Revisiting the strategy-performance linkage

An application of an empirically derived typology of strategy content areas

Mikko Antero Luoma
University of Vaasa, Vaasa, Finland

Received 1 October 2014
Revised 22 November 2014
Accepted 22 January 2015

Abstract

Purpose – The linkage between strategy and performance is central to strategic management. Empirical studies have nevertheless produced mixed results on the nature of this relationship, and in recent decades, very little advancement has been made in research aimed at elucidating this relationship. Accordingly, the purpose of this paper is to identify the approaches to the strategy-performance linkage in previous studies and defines five principles that should characterize future research on this relationship. The paper develops a novel research design that follows these principles and tests the usefulness of this research design in practice.

Design/methodology/approach – This paper is exploratory in nature and its empirical methods include content analysis, multidimensional scaling, and cluster analysis. The primary difference between this paper and studies in the mainstream literature on the linkage between strategy and performance relates to the application of an endogenous strategy typology instead of predefined strategy categories.

Findings – The analysis shows that the adopted research design based on five principles is applicable to research on the linkage between strategy and performance and that such a research design produces meaningful results. The results support the findings of earlier studies regarding the potential of "hybrid" strategies for achieving superior firm performance.

Research limitations/implications – This paper challenges the dominance of generic strategies in research on the strategy-performance linkage and provides statistical data that lay the foundation for more detailed investigation on this relationship. The paper argues for a contextually bound view of strategic management.

Originality/value – This paper invigorates the discussion on the linkage between strategy and performance, which has long been diminishing as a research topic in the literature because of contradictory results and the lack of fresh research opportunities. This paper further introduces a methodology that has been underutilized in the study of strategic management.

Keywords Performance, Strategy, Content analysis, Empirically derived typology, Multidimensional scaling

Paper type Research paper

Introduction

Since the conception of its modern meaning (see Ghemawat, 2001), the term "business strategy" has constituted a pivotal management concept. Among other aspects, scholars have been attracted by the potential impact of strategy on firm performance (Furrer *et al.*, 2008). The linkage between strategy and performance has been examined in numerous works, both theoretically and empirically. Within such research, performance can be considered part of the actual meaning of strategy (Nag *et al.*, 2007) or the single most important consideration when assessing the suitability of a specific strategy (Katsikeas *et al.*, 2006).

In many theoretical works, the linkage is often treated implicitly, almost as an act of faith (see Venkatraman and Ramanujam, 1986; Guérard *et al.*, 2013). The rationale of

Management Decision
Vol. 53 No. 5, 2015
pp. 1083-1106

0025-1747
DOI 10.1108/MD-10-2014-0593

having the *right* or a *good* strategy, however such a strategy is defined in various works, is motivated by the positive impact of such a strategy on a firm's financial or market-related position. Generally, more effort is put into presenting the nuances of a new type of strategy or business model than into the mechanisms underlying *how* or *why* this logic affects firm performance.

In empirical studies, the linkage between strategy and performance is typically operationalized by using various measures and explicit ideas of causality (Richard *et al.*, 2009). Moreover, generally, empirical studies on the relationship between strategy and performance have been fueled by advancements in strategy research, such as Porter's (1980) generic strategies and Miles and Snow's (1978) idea of strategic types, or by more practically oriented frameworks, such as the BCG and GE matrices. Such research has offered workable frameworks for distinguishing different strategies and for evaluating the impact of such strategies on various measures of performance.

Recently, however, studies on the strategy-performance linkage have been criticized because of their tendency to overlook more dynamic and less categorical approaches to strategy. For instance, Pertusa-Ortega *et al.* (2010) addressed the neglected role of the resource-based view in studies on the strategy-performance linkage. According to Juuti and Luoma (2009), other underutilized approaches that could add to our understanding of the strategy-performance linkage include the logic of hypercompetition (D'Aveni, 1994), complexity management (Brown and Eisenhardt, 1998), and post-modern thinking (Stacey, 2003). Furthermore, Guérard *et al.* (2013) point out the often oversimplified approaches to the concept of performance in such studies and recommend that more emphasis be placed on the performativity perspective.

Clearly, empirical studies on the strategy-performance linkage would benefit from new perspectives provided by approaches, methods, and measures that are applicable to the features of modern strategies and contemporary business environments. This paper makes one such attempt by proposing a research design that is based on authentic strategy descriptions, an endogenous strategy typology, and longitudinal performance data.

The objective of this paper is to test the usefulness of such a design. Its research questions read as follows:

RQ1. What are the common underlying characteristics of past empirical studies focussing on the strategy-performance linkage?

RQ2. Is it possible to identify characteristics that renew the research tradition of the strategy-performance linkage? If yes, what are those new characteristics?

RQ3. What would an example of a research design based on the new characteristics be like?

Accordingly, this paper proceeds by first reviewing a number of existing noteworthy empirical studies on the relationship between strategy and performance. Then, it identifies the common features of these studies, and based on these features, the paper constructs a research design that seeks to overcome some of the potential shortcomings of studies in the mainstream literature. Next, it employs the proposed research design by using data collected from large Finnish companies from the three-year period between 2010 and 2012. Finally, the paper draws conclusions by comparing the results of the present empirical study to the results of earlier studies and by assessing the general usefulness of the proposed research design.

Literature review

The content research of strategy

Understanding the deeper nature of the strategy-performance relationship requires an examination of the content research of strategic management. Research on strategic management has traditionally been divided into three specific perspectives: process, context, and content (e.g. de Wit and Meyer, 2004). Each of these research streams has developed into a notable subcategory of management research.

Certainly, content research in some form has existed since the beginning of strategic management as an academic discipline, but the importance of the content perspective has only been recognized since the 1970s. For example, Hofer (1975), in a comprehensive review, noted that strategy processes had been emphasized more than the content of strategies.

Several important steps have been taken since then. For example, Fahey and Christensen (1986) and later Montgomery *et al.* (1989) outlined the domain of content decisions by separating the aspects related to goals, scope, and ways of competing. This trinity also serves as the basis of Collis and Rukstad's (2008) more recent text on the critical components of strategy. The possible influence of a firm's context, such as its size category, family ownership, or the nature of its operating environment, on the content of its strategy has also been investigated (e.g. Knight, 2001; Habbershon and Williams, 1999; Smart and Vertinsky, 1984).

Alongside the pursuit to clarify the necessary contentual components of strategy, another even more impactful line of theorizing has arisen in the creation of strategy typologies that render different strategic choices apparent and manageable. Hambrick (1984) notes that some classification system is needed to study organizational strategies because of the large number of potential variables that can be included in such research. Two basic types of typologies can be identified, the origins of which may be traced back several decades. First, there are empirically derived taxonomies, such as those created by Galbraith and Schendel (1983) and Hawes and Crittenden (1984) that aim to identify an internal order (a limited number of different strategies) from a set of predefined strategic measures. Second, and more popular, are strategy typologies that are not based on any specific empirical sample and that are considered to be generic in nature, that is, strategy typologies that are applicable over different industries and economic cycles. The best-known examples of such typologies include those created by Miles and Snow (1978), Porter (1980), and Treacy and Wiersema (1993).

Interestingly, following these early landmark frameworks, very few similarly comprehensive presentations of strategy content have become widely known. One exception is the work of Hambrick and Fredrickson (2001), which offers another model for the contentual design of strategies. Instead of creating new holistic strategy typologies, there appears to be a growing tendency to emphasize individual functional areas, such as human resources (e.g. Martell and Carroll, 1995), technology (e.g. Zahra, 1996), marketing (e.g. Katsikeas *et al.*, 2006), or manufacturing (e.g. Joiner *et al.*, 2009) as potential sources of strategic superiority. These studies can be identified as representing a single factor view of strategy content as opposed to the multiple factor view represented by generic strategy models, as these studies limit their scope to selected elements of strategies' overall content. Generally, this single factor view has also gained increasing prevalence in empirical studies on the strategy-performance linkage.

The concept of performance in the strategy literature

In the strategy literature, performance is an intrinsic construct. According to Cameron and Whetten (1983), the importance of performance can be argued along three dimensions: theoretical, empirical, and managerial. The theoretical reasoning derives from the well-established idea that (better) performance is the time test of any strategy (Schendel and Hofer, 1979); the empirical reasoning, for its part, is utilized and further strengthened in the many attempts of scholars who investigate the impact of certain strategies on firm performance in the real world (see the examples below); and the managerial importance is apparent from numerous prescriptive works on how practicing managers can improve firm performance.

Another trinity of aspects can be identified in the treatment of performance as a subject in the strategy literature. First, performance can be approached as the ultimate goal of management, an end in itself, and it can be highlighted at the level of individual managers (e.g. Cameron, 2012), teams (e.g. Guttman, 2008), businesses and corporations (e.g. Peters and Waterman, 1982; Collins, 2001; Doz and Kosonen, 2008), and even nations (Porter, 1990). Second, performance can be approached from a measurement perspective (e.g. Venkatraman and Ramanujam, 1986), with a focus on the selection of the appropriate indicators and levels for quantifying an organization's outcomes. Third, performance can be viewed as a question of scope (e.g. Kaplan and Norton, 1996; Laitinen, 2002), which moves the discussion to areas that, ultimately, should be understood to comprise the entirety of performance and the integration of these areas.

With regard to the measurement perspective, Venkatraman and Ramanujam (1986) note that financial performance, which is most typically measured by indicators related to sales growth, profitability, and earnings per share, form the core of the concept of performance. However, they encourage strategy researchers to expand their conceptions of performance to cover those aspects relating to organizational effectiveness. To do so, researchers should consider those indicators relating to a firm's use of resources, not only performance indicators that reflect the outcome of a firm's operations. Only recently have strategy researchers taken up this call by utilizing sophisticated methods like Stochastic Frontier Analysis (SFA) and Data Envelopment Analysis (DEA), which allow the simultaneous use of multiple input and output factors (e.g. Haugland *et al.*, 2007; Neves and Lourenço, 2009).

Despite being an organic part of the strategy literature, views regarding the deeper meaning of and the connections to performance are mixed. The primary assumption that strategic planning overall is positively related to organizations' performance has been criticized, most famously by Mintzberg (1987, 1990), who particularly questions the value of explicit strategies in the context of environmental turbulence. While the major share of his criticism concerns the process instead of the content aspect of strategic management, his influence on the general move away from formal, declarational strategy descriptions toward more liberal descriptions has undoubtedly been significant. Later, at least two comprehensive meta-analytical studies found evidence for (Miller and Cardinal, 1994) and against (Boyd, 1991) the value of making strategies for firm performance.

In strategy studies, performance is typically treated as an aggregate firm-level outcome, that is, a dependent variable (Richard *et al.*, 2009; Guérard *et al.*, 2013), with strategy acting as an independent variable. Although this approach seems logical, it has also been confronted by the notion of performance as an input factor in relation to strategy (Kimberly and Quinn, 1984; Greve, 2003; Park, 2007) or as both an input and an output (Burgelman and Grove, 2007; Guérard *et al.*, 2013) instead of a pure output. To date, nevertheless, the empirical applications of these emerging approaches are rare.

The empirical study of the strategy-performance linkage

Merging the content and performance aspects of strategy has produced a number of empirical studies that seek to clarify potential connections between the two. For the following review, the author screened the journal databases of noteworthy publishers within the field of strategic management. Using combinations of terms such as "strategy," "performance," and "measurement" and derivatives such as "competitive strategy" and "organizational performance" appearing in the keywords, title, and abstract of articles, the author identified 12 empirical studies that meaningfully and on larger scale link strategy content and performance.

Only studies that base their conception of strategy on the aforementioned multiple factor view, that is, articles that view strategy as a holistic concept and that do not focus on any individual function as a detached component of strategy, were selected. Studies focussing on the empirical testing of the so-called contingency theory were not included either. A central idea of contingency theory assumes that to reach optimal output (e.g. financial performance), an organization should have a functional fit among the elements of its environment, its strategy, and its structure. Although the research designs of many contingency studies resemble those employed in the studies selected above, these studies primarily focus on the potential influence of fit on performance rather than on any form of strategy *per se*.

Despite the attempt to include as many studies as possible that fulfill the criteria of the present study, there is a natural possibility that some central work was overlooked. However, the included studies facilitate an examination of a good number of notions derived from prior research. Table I shows the individual studies, their data/samples, their applied approaches to strategy content, their performance measures, and their central findings.

The first notion is related to the temporal interest in the topic. During the decade of the 1980s, the then-novel generic typology approach was applied the most intensively. Likewise and understandably, the Profit Impact of Market Strategy (PIMS) database, developed in the 1970s, offered another relatively fresh instrument for strategy scholars. Subsequently, PIMS appears to have lost its application value.

Second, the data have been acquired from both larger databases and survey studies. When surveys have been used, they have been industry specific.

The third notion illustrates the most distinctive feature of studies on the strategy-performance linkage in general. Without exception, some predefined categorization of different strategies has been used as the basis for empirical research. Most often, the categorization has been borrowed from Porter (1980), and only in rare cases has the typology identified by Miles and Snow (1978) or some other typology been used. Companies have been associated with different strategies (or vice versa) equally based on individual respondents' subjective ratings and based on indirect information from the database.

Fourth, several different measures of financial performance have been used, the most common being return on investment as a profitability measure and sales growth as a volume-related measure. Nevertheless, an individual study normally employs only two or three measures. Again, both information from database and subjective answers from respondents have been used. Interestingly, only one of the studies employed capital market-related performance data.

The fifth and perhaps most important notion relates to the results of the studies, which, of course, must be viewed in relation to the research objectives of each study. In general, the possibility of different combinations of "pure" generic strategies was

Table I.
A summary of studies on the strategy-performance linkage

Study	Data/sample	Approach to strategy content	Performance measures	Findings
Hambrick *et al.* (1982)	PIMS database, 1,028 businesses producing industrial products	The four cells of BCG matrix; market growth rate calculated from the sales growth rate, relative market share calculated from the market share relative to the leading competitor	Return on investment, cash flow on investment, return per risk, market share change (all mainly averages of two years from the database)	Significant differences among the four cells on performance measures were observed
Hambrick (1983)	PIMS database, two sets of data: 107 disciplined capital goods makers and 57 aggressive makers of complex capital goods	Four strategy dimensions based on Porter's (1980) generic strategies: cost efficiency, asset parsimony, differentiation, scale/scope	Return on investment (four-year average from the database)	Generic strategies, or close variations of them, were represented among the high profit clusters; not all the generic strategies were found in all environments; two types of differentiation strategies were found
Dess and Davis (1984)	78 respondents from 22 manufacturing firms in the paints and allied products industry; a panel of experts	Porter's (1980) generic strategies (CEO's subjective view combined with expert panel's view)	Annual sales growth, return on total assets (performance data from 15 companies)	Firms representing at least one generic strategy simultaneously outperformed those firms stuck in the middle
Miller and Friesen (1986a, b)	PIMS database, 102 consumer durable business units	Porter's (1980) generic strategies deduced from the PIMS measures	Return on investment, percentage change in market share (from the database)	Pure generic strategies were not applied; successful groups of firms had very different strategies
Conant *et al.* (1990)	A sample of 150 (of 406) marketing professionals in health maintenance organizations	Miles and Snow's (1978) strategic types (subjective views of informants by using a multi-item scale)	General profitability, return on investment (both relative to the competitors, subjective evaluations from the informants)	Defenders, prospectors, and analyzers were equal to each other and higher that reactors in financial measures
Parnell and Wright (1993)	A sample of 104 (of 171) catalogue and mail-order houses	Miles and Snow's (1978) strategic types (subjective views of informants by using a multi-item scale)	Revenue growth rate, return on assets (subjective evaluations from the informants)	ROA and revenue growth were lower for reactors than non-reactors; revenue growth was highest among prospectors; successful combination strategies were possible
Dimara *et al.* (2004)	94 firms adopting ISO 9000, from a national database	Porter's (1980) generic strategies (subjective views of informants)	Return on capital employed, return on investment, net profits to equity, growth of sales, growth of equity, ratio of external funds to equity (from the database)	The measures of financial performance differ significantly among firms in various strategic orientation groups

(*continued*)

Study	Data/sample	Approach to strategy content	Performance measures	Findings
Spanos *et al.* (2004)	1,921 observations from a national database	A variation of Porter's (1980) generic strategies calculated from the database; high values of employee productivity mean low -cost, high values of advertising intensity mean marketing-based differentiation, high values of technology intensity mean technology-based differentiation	Price-cost margin (from the database)	Firms pursuing hybrid strategies are generally more profitable than firms pursuing pure generic strategies; the more generic strategy dimensions are included in the strategy mix, the more profitable is the strategy, provided that one of the key ingredients is low cost
Yeung *et al.* (2006)	A sample of 159 (of 1,262) logistics companies	Porter's (1980) generic strategies (subjective views of informants using a multi-item scale)	Overall financial performance, average growth in annual sales, average growth rate in market share, percentage growth in return on assets, percentage growth in return on sales (subjective evaluations from the informants)	Companies adhering to the combined strategy of cost and differentiation perform best, followed by pure differentiation companies which in turn outperform pure cost strategy companies
Vorhies *et al.* (2009)	Study 1: A sample of 270 (of 725) transportation technical service companies; Study 2: A sample of 85 (of 384) Fortune 500 companies	A taxonomy consisting of three elements: differentiation, cost focus, and product-market scope (subjective views of informants using a multi-item scale)	Cash flow divided by total assets (one year before and after data collection, from several secondary sources)	Marketing capabilities enable the realization of product-market strategy leading to increased market and financial performance
Asdemir *et al.* (2013)	4,351 firms from the Compustat database	Porter's (1980) generic strategies calculated from the database using confirmatory factor analysis	Tobin's Q, abnormal market returns (from the CRSP database)	Tobin's Q is positively and significantly related to both differentiation and cost leadership strategies; however, the coefficient of differentiation is significantly larger than that of cost leadership

Table I.

considered viable, and these "hybrid" strategies appeared to be more profitable than "pure" strategies. Regarding the typology of Miles and Snow (1978), the findings are congruent in the sense that other types of companies outperformed reactor type companies. Otherwise, the findings do not build a particularly coherent picture of the linkage between strategy and performance.

Despite the individual differences in the studies, they share two common features. First, they all utilize some predefined categorization of different forms of strategy content. Second, they either deduce the content of strategy from the available numeric information or rely on an individual respondent's perception of strategy: in both cases, they avoid using any authentic strategy descriptions.

Both of these aspects merit further consideration. The first feature, the use of a generic categorization, is understandable, because the differences between different strategies must be made apparent somehow. The generic strategy format offers a practical means for comparing strategies without requiring scholars to construct and justify a structure of their own. However, when applying a generic typology, one simultaneously accepts that it is a valid construct and excludes the possibility of finding some other logic by which the data (strategy content) might be organized. Being well-established in the management literature, the best-known generic models are of indisputable value, but doubts remain regarding whether, even as theoretical constructs, they should be held as enduring condensations of strategic parameters across industries and situations or whether – contrary to their core assumptions – they could not be combined successfully (e.g. Faulkner and Bowman, 1992; Hill, 1988). This latter notion is also apparent in the results of several of the studies listed above.

The second feature relates to how studies in the mainstream literature acquire their content and performance information. Most likely, for research-economic reasons, such information is collected at the same time and from the same sources. In practice, such a data collection process entails the utilization of either general databases or the views of individual informants. In the case of databases, such as PIMS, the researcher is forced to first create a logic of how numerical information, originally collected for undefined purposes, is converted into measures of strategy content and, second, to organize this secondary content information into existing strategy categories. In the case of survey studies, in which the informants are individual respondents, the researcher must either ask the respondent to select the actual strategy of their organization from generic strategy descriptions presented in the questionnaire or create and use some multi-item scale that measures the "magnitude" of different categories in the respondent's mind. Analogous procedures are used to acquire performance information with the exception that such information is not normally converted into some existing categorization but is instead treated as ratio-scale data.

A noteworthy aspect of data collection from both databases and surveys is that neither actually measures the target, namely, the content of strategy as formulated by the company pursuing it. Databases provide numerical information that reflects actual developments in the company with respect to its investments, effectiveness, performance in the market, or the like. Assuming that these developments are all valid reflections of a company's strategy is a major simplification that should not be undertaken without at least making such an assumption explicit. Survey studies, for their part, may offer a valid method for measuring an individual respondent's perception of strategy, but as Hambrick (1981) notes based on an empirical study, there may be significant variation in perceptions of strategy even among top management team members.

A basis for an alternate research design

Based on the review and analysis above, a new research design for studying the strategy-performance linkage is proposed in the following. It is hoped that this presentation generates new interest in this area of research, which appears to have lost some of its academic value in the last few decades, at least in the terms of the number of empirical studies.

To renew the research tradition in this area, the following principles are proposed to characterize future empirical research settings on the linkage between strategy content and performance:

(1) instead of using predefined strategy typologies, the possible categories should be allowed to organize themselves endogenously on the basis of available strategy information;

(2) strategy information that is used should be as authentic as possible, preferably created by the studied organizations for their own managerial purposes;

(3) instead of a subjective evaluation of performance, actual performance data (financial or other) should be used;

(4) performance data should reflect the long-term development of the studied organizations because of the time-lag effect of corporate performance; and

(5) the relationship between strategy and performance should allow both directions of influence, that is, from strategy to performance and from performance to strategy.

All of these principles have been underutilized in past research. This underutilization may be a reason why the empirical findings have not provided a more solid knowledge base. However, this paper does not propose that all new works aimed at revitalizing the field should simultaneously possess all of the abovementioned principles. The aim of the list above is to outline an overall direction that scholars could apply to a lesser or greater degree. In the next subsection, one application incorporating all the mentioned principles will be presented and the role of each principle in the application will be demonstrated.

Methodology

Sample and data collection

The study was conducted among the 250 largest companies in Finland, as measured by the net sales for the year 2010. The net sales figures for the companies varied from EUR190 million to over EUR40 billion.

To find data on strategy that were as authentic as possible, the home pages and/or annual reports of these companies were used. Most often, the listed companies had published a description of their strategy in the "Investors" section of their home page. Although it is understandable that these public documents do not include all aspects of the companies' future aspirations, they were considered to be sufficiently credible and internally consistent descriptions of their aspirations for the future and the paths they would take toward such aspirations. The data were collected in July 2011.

This investigation produced 74 strategy documentations, covering 29.6 percent of all of the companies in the total sample. The remainder of the companies simply did not present an explicit description of their strategy, which is an interesting observation in itself. Clearly, the likelihood of finding public strategy documentation was greater

among the largest and listed companies in the sample than among the smaller and non-listed companies.

Performance was measured in financial terms. The time frame that was used was the three-year period between 2010 and 2012. This period was considered sufficiently long to account for both the financial situation at the moment of the formulation of strategy and the time-lag effect of corporate performance (e.g. Lei and Ouyang, 2012). The financial data were drawn from the Trade Register of Finland. Because of the incomparability of some company forms (such as unconsolidated networks or state monopolies) with the majority of company forms, which were limited liability companies competing in an open market, and because of fundamental changes (such as mergers, demergers, or bankruptcies) of some companies during the studied period, full financial data could be derived for 60 companies.

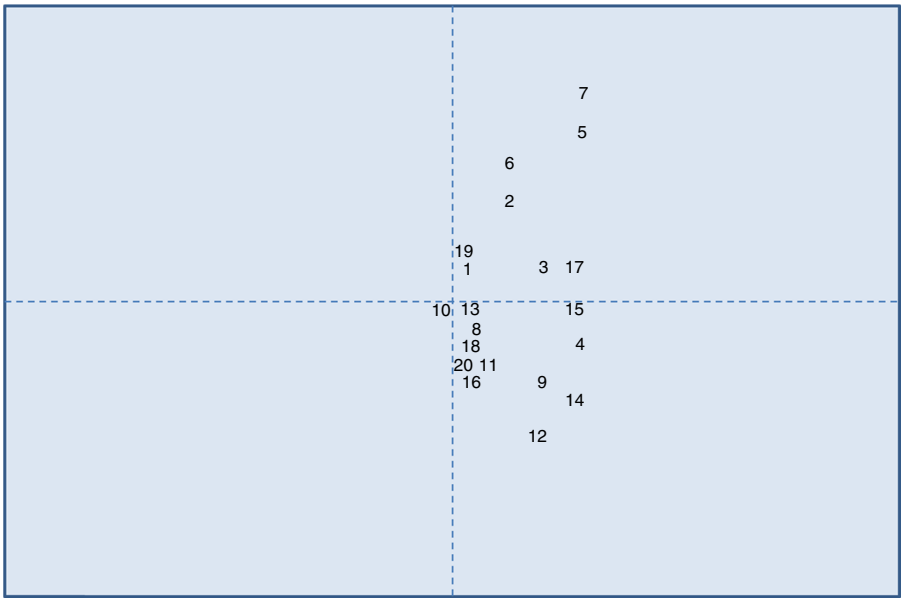
Measures

Content analysis was used to study the strategies. Strategy content was measured by using keywords identified from the strategy descriptions. In the first phase, the strategy descriptions of the ten largest companies in the sample were examined, as they were considered to be among the most representative verbal documents of the entire sample. A keyword could be any noun, verb, or adjective that carried essential information in a written sentence. Examples of keywords identified in this phase were terms such as: market, volume, focus, global, and renew or compounds such as sustainable development and attractive employer. Proper nouns such as China and Latin America were also treated as individual keywords during this phase. In all, 171 keywords were gathered, with an average of approximately 17 keywords per document, and 90 different keywords were identified (as many keywords appeared in more than one company's document). Then, the keywords that were synonymous or logically interconnected were grouped together, which produced altogether 21 keyword groups.

The keywords for all of the strategy descriptions were then examined, and each keyword was positioned into a relevant keyword group from the 21 available keyword groups. During this process, the initial solution started to evolve, as two keyword groups proved to be too specific and were therefore merged with the remaining groups and one additional group had to be formed. This phase resulted in a solution of 20 keyword groups. The groups are presented in the lower part of Figure 1. The relative frequencies of the different keyword groups appearing in the companies' strategy documents were then calculated, and these frequencies served as the measures of various content aspects of strategies.

Note that this somewhat laborious procedure endogenously produced a multi-item scale for strategy content, without the need to apply any predefined measure (see principles 1 and 2).

As mentioned previously, the measurement of performance was conducted from the financial perspective. Relying solely on the financial perspective is motivated by the richness of financial data available, which enabled the researcher to avoid a narrow focus on only a few of the most conventional viewpoints. Expanding the concept of performance to cover the larger realm of organizational effectiveness (by examining the earlier cited notion of Venkatraman and Ramanujam, 1986) would require information to be collected on the various input factors of productivity, in addition to strategy content information, which would certainly enrich the empirical analysis but would not be necessary to meet the objective of this paper.



Notes: Clusters: 1, partnership(s), ecosystem, network, cooperation; 2, environment, ecology, sustainable development, climate change; 3, development, innovation, R&D, technology, creativity; 4, production, manufacturing, supply chain, process(es); 5, customer value/benefit/experience, quality, delivery; 6, responsibility, trustworthiness, relationship(s) with society; 7, personnel, competence, values, culture, attractive employer, industiral relationships; 8, specialization, focus; 9, international(ism)/internationalization, global(ism)/globalization, multinational; 10, home market(s), domestic; 11, execution, speed, change, renewal, reorganization; 12, growth, expansion, investment(s); 13, internet, digital, intelligent, e-commerce; 14, market(s), customer(ship), customer need, sales, marketing, distribution (channels); 15, economy/economical, result(-oriented), profitable, owner/shareholder value; 16, consolidation, industry, structural change; 17, service, product, selection/assortment, concept, productization; 18, brand, image, reputation; 19, risk management, security; 20, synergy, business organization/portfolio

Figure 1.
A two-dimensional MDPREF solution

Financial performance was measured from the following viewpoints and with the following financial indicators:

(1) Growth:

- change of net sales (CNS).

(2) Profitability:

- operating margin (OM);
- profit margin(PM);
- return on capital employed (ROCE); and
- return on total capital (ROTC).

(3) Liquidity:
- quick ratio (QR); and
- current ratio (CR).

(4) Solvency:
- equity ratio (ER);
- net gearing (NG); and
- relative indebtedness (RI).

(5) Cash management:
- working capital (WC);
- inventory to sales ratio (ITSR);
- sales receivable turnover (SRT); and
- accounts payable turnover (APT).

The rationale for using a variety of measures over a longer time frame was to avoid subjectivity and a restricted view of performance (see principles 3 and 4). The inclusion of financial data for one year before the collection of strategy documents (year 2010) facilitated the assessment of the potential influence of past performance on strategy (see principle 5).

Analysis

The analysis was conducted in several phases. First, the mutual relationships of different keyword groups were studied. An appropriate method for analyzing ranking information (which is represented by the relative frequencies of the keyword groups in different strategies) is a preference-based multidimensional scaling (MDS) algorithm, MDPREF. MDPREF is a powerful statistical technique that utilizes preference data from several subjects (respondents) to build a visual solution in which equally preferred objects (variables) are located close to each other in a multidimensional space (for details on the method, see, e.g. Chang and Carroll, 1969; Kruskal and Wish, 1978). In this study, keyword groups were used as objects, and companies were used as subjects.

Figure 1 shows the two-dimensional MDPREF solution for the data. The numbers in the solution refer to individual keyword groups. Similarly preferred groups are located close to each other in the visual solution.

Then, cluster analysis was conducted to assist in the meaningful interpretation of the MDPREF solution. The x- and y-coordinates of the objects (keyword groups) were used as input data for a hierarchical cluster analysis, which organizes the objects into smaller clusters (later referred to as strategy content areas) based on their similarity. The result is a solution in which keyword groups that are perceived to be similar based on the MDPREF solution are located together. Figure 2 shows a dendrogram-type solution in which six strategy content areas have been formed, each containing two to five individual keyword groups.

Interpreting the strategy content areas is an especially interesting and important task. The keyword groups in the same cluster must be studied to identify the potential

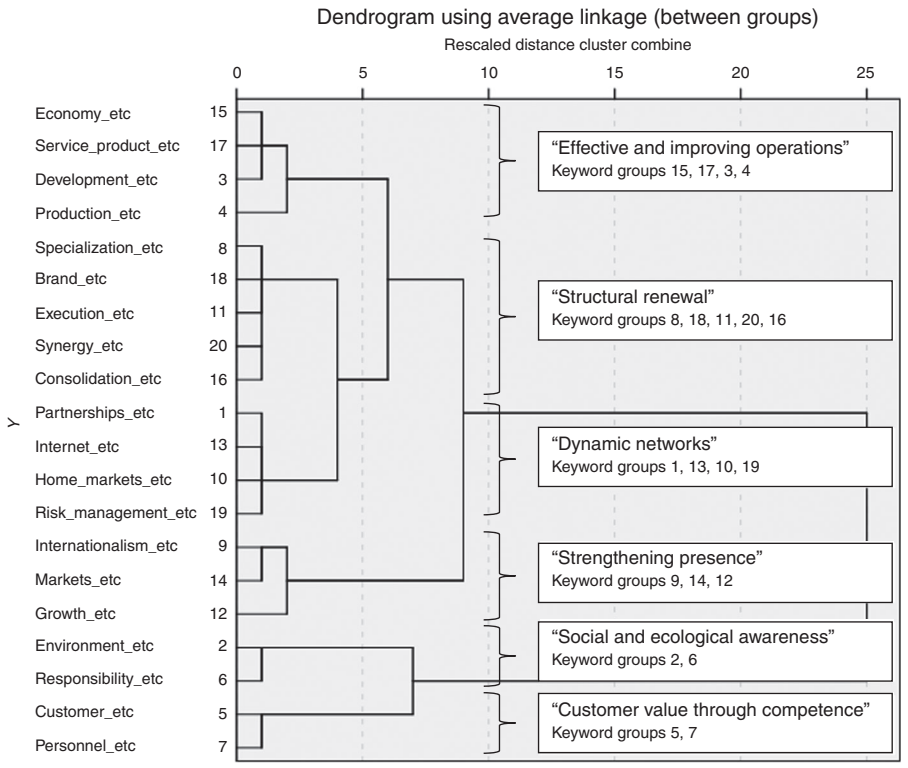


Figure 2.
The strategy content areas resulting from the cluster analysis

common themes linking them. The following is a suggestion for interpreting the new strategy content structure:

Strategy content area 1: "Effective and improving operations":

- This content area contains keyword groups that are related to the core product/service, its production process, and new product development, as well as financial performance and effectiveness. The common theme is a focus on operations that are effective and subject to continuous improvement.

Strategy content area 2: "Structural renewal":

- This content area contains keyword groups that are related to structural elements and choices, change management, brand, and reputation. These aspects reflect movement toward new organizational settings, changes in positioning among competitors, and industry-wide restructuring.

Strategy content area 3: "Dynamic networks":

- This content area contains keyword groups that are related to ecosystems, geographical coverage, digitality, and security. The emerging theme is one of striving for wider impact and control through virtual and relation-based networks.

Strategy content area 4: "Strengthening presence":

- This content area contains keyword groups that are related to internationalism, markets, distribution, and growth. The unifying factor is the generation of stronger footholds on an international scale.

Strategy content area 5: "Social and ecological awareness":

- This content area contains keyword clusters that are related to the environment, sustainable development, responsibility, and relationships with society. All of these keyword clusters relate to good corporate citizenship, in both social and ecological terms.

Strategy content area 6: "Customer value through competence":

- This content area contains keyword clusters that are related to customer experience and quality, as well as employees' competence and values. Collectively, these aspects highlight firms' determination to exceed customer expectations by building on their human resources.

In the next phase of analysis, companies with similar preferences for the various content areas were grouped together. This grouping was performed analogously by forming the strategy content areas above. The coordinate values of the different companies were received from the same MDPREF solution presented in Figure 1; however, because of the large number of companies, they are not plotted in the visual solution to aid clarity. The solution containing four different company groups was the most stable and was therefore selected for the basis of the subsequent phase of analysis. The division of the companies in four groups and the average values of each strategy content areas are shown in the Appendix.

Next, potential differences in the financial ratios between the four company clusters were subjected to analysis of variance and *post hoc* tests (Fisher's least significant difference). Table II depicts the mean financial ratios and standard deviations for different company groups and indicates the statistically significant differences between the figures for each year.

Results

Regarding the interpretation of the results, one noteworthy aspect is the composition of the strategy content areas that are presented in Figure 2. The analysis gives reason to assume that the strategies of different companies from different industries, constructed under specific circumstances, and through individual processes, might be built on only a few fundamental elements. While this notion approaches the very idea of generic strategies, none of the individual content areas identified in this study is identical with any of the most widely known strategy archetypes, that is, those created by Miles and Snow (1978), Porter (1980), or Treacy and Wiersema (1993). The content areas that are closest to each other are "Effective and improving operations" in this study, "Cost leadership" in Porter (1980), and "Operational excellence" in Treacy and Wiersema (1993), as well as "Strengthening presence" in this study and "Prospector" in Miles and Snow (1978); however, the specific details of these pairs still differ. Drawing from this finding, one can conclude that deriving the strategy content endogenously, from the authentic strategy descriptions, leads to a content structure that differs from those typically used as the basis of studies on the strategy-performance linkage.

Table II.
Financial ratios in the four company groups

Financial ratios/company groups		Growth		Profitability			Liquidity		Solvency			Cash management			
		CNS	OM	PM	ROCE	ROTC	QR	CR	ER	NG	RI	WC	ITSR	SRT	APT
Company group 1															
2010	Mean	*18.4*[ab]	15.2	12.2	11.6	9.0	1.5	1.9	40.4[e]	0.9	138.0	10.9[f]	11.7[g]	*36.4*[hi]	89.2
	SD	18.7	14.9	18.1	11.6	8.5	2.1	2.9	16.6	1.2	228.7	12.7	9.2	22.0	14.9
2011	Mean	14.5	13.8	10.7	9.9[a]	6.9[d]	1.4	1.8	37.8[f]	1.2[g]	139.6	10.6[h]	11.4[j]	*38.8*[lm]	51.6
	SD	20.8	15.4	18.5	9.1	5.9	2.5	3.1	16.2	1.4	235.5	10.6	8.4	28.9	29.7
2012	Mean	5.1	14.4	10.1	8.3[b]	5.8[d]	1.1	1.4	38.2[f]	1.1[g]	135.5	*9.3*[hi]	10.6[k]	*34.4*[lm]	24.6
	SD	15.8	16.3	19.4	9.7	6.6	1.0	1.2	14.9	1.1	222.7	10.8	11.1	21.3	84.0
Company group 2															
2010	Mean	13.6	8.7	4.2	6.2[c]	4.6[d]	1.0	1.5	40.9	0.7	56.1	25.7[f]	21.7[g]	62.0[h]	50.8
	SD	8.7	3.7	6.7	12.2	9.6	0.3	0.2	8.4	0.6	15.4	16.1	13.4	32.4	6.6
2011	Mean	0.2	10.5	5.6	8.4[b]	6.5	1.1	1.6	41.7	0.6	56.4	*26.7*[hi]	*21.7*[jk]	63.1[l]	51.3
	SD	26.4	4.0	4.8	5.8	4.5	0.4	0.2	6.8	0.6	10.7	13.8	12.9	27.2	4.4
2012	Mean	−2.6	8.5	3.2	5.1[c]	4.3[e]	1.1	1.6	40.5	0.6	59.4	*26.4*[hj]	20.9[k]	61.9[l]	50.8
	SD	9.6	3.5	5.6	8.2	5.7	0.3	0.4	6.7	0.6	13.2	15.7	12.3	32.7	7.4
Company group 3															
2010	Mean	7.6[a]	12.1	8.7	16.7[c]	12.0[d]	1.4	1.7	51.5[e]	0.4	47.8	19.5	15.2	57.2[i]	57.3
	SD	11.9	6.2	7.0	13.2	9.5	0.7	0.9	14.0	0.6	36.3	15.1	15.5	20.8	29.7
2011	Mean	14.3	11.7	8.9	*17.3*[abc]	*11.9*[de]	1.3	1.5	49.5[f]	0.4[g]	46.9	17.0	14.0	56.8[m]	57.1
	SD	13.9	6.3	7.9	13.7	9.9	0.5	0.7	13.4	0.7	33.2	15.0	12.5	18.9	27.6
2012	Mean	8.7[a]	11.4	9.0	*17.1*[bc]	*11.6*[de]	1.3	1.7	48.9[f]	0.5[g]	46.0	18.0[i]	14.3	55.4[m]	50.3
	SD	12.1	5.9	7.3	12.7	8.7	0.9	1.2	14.5	0.7	33.8	15.6	15.3	18.2	25.2
Company group 4															
2010	Mean	5.4[b]	9.1	6.5	9.2	7.1	1.0	1.4	49.9	0.5	41.5	13.4	11.4	49.4	37.3
	SD	7.4	9.0	5.9	4.7	4.1	0.8	0.7	17.4	0.5	13.7	11.7	6.0	18.6	14.8
2011	Mean	4.1	8.4	5.3	7.7[c]	6.1[e]	0.9	1.2	46.7	0.6	46.4	12.9[i]	11.6[k]	49.5	45.3
	SD	9.4	7.8	5.5	6.6	5.1	0.4	0.4	19.0	0.5	20.1	12.5	6.3	19.6	23.5
2012	Mean	−2.5[a]	9.5	5.6	10.0	7.2	1.0	1.4	48.0	0.5	48.2	11.6[j]	11.2	48.4	47.0
	SD	14.4	9.9	4.7	8.3	6.6	0.6	0.6	19.2	0.4	22.7	11.7	6.2	20.1	28.0

Notes: Mean values that differ significantly (0.05 level) from each other have been marked with superscript letters from a to m. The italic values represent a statistically significant difference with several other company groups in the same year

When examining the company groups and the amalgamation of the content areas therein (see the Appendix), one notes that three of the content areas, namely, "Effective and improving operations," "Strengthening presence," and "Customer value through competence," generally load higher than the rest of the areas and that these content areas also appear in a variety of combinations. This finding supports the existence of "hybrid" strategies in practice, which has been suggested by several earlier studies (e.g. Miller and Friesen, 1986a, b; Spanos *et al.*, 2004) with the only clear exception being company group 2, which emphasizes growth at the expense of its customers and human resources. In particular, company group 3 strikes a balance across all three content areas, with each of them at a reasonably high magnitude compared to other company groups.

The relationship between strategy content and financial performance can be considered from two viewpoints. The first viewpoint is the possible impact of the initial financial state on strategy content. This impact can be interpreted by the association of the 2010 values with the different company groups. The most obvious difference is that for group 1 with respect to the rate of sales growth and the turnover of accounts payable, both of which outperform the two other company groups. Therefore, some relationship between past financial performance and the formation of a new strategy appears to be possible, as was suggested by Guérard *et al.* (2013), though the rationale for this relationship is not easy to interpret.

The other viewpoint concerns the aspect of profitability, in relation to which company group 3 appears to outperform other groups (in terms of ROCE and ROTC). This result enables an interpretation that a balanced strategy emphasizing all content areas equally would constitute an exceptionally profitable combination. This finding lends support to earlier studies reporting evidence of the relationship between "hybrid" strategies and firm performance (Dess and Davis, 1984; Parnell and Wright, 1993; Spanos *et al.*, 2004; Yeung *et al.*, 2006).

Discussion

This paper aimed to test the usefulness of a novel research design whose differentiating features were presented and motivated. Based on the empirical study, the research design can be concluded to offer a functioning means for the study of the strategy-performance linkage.

The study nevertheless has some limitations, particularly with respect to the empirical methodology. Although the publicly available strategy documents were considered sufficiently credible and rich to enable content analysis, they undoubtedly lack some information that may make the findings richer and more complete. For example, while some strategy documents addressed structural arrangements as a theme, the fact that they took place to such an extent that several companies had to be excluded from the financial analysis gives reason to suspect that some of the most influential developments would not be documented (or anticipated) in written strategies. Further, the relatively small percentage of available strategy descriptions compared to the entire population raises concerns about the potential impact of information that was not available for analysis. However, these issues do not negatively affect the value of the research design, which is the focus of this paper.

Regarding implications for theory building, the following issues are apparent. First, this paper adds to the critical discussion on the existence of generic strategies as fundamental choices of companies. Note that the content areas identified in this study should not be interpreted to represent another generic structure, as there is no attempt to generalize it over the sample of this study. The empirical evidence was collected from a

population of organizations that share many common denominators, such as nationality, size, private business context (instead of public or third sector), and, perhaps most important, a connection to a certain era that is characterized by a generally challenging economic environment. Instead of assuming that basic strategies would be fundamentally the same regardless of the context, this paper seeks to advance the idea that strategies are contextually bound. In other words, all generalizations of strategies' content elements should be made carefully, acknowledging the boundaries of the empirical landscape of each study. This paper should encourage more studies focusing on the relationship between the context and content of strategies.

Second, for its part, this paper not only strengthens the line of thinking that a connection exists between what an organization wants and how it performs or has performed earlier but also illustrates the complexity of this connection. Only a few of the many statistically significant associations between the company groups and financial ratios were highlighted in the results section above, but many others deserve closer attention. The statistical information reported in Table II should be used as one additional basis for hypothesis building in future studies that seek to further investigate the various aspects of the strategy-performance linkage.

One interesting viewpoint apparent in Table II, for example, is the tendency of different company groups to continue on their initial path of economic development rather than to change it radically. As can be interpreted from the table, with many economic indicators, the apparent difference in the first year of observation endures and sometimes even grows over the course of time. Does this finding suggest that the impact of past performance is actually even more important than that found when studying the association of only one year's figures with the strategy content? Likewise, the same notion also stresses the importance of studying radical changes and discontinuities on a company's path as valuable windows into the strategy-performance linkage.

The third implication of the present findings for theory building derives from the adopted methodology. The present study utilized content analysis and MDS procedures, which have long been recognized methods within social sciences, but in the area of strategy research, their use even separately, let alone together, has been modest. The methodology used in this study and also other sophisticated statistical methods, such as SFA and DEA that were briefly referred to, should be utilized more intensively in future studies of the subject.

For practical strategists, this paper highlights the importance of quality content as an essential part of strategic management. If strategy tools and methods serve as a user interface between strategic management and strategists, content serves as an output that ultimately determines the actions that will be taken in practice. In many organizations, far more attention is devoted to the planning process and the use of tools and methods than to the multidimensionality and dynamism of different content elements. Poorly articulated, internally contradictory, or overly simplistic content may well be a central contributor to employee skepticism about the value of strategies, which does not help organizations utilize the full potential of strategic management as their most important steering mechanism.

References

Asdemir, O., Fernando, G.D. and Tripathy, A. (2013), "Market perception of firm strategy", *Managerial Finance*, Vol. 39 No. 2, pp. 90-115.

Boyd, B.K. (1991), "Strategic planning and financial performance: a meta-analytical review", *Journal of Management Studies*, Vol. 28 No. 4, pp. 353-374.

Brown, S.L. and Eisenhardt, K.M. (1998), *Competing on the Edge: Strategy as Structured Chaos*, Harvard Business School Press, Boston, MA.

Burgelman, R.A. and Grove, A.S. (2007), "Let chaos reign, then rein in chaos – repeatedly: managing strategic dynamics for corporate longevity", *Strategic Management Journal*, Vol. 28 No. 10, pp. 965-979.

Cameron, K. (2012), *Positive Leadership: Strategies for Extraordinary Performance*, Berrett-Koehler, San Francisco, CA.

Cameron, K.S. and Whetten, D.A. (1983), *Organizational Effectiveness: A Comparison of Multiple Models*, Academic Press, New York, NY.

Chang, J.J. and Carroll, J.D. (1969), *How to Use MDPREF, a Computer Program for Multidimensional Analysis of Preference Data*, unpublished paper, Bell Laboratories, Murray Hill, NJ.

Collins, J. (2001), *Good to Great: Why Some Companies Make the Leap … and Others Don't*, Harper Business, New York, NY.

Collis, D.J. and Rukstad, M.G. (2008), "Can you say what your strategy is?", *Harvard Business Review*, April, pp. 82-90.

Conant, J.S., Mokwa, M.P. and Varadarajan, P.R. (1990), "Strategic types, distinctive marketing competencies and organizational performance: a multiple measures-based study", *Strategic Management Journal*, Vol. 11 No. 5, pp. 365-383.

D'Aveni, R. (1994), *Hypercompetition: Managing the Dynamics of Strategic Maneuvering*, The Free Press, New York, NY.

de Wit, B. and Meyer, R. (2004), *Strategy: Process, Content, Context*, Thomson International Business Press, London.

Dess, G.G. and Davis, P.S. (1984), "Porter's (1980) generic strategies as determinants of strategic group membership and organizational performance", *Academy of Management Journal*, Vol. 27 No. 3, pp. 467-488.

Dimara, E., Skuras, D. and Tsekouras, K. (2004), "Strategic orientation and financial performance of firms implementing ISO 9000", *International Journal of Quality & Reliability Management*, Vol. 21 No. 1, pp. 72-89.

Doz, Y. and Kosonen, M. (2008), *Fast Strategy: How Strategic Agility Will Help You Stay Ahead of the Game*, Wharton School Publishing, Harlow.

Fahey, L. and Christensen, H.K. (1986), "Evaluating the research on strategy content", in Hunt, J.G. and Blair, J.D. (Eds), *1986 Yearly Review of Management of the Journal of Management*, pp. 167-183.

Faulkner, D. and Bowman, C. (1992), "Generic strategies and congruent organisational structures: some suggestions", *European Management Journal*, Vol. 10 No. 4, pp. 494-500.

Furrer, O., Thomas, H. and Goussevskaia, A. (2008), "The structure and evolution of the strategic management field: a content analysis of 26 years of strategic management research", *International Journal of Management Reviews*, Vol. 10 No. 1, pp. 1-23.

Galbraith, C. and Schendel, D. (1983), "An empirical analysis of strategy types", *Strategic Management Journal*, Vol. 4 No. 2, pp. 153-173.

Ghemawat, P. (2001), *Strategy and the Business Landscape*, Prentice Hall, Upper Saddle River, NJ.

Greve, H.R. (2003), *Organizational Learning from Performance Feedback: A Behavioral Perspective on Innovation and Change*, Cambridge University Press, Cambridge.

Guérard, S., Langley, A. and Seidl, D. (2013), "Rethinking the concept of performance in strategy research: towards a performativity perspective", *M@n@gement*, Vol. 16 No. 5, pp. 566-578.

Guttman, H.M. (2008), *Great Business Teams: Cracking the Code for Standout Performance*, Wiley, Hoboken, NJ.

Habbershon, T.G. and Williams, M.L. (1999), "A resource-based framework for assessing the strategic advantages of family firms", *Family Business Review*, Vol. 12 No. 1, pp. 1-25.

Hambrick, D.C. (1981), "Strategic awareness within top management teams", *Strategic Management Journal*, Vol. 2 No. 3, pp. 263-279.

Hambrick, D.C. (1983), "High profit strategies in mature capital goods industries: a contingency approach", *Academy of Management Journal*, Vol. 26 No. 4, pp. 687-707.

Hambrick, D.C. (1984), "Taxonomic approaches to studying strategy: some conceptual and methodological issues", *Journal of Management*, Vol. 10 No. 1, pp. 27-42.

Hambrick, D.C. and Fredrickson, J.W. (2001), "Are you sure you have a strategy?", *Academy of Management Executive*, Vol. 15 No. 4, pp. 48-59.

Hambrick, D.C., MacMillan, I.C. and Day, D.L. (1982), "Strategic attributes and performance in the BCG matrix: a PIMS-based analysis of industrial product businesses", *Academy of Management Journal*, Vol. 25 No. 3, pp. 510-531.

Haugland, S.A., Myrtveit, I. and Nygaard, A. (2007), "Market orientation and performance in the service industry: a data envelopment analysis", *Journal of Business Research*, Vol. 60 No. 11, pp. 1191-1197.

Hawes, J.M. and Crittenden, W.F. (1984), "A taxonomy of competitive retailing strategies", *Strategic Management Journal*, Vol. 5 No. 3, pp. 275-287.

Hill, C.W.L. (1988), "Differentiation versus low cost or differentiation and low cost: a contingency framework", *Academy of Management Review*, Vol. 13 No. 3, pp. 410-412.

Hofer, C.W. (1975), "Toward a contingency theory of business strategy", *Academy of Management Journal*, Vol. 18 No. 4, pp. 784-810.

Joiner, T.A., Spencer, X.S. and Salmon, S. (2009), "The effectiveness of flexible manufacturing strategies: the mediating role of performance measurement systems", *International Journal of Productivity and Performance Management*, Vol. 58 No. 2, pp. 119-135.

Juuti, P. and Luoma, M. (2009), *Strateginen Johtaminen: Miten Vastata Kompleksisen ja Postmodernin Ajan Haasteisiin?*, Otava, Keuruu.

Kaplan, R. and Norton, D. (1996), *The Balanced Scorecard: Translating Strategy into Action*, Harvard Business School Press, Boston, MA.

Katsikeas, C.S., Samiee, S. and Theodosiou, M. (2006), "Strategy fit and performance consequences of international marketing standardization", *Strategic Management Journal*, Vol. 27 No. 9, pp. 867-890.

Kimberly, J.R. and Quinn, R.E. (1984), *Managing Organizational Transitions*, Richard D. Irwin, Homewood, IL.

Knight, G.A. (2001), "Entrepreneurship and strategy in the international SME", *Journal of International Management*, Vol. 7 No. 3, pp. 155-171.

Kruskal, J.B. and Wish, M. (1978), *Multidimensional Scaling*, Sage Publications, Beverley Hills, CA.

Laitinen, E.K. (2002), "A dynamic performance measurement system: evidence from small Finnish technology companies", *Scandinavian Journal of Management*, Vol. 18 No. 1, pp. 65-99.

Lei, H. and Ouyang, L. (2012), "Studies on time-lag effect of corporate performance influenced by competitive strategy", *Cross-Cultural Communication*, Vol. 8 No. 6, pp. 93-98.

Martell, K. and Carroll, S.J. (1995), "How strategic *is* HRM?", *Human Resource Management*, Vol. 34 No. 2, pp. 253-267.

Miles, R. and Snow, C. (1978), *Organizational Strategy, Structure, and Process*, McGraw-Hill, New York, NY.

Miller, C.C. and Cardinal, L.B. (1994), "Strategic planning and firm performance: a synthesis of more than two decades of research", *Academy of Management Journal*, Vol. 37 No. 6, pp. 1649-1665.

Miller, D. and Friesen, P.H. (1986a), "Porter's (1980) generic strategies and performance: an empirical examination with American data. Part I: testing Porter", *Organization Studies*, Vol. 7 No. 1, pp. 37-55.

Miller, D. and Friesen, P.H. (1986b), "Porter's (1980) generic strategies and performance: an empirical examination with American data. Part II: performance implications", *Organization Studies*, Vol. 7 No. 3, pp. 255-261.

Mintzberg, H. (1987), "The strategy concept II: another look at why organizations need strategies", *California Management Review*, Vol. 30 No. 1, pp. 25-32.

Mintzberg, H. (1990), "The design school: reconsidering the basic premises of strategic management", *Strategic Management Journal*, Vol. 11 No. 3, pp. 171-195.

Montgomery, C.A., Wernerfelt, B. and Balakrishnan, S. (1989), "Strategy content and the research process: a critique and commentary", *Strategic Management Journal*, Vol. 10 No. 2, pp. 189-197.

Nag, R., Hambrick, D.C. and Chen, M.J. (2007), "What is strategic management, really? Inductive derivation of a consensus definition of the field", *Strategic Management Journal*, Vol. 28 No. 9, pp. 935-955.

Neves, J.C. and Lourenço, S. (2009), "Using data envelopment analysis to select strategies that improve the performance of hotel companies", *International Journal of Contemporary Hospitality Management*, Vol. 21 No. 6, pp. 698-712.

Park, K.M. (2007), "Antecedents of convergence and divergence in strategic positioning: the effects of performance and aspiration on the direction of strategic change", *Organization Science*, Vol. 18 No. 3, pp. 386-402.

Parnell, J.A. and Wright, P. (1993), "Generic strategy and performance: an empirical test of the miles and snow typology", *British Journal of Management*, Vol. 4 No. 1, pp. 29-36.

Pertusa-Ortega, E.M., Molina-Azorin, J.F. and Claver-Cortés, E. (2010), "Competitive strategy, structure and firm performance", *Management Decision*, Vol. 48 No. 8, pp. 1282-1303.

Peters, T. and Waterman, R. (1982), *In Search of Excellence: Lessons from America's Best Run Companies*, Harper & Row, New York, NY.

Porter, M.E. (1980), *Competitive Strategy*, Free Press, New York, NY.

Porter, M.E. (1990), *The Competitive Advantage of Nations*, Free Press, New York, NY.

Richard, P.J., Devinney, T.M., Yip, G.S. and Johnson, G. (2009), "Measuring organizational performance: towards methodological best practice", *Journal of Management*, Vol. 35 No. 3, pp. 718-804.

Schendel, D.E. and Hofer, C.W. (1979), *Strategic Management: A New View of Business Policy and Planning*, Little, Brown and Company, Boston, MA.

Smart, C. and Vertinsky, I. (1984), "Strategy and the environment: a study of corporate responses to crises", *Strategic Management Journal*, Vol. 5 No. 3, pp. 199-213.

Spanos, Y.E., Zaralis, G. and Lioukas, S. (2004), "Strategy and industry effects on profitability: evidence from Greece", *Strategic Management Journal*, Vol. 25 No. 2, pp. 139-165.

Stacey, R. (2003), *Strategic Management and Organizational Dynamics. The Challenge of Complexity*, Prentice Hall, Harlow.

Treacy, M. and Wiersema, F. (1993), "Customer intimacy and other value disciplines", *Harvard Business Review*, January-February, pp. 84-93.

Venkatraman, N. and Ramanujam, V. (1986), "Measurement of business performance in strategy research: a comparison of approaches", *Academy of Management Review*, Vol. 11 No. 4, pp. 801-814.

Vorhies, D.W., Morgan, R.E. and Autry, C.W. (2009), "Product-market strategy and the marketing capabilities of the firm: impact on market effectiveness and cash flow performance", *Strategic Management Journal*, Vol. 30 No. 12, pp. 1310-1334.

Yeung, J.H., Selen, W., Sum, C.C. and Huo, B. (2006), "Linking financial performance to strategic orientation and operational priorities: and empirical study of third-party logistics providers", *International Journal of Physical Distribution & Logistics Management*, Vol. 36 No. 3, pp. 210-230.

Zahra, S.A. (1996), "Technology strategy and financial performance: examining the moderating role of the firm's competitive environment", *Journal of Business Venturing*, Vol. 11 No. 3, pp. 189-219.

Appendix

Company group 1

Average values of strategy content areas (scale 1-20):

- Effective and improving operations 10.75
- Structural renewal 2.33
- Dynamic networks 3.06
- Strengthening presence 6.90
- Social and ecological awareness 7.24
- Customer value through competence 15.26

Companies and industry sectors (SIC) of the primary business:

- 3 Step IT Professional, scientific, and technical activities
- Aktia Financial and insurance activities
- Citycon Real estate activities
- Componenta Manufacturing
- Finnair Transportation and storage
- Fortum Electricity, gas, steam, and air conditioning supply
- Ilmarinen Compulsory social security
- Itella Transportation and storage
- Lite-On Mobile Manufacturing
- Lival Manufacturing
- Mehiläinen Human health and social work activities
- Metso Manufacturing
- Neste Oil Manufacturing

- OP-Pohjola — Financial and insurance services
- Outokumpu — Manufacturing
- Patria — Manufacturing
- PKC Group — Manufacturing
- Pöyry — Professional, scientific, and technical activities
- S-ryhmä — Wholesale and retail trade
- Sponda — Real estate activities
- Teboil — Wholesale and retail trade
- Tech Data Finland — Wholesale and retail trade
- Tikkurila — Manufacturing
- UPM — Manufacturing
- Valio — Manufacturing
- Vantaan Energia — Electricity, gas, steam, and air conditioning supply
- Vapo — Mining and quarrying
- Veikkaus — Arts, entertainment and recreation
- Viking Line — Transportation and storage
- VVO — Real estate activities
- Yleisradio — Information and communication

Company group 2
Average values of strategy content areas (scale 1-20):

- Effective and improving operations — 11.50
- Structural renewal — 6.73
- Dynamic networks — 2.28
- Strengthening presence — 14.40
- Social and ecological awareness — 1.00
- Customer value through competence — 1.00

Companies and industry sectors (SIC) of the primary business:

- Altia — Manufacturing
- Cargotec — Manufacturing
- Nokia — Manufacturing
- Powerflute — Manufacturing
- Rapala VMC — Manufacturing
- Rautaruukki — Manufacturing
- Stora Enso — Manufacturing.
- YIT — Construction

Company group 3
Average values of strategy content areas (scale 1-20):

- Effective and improving operations 12.73
- Structural renewal 4.69
- Dynamic networks 4.39
- Strengthening presence 11.00
- Social and ecological awareness 4.73
- Customer value through competence 11.86

Companies and industry sectors (SIC) of the primary business:

- Alma Media Information and communication
- Destia Professional, scientific, and technical activities
- DNA Information and communication
- Finnlines Transportation and storage
- HKScan Manufacturing
- Huhtamäki Manufacturing
- Kone Manufacturing
- Konecranes Manufacturing
- KWH-Yhtymä Manufacturing
- L&T Sewerage, waste management, and remediation activities
- Nokian Renkaat Manufacturing
- Orion Manufacturing
- Outotec Manufacturing
- Raisio Manufacturing
- Sampo Financial and insurance activities
- SRV Yhtiöt Construction
- Tieto Information and communication
- Vacon Manufacturing
- Vaisala Manufacturing
- Varma Compulsory social security
- VR Group Transportation and storage
- Wärtsilä Manufacturing

Company group 4
Average values of strategy content areas (scale 1-20):

- Effective and improving operations 11.31
- Structural renewal 5.80
- Dynamic networks 3.46

- Strengthening presence 14.20
- Social and ecological awareness 3.88
- Customer value through competence 7.29

Companies and industry sectors (SIC) of the primary business:

- Ahlstrom Manufacturing
- Alko Wholesale and retail trade
- Amer Sports Manufacturing
- Atria Manufacturing
- Elcoteq Manufacturing
- Fiskars Manufacturing
- Kesko Wholesale and retail trade
- Lemminkäinen Construction
- Oriola KD Wholesale and retail trade
- Salcomp Manufacturing
- Sanoma Information and communication
- TeliaSonera Information and communication
- Uponor Manufacturing

About the author
Dr Mikko Antero Luoma is a Research Director in the Department of Management at the University of Vaasa, Finland. His research is concentrated on strategic management, top management teams, human resource management, and the applications of complexity in management. Dr Mikko Antero Luoma can be contacted at: mikko.a.luoma@gmail.com