other fields, e.g. Gary et al (2008), Kazakov and Kunc (2015).

The future of the field needs to follow changes in society. Løwendahl and Revang (2008) called for a renewal to the existing Strategy Theory given a postindustrial era where complexity is paramount and extreme for managers affecting their decisions (Kunc and Morecroft, 2010). However, our findings don’t show indication of a change in the subfields. Perhaps it is time to the creation of new subfields capturing the changes in society by defining them through seminal papers, as it occurred in early days of the field. Potentially a keyword list can help to consolidate the lexicon that makes up the discipline contributing to consensus, clearly delineating the intellectual structure of the discipline and amalgamating its research. However, it should not preclude the possibility of including new keywords to discover the emergence of new lines for the solution of practical problems of business practice in the world.

Our work can be expanded, by addressing some of our limitations. For example, additional co-occurrence analysis of authors (Nerur et al, 2008) can provide useful information to have a systematic overview of the field. Performing similar study in other journals covering the Strategy field will provide a broader overview of different practitioners and probably more lines of research and subfields.

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REFERENCES


