Competitive Dynamics, Strategic Consistency and Organizational Survival

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Abstract

This paper investigates strategic consistency in competitive behavior. Drawing on competitive dynamics and evolutionary perspectives, we show how organizational structure and strategy on the one hand and organizational resources on the other influence the level of strategic consistency and how historical patterns of competitive actions recursively build these organizational properties. Our historical study demonstrates that the mindfulness of the firm administration and the level of strategic consistency are tightly related, leading to survival or death in a competitive setting. Essentially, strategic consistency is related to both organizational survival and the most efficient movement in a competitive landscape. On the other hand, a focused and resourceful administrative body and widely accepted strategic focus are important antecedents of consistency. Our results offer an alternative, long-term perspective to study competitive actions with consequent practical implications.

Keywords: strategic consistency, competitive dynamics, industry evolution, business history, retail industry

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INTRODUCTION

An interesting theme in recent strategic management literature has been the treatment of firms as engaged in continuous and intensive competition with rivals (e.g. Ketchen *et al.*, 2004; Ferrier, 2001). For example, success has been linked with such properties as aggressiveness and speed in competitive behavior (Chen and MacMillan, 1992; Ferrier *et al.*, 1999). This portrait of firms is especially dominant in the competitive dynamics literature in which an integrating theme has been the treatment of competitive actions primarily as a mechanism of short-term dynamics in a competitive environment characterized by inter-firm dyads (for reviews see Smith *et al.*, 2001; Ketchen *et al.*, 2004).

The argument of this article is very simple. We acknowledge that short-term dynamics of competition is a valid and important perspective to strategy. Indeed, competitive actions may impose idiosyncratic consequences which lead to changes in the competitive positions of firms (e.g. Miller and Chen, 1994). However, we argue that (ultimately) no firm can have a long-term competitive advantage without being consistent in its activities. Consequently, we concentrate here on strategic consistency in the patterns of competitive actions: being consistent means that a firm's actions conjunct both with changes in the business environment (necessitating adaptation) (Zajac *et al.*, 2000; Siggelkow, 2001) and with the firm's own history (necessitating continuity) (Nelson & Winter, 1982; Levinthal & Rerup, 2006). In a stable environment (cf. Zajac *et al.*, 2000) this means following a constant trajectory of action, whereas in a more dynamic environment consistency refers to the most efficient movement from one position to the next. In both cases the mindfulness (Levinthal and Rerup, 2006) or cognitive awareness (Chen, 1996) of the organizational actors plays a crucial role.

When studying strategic consistency, our key unit of analysis is the series or pattern of competitive actions. In the spirit of Mintzberg (1978: 934), we may see strategy as ”…a pattern in a stream of decisions”. This idea is clearly an underlying theme in competitive dynamics research (e.g. Miller and Chen, 1994), and motivates us to consider the influence of competitive actions and strategic consistency on long-term firm evolution. From this perspective, competitive actions can be seen as movement in a competitive landscape (c.f. Gavetti and Levinthal, 2000). Each individual action is not merely a competitive attack or a response but moves the firm to some new point in the competitive landscape. What is more, competitive actions constantly change the landscape and the configuration of the firm (Nelson and Winter, 1982; Miller, 1986). This means that the outcomes and antecedents of competitive actions are not directional. Rather, they are systemic and recursive, emphasizing the process nature of competition and, thus, the importance of strategic consistency (Pettigrew, 1985; Farjoun, 2002).

Our research can be seen as an answer to the calls for more longitudinal (e.g. Miller and Chen, 1994) and historical (Porter, 1991) approaches to competitive strategy. We build our theorizing on a historical study of four dominant grocery-sector retail organizations in a closed competitive setting in Finland 1945-1995. Our research site can be seen as an illustrative micro-cosmos for studying strategic consistency. The period included both stable and increasingly dynamic sub-periods which lead to changes in the competitive positions of the firms and, finally, to the demise of two of the studied four organizations towards the end of the period of study. Essentially, the results of our historical study show that strategic consistency is related to both organizational survival and the most efficient movement in the competitive landscape.

We contribute to the competitive dynamics literature in three distinct ways. First, the longitudinal perspective on competition is a reminder that maintaining an optimal level of strategic consistency is an important source of long-term competitive advantage. Even in an intensive competitive situation successful companies are expected to maintain an understanding of the direction and pace of their evolution. Despite earlier related concepts such as convergence (Tushman and

Romanelli, 1985), momentum (Miller and Friesen, 1980), inertia (Miller and Chen, 1994) or path dependence (Schreyögg and Kliesch-Eberl, 2007) our study is the first that aims at an evolutionary conceptualization of strategic consistency. Second, our study complements existing theoretical understanding of the organizational antecedents of competitive behavior. Previously, competitive dynamics researchers have identified the awareness, motives and capabilities (AMC) (Chen, 1996; Miller and Chen, 1994) of a firm as important explanations of competitive behavior. Our historical small-N perspective allowed us to find three organizational properties that complement the AMC framework. More specifically, we found that a focused and resourceful administrative body enhances awareness to act; a widely accepted strategic focus motivates the firm to utilize a balanced repertoire of actions; and finally, sufficient slack resources create the capacity to use a variety of actions in balanced manner. Likewise, a weak and/or fragmented administrative body, contested strategic direction and insufficient slack resources may result in strategic inconsistency (cf. Hambrick and D'Aveni, 1988; Hambrick and D'Aveni, 1992). Third, our historical methodology and the created measure of strategic consistency offer an alternative way to study competitive dynamics and, especially, the organizational factors underpinning competitive behavior.

We start our article with a literature review which result in a comprehensive systemic framework (cf. Farjoun, 2002; Durand, 2006) and a set of related research questions that focus on the antecedents and process of strategic consistency. Our historical account concentrates on the issues raised in the research framework. Also, the historical analysis offers answers to the research questions in the form of three research propositions. These propositions are then tested and developed with a quantitative measurement of strategic consistency. The paper concludes with ideas for future studies and for practicing managers.

THEORETICAL FRAMEWORK

Figure 1 summarizes our model of the process which leads to different levels of strategic consistency and finally to organizational survival or death.

Insert Figure 1 around here

The key elements of the framework are competitive actions, the level of strategic consistency, market process and feedback, organizational structure and strategy, and organizational resources. The framework includes an assumed relationship with the surrounding society and competitors. In the following, we explicate our conceptualization, resulting in three research questions.

Competitive actions and firm evolution

By definition, competitive dynamics refers to the dynamics in the series of initiative and responsive competitive actions among firms in a competitive situation: “the study of competitive dynamics is the study of how firm action affects competitors, competitive advantage, and performance” (Smith *et al.*, 2001). Accordingly, the key unit of analysis is an individual *competitive action*. Individual initiative and responsive actions by rival companies, taken together, represent competition in a specific population of firms. The popular conceptualization of competition has been that initiative actions directly mount competitive pressure on competitors, thereby ”provoking” (Chen *et al.*, p. 440), “eliciting” (Chen and MacMillan, 1992, p. 540), or “inviting” (Chen and Miller, 1994, p. 86; Baum and Korn, 1999, p. 252) them to respond. Or, put differently, initiative actions are (at least implicitly) primarily targeted towards competing companies.

We conceptualize competition as the exchange of initiative and responsive actions mediated by the market process. This argument follows the tradition of Austrian economics (for a review see

Jacobson, 1992) and emphasizes the importance of market evolution (cf. Nelson and Winter, 1982). Thus, the market is seen as a process that signals for market participants what courses of action to take and from which to forbear (von Mises, 1949, pp. 258-259). Accordingly, the market prices and the consequent economic calculations by market participants are seen as signals for favorable and unfavorable courses of actions. Thus, the market process is "continually changing" (von Mises, 1949, p. 258; cf. Farjoun, 2002). A central driver in this change is the actions of entrepreneurial actors who "*guess* what the consumers would like to have and are intent upon providing them with these things" (von Mises, 1949, p. 333, emphasis added).

Building on the idea of the market process as a link between competitive actions and the outcomes of these actions, we do not solely focus on the direct dyadic exchange of competitive actions. Instead, we assume that competing companies dominantly engage in educated experimenting with their actions, and that all competing companies, at a given point in time, will base their future actions on the outcomes that the market process has produced for prior competitive actions (cf. Barney and Zajac, 1994; Levinthal and Warglien 1999). By "dominantly" we mean that we also allow direct challenge-response exchange of competitive actions to take place, but we view such interaction outside the market process more as an exception than the norm. For instance, a company may feel publicly attacked by a particular initiative action and feel compelled to respond in order to defend its reputation.

As competitive actions have important long-term effects on firm evolution it is of crucial importance to understand how individual actions are orchestrated over time. For example, an aggressive bundle of competitive actions may be seen as attractive in an intensive competitive situation. The risks of such decisions, however, are considerable: do the actions build on existing capabilities and do they build future capabilities; do the actions increase or decrease legitimacy among organizational stakeholders; does the firm have enough organizational slack for excessive activities; and, most importantly, do the actions conjunct with organizational strategy and vision?

Strategic consistency

Individual competitive actions do not enhance a firm's survival probabilities without being consistent both with the firm's own history and with the rate and the nature of change in the environment (Barnett and Burgelman, 1996; Zajac *et al.*, 2000). Both of these issues have been studied previously, but not as an integrated construct. For example, Galbraith and Schendel (1983) found that firms in the consumer goods industry followed a 'continuity' strategy which was manifested in an incremental change policy and a low-risk attitude toward investments. For others (e.g. Harrison *et al.*, 1993), consistency has meant a balance in resource allocation in diversified firms. Consistency has also been referred to as a balance between strategic choices across business and functional levels of strategy (Nath and Sudharstnan, 1994). On the other hand, researchers studying dynamic fit (Siggelkow, 2001; Zajac *et al.*, 2000) and the evolution of industrial populations (Lewin and Volberda, 1999; Raff, 2000) have noted that firm-level changes must concur with the rate of change in the business context (e.g. changes in markets, regulation, macro-culture, and technology) to be able to survive (Cattani, 2006; Rosenbloom, 2000). Next, we integrate these two perspectives into strategic consistency from a competitive action perspective.

Considering a firm operating in a relatively stable ('no-change') environment, strategic consistency can be defined as the tendency of an organization to preserve its state of rest or uniform action. From this perspective, strategic consistency refers to comparability in the repertoire and amount of competitive actions that an organization undertakes when conducting its competitive stance. Thus, a high level of strategic consistency can signal the existence of a strong explicit or implicit competitive strategy, or simply sunk costs in terms of 'stacked' structural properties. In a stable setting, this conceptualization of consistency tangents the theories underlining the effects of inertia (Hannan and Freeman, 1984; Miller and Chen, 1994) and path dependence (e.g. David, 2001). Thus, in a business environment that does not change, or changes only very incrementally (e.g. in a regulated market) firms may be successful by being fully consistent; i.e. continuously following a constant trajectory of action.

In a dynamic environment, however, the above approach to consistency is not able to explain competitive success. As evolutionary strategy researchers have proposed, firm-level competitive behavior is relative to the nature and the pace of environmental change (Hannan and Freeman, 1989: Lewin and Volberda, 1999; Sorenson, 2000). In an extreme reading of this, fully adaptive firms should change the direction and speed of their activities to follow very closely what happens in their environment (Brown and Eisenhardt, 1997). However, full adaptation raises problems which may put the existence of the firm at risk. First, frequent changes in competitive behavior may decrease the legitimacy of the firm and lead to unwanted actions by important stakeholders (Meyer and Rowan, 1977; Pfeffer and Salancik, 1978). Second, actions which are not in line with past behavior may lead to an imbalance between organizational capabilities and current competitive actions (cf. March, 1991). This may cause a rapid increase in costs and an erosion in the competitive position of the firm (Hambrick and D'Aveni, 1988; Ferrier *et al.*, 1999). Finally, without an extensive repertoire of available actions and capabilities stemming from the historical activities of the firm, firms may have difficulty interpreting the current competitive situation and determining what would be a mindful set of competitive actions (Spender, 1996; Farjoun, 2002; Levinthal and Rerup, 2006). "Mindful," in this context, refers to an awareness of the context and the capability to respond to signals coming from the marketplace (Levinthal and Rerup, 2006; Weick and Sutcliffe, 2006; Chen, 1996). Thus, in a dynamic environment, strategic consistency can be defined as an action pattern that incrementally changes and develops the repertoire of competitive actions and the underpinning capabilities, paving the way for a new strategic direction.

Taking these two perspectives together, despite rapid environmental changes, in order to be successful firms should be able to undertake mindful actions which, in turn, are manifested in an optimal level of strategic consistency. Consequently, the relationship between strategic consistency and performance in a dynamic environment is fundamentally curvilinear: over time, the optimal level of consistency fills somewhere between being fully consistent with the past (no change in direction or position) on the one hand, and being fully adaptive with environmental change (changing everything) on the other (cf. Hambrick and D'Aveni, 1988; Zajac *et al.*, 2000). Indeed, our starting point is that individual competitive actions may be visualized as movement in the competitive landscape (cf. Gavetti and Levinthal, 2000). The more mindful the firms are, the better they should be prepared for changes of the landscape. Consequently, the optimal level of strategic consistency in behavior refers to the most efficient movement from one position to the next. For example, if a firm is uncertain (i.e. less mindful) how and why the environment is changing, it will either conduct actions which are familiar to it (Tripsas and Gavetti, 2000) or, alternatively, it will increase its search activity by launching a number of competitive actions which may lead it to a new position in the landscape (Barnett *et al.*, 1994; Levinthal and Warglien, 1999). This, however, comes with a higher transformation cost than in the case of strategic consistency, leading to weakened business performance (cf. Hambrick and D'Aveni, 1988).

Antecedents of strategic consistency: Feedback loops and organizational factors

Considering the feedback loops in strategic consistency, we may see the 1st order effect of actions as increasing dynamism in the market, potentially leading to changes in competitive positions. Consequently, the 2nd order effect of competitive actions is manifested in the evolution of the repertoire of competitive actions and related capabilities in the firm (e.g. Helfat and Raubitschek, 2000), and in the cognitions which constitute the focus of awareness and motivation of top-management (Chen, 1996; Chen *et al.*, 2007). Obviously, a firm can conduct actions that do not conjunct with the market process (Tripsas and Gavetti, 2000). Despite the lack of a link to the marketplace, these actions change the firm, its capabilities, and its formal structure and strategy (cf. Barney and Zajac, 1994). In both of these cases, the organizational context (Barney and Zajac, 1994) primarily explains the type and number of realized competitive actions. For analytical purposes, we parcel the organizational context to two interrelated elements: structure and strategy, and organizational resources[1].

The formal structure and strategy of a firm can be defined as a filter that either signals for changes in the action patterns or acts as a force of inertia in the firm development (Miller and Chen, 1994). For example, a firm that has a strong imprint to conduct certain types of activities due to its formal structure and strategic mission may ignore the dynamism in the surrounding environment (e.g. Levinthal and March, 1993; Christensen and Bower, 1996; Dowell and Swaminathan, 2006; Siggelkow, 2001). One example is an ideologically laden organization (Simons and Ingram, 1997), which may follow a suboptimal trajectory even if it is recognized that an alternative way would exist. However, radical change in the marketplace can also favor structural properties and strategies that were earlier suboptimal vis-à-vis competitors (Cattani, 2006; Noda and Bower, 1996).

In the literature focusing on organizational inertia, it is recognized that the core elements of an organization are very difficult to change (Hannan and Freeman, 1984; March, 1981). Typically, the imprinting conditions of any organization constrain opportunities for fundamental strategic change (e.g. Tripsas and Gavetti, 2000; Dowell and Swaminathan, 2006). Also, the more complex an organization is, the more probable it is that an impetus for radical change will activate political coalitions that dispute the issue and hinder opportunities to react to market feedback (Cohen *et al.*, 1972; Pettigrew, 1973; Hannan and Freeman, 1984). Alternatively, a firm may choose to create buffers between the firm and its competition by changing its strategy and structure. For example, Barnett *et al.* (1994) showed

[1] Alternative ways to conceptualize organizational context would include, e.g., Miller's (1986) theory of configurations or the famous Miles and Snow (1978) typology of strategic postures (defender; prospector; analyzer; reactor). As these taxonomies (Miller) and typologies (Miller and Snow) primarily concentrate on industrial firms, their use in the analysis of retail competition would require an extensive modification. We also wanted to avoid a priori explanation of the nature of the firms. Instead, the historical approach allows more inductive and context-specific theorizing.

that firms may choose a multiunit strategy which should enhance survival opportunities. At the same time, however, a multiunit strategy may weaken opportunities for learning and thus mindfulness of search behavior by reducing incentives to 'learn or die', decreasing sensitivity to local business-specific adaptation, and finally, compromising the existence and transferability of capabilities needed in business-specific competition. Thus, a multiunit strategy similarly weakens the signals coming from the marketplace as does a sub-optimal organizational imprint (Sorenson *et al.*, 2006).

The main message of the above discussion is that without an extensive bundle of capabilities and knowledge of 'how things work', firms are unable to conduct consistent actions (cf. Nelson & Winter, 1982). Accordingly, strategic consistency requires attention (Ocasio, 1997) and other organizational slack resources (Bourgeois, 1981; Chakravarthy, 1986; Hambrick and D'Aveni, 1988) which are not hindered by fragmented, stagnated or diversified organizational strategy and structure (cf. Burgelman, 1994; Miller and Chen, 1994).

In general, there are opposing views on the effect of slack resources on the competitive behavior of a firm (Tan and Peng, 2003). We follow here scholars (e.g. Cyert and March, 1963; Thompson, 1967; Hambrick and D'Aveni, 1988) who see organizational slack as beneficial for a company as it provides resources to innovate and adapt to changes in the environment[2]. Research on competitive dynamics has found that organizational slack tends to suppress initiative actions but, in turn, promotes responsive actions (Chen and Hambrick, 1995). Furthermore, organizational slack allows firms to respond in more creative ways (Smith *et al.*, 1991) which, in turn, diminishes the tendency to imitate rivals' initiative actions. We treat organizational slack as a necessary (but not sufficient) condition for strategic consistency, as both absorbed and unabsorbed slack are needed in the long-term orchestration of competitive behavior (cf. Bourgeois, 1981). Also, organizational resources

[2] We note that, e.g., Fama (1980) and Jensen and Meckling (1976) have argued that organizational slack is harmful as it creates inefficiency and suppresses innovativeness. However, in our case the measured competitive actions would simply be impossible without both absorbed and unabsorbed slack resources.

are fundamentally a result of the firm-marketplace interrelationship. For example, consistent and appropriate actions from the perspective of customers and other stakeholders potentially enhance the firm performance and increase organizational slack resources. On the contrary, inconsistent actions are costly and may decrease the firm's legitimacy among important stakeholders. Over time, this leads to diminishing slack resources, a narrowing repertoire of available actions, and increasing problems in maintaining an optimal level of strategic consistency (Hambrick and D'Aveni, 1988; Christensen and Bower, 1996; Tripsas and Gavetti, 2000).

Finally, in the management of the fundamental activities in the market process and organizational resource allocation, the role of the administrative body of the organization is crucial, as it makes the key choices influencing firm evolution (Simon, 1947; Bower, 1970; Hambrick and Mason, 1984; Hambrick and D'Aveni, 1992). In our study, the administrative body refers mainly to the top management team, but also to administrative resources devoted to environmental scanning, strategic planning and controlling the implementation of strategic decisions (cf. Eisenhardt and Zbaracki, 1992; Burgelman, 1994; Noda and Bower, 1996).

Research questions

The following research questions are drawn from the theoretical framework and will guide our historical analysis:

1. How and why the organizational structure and strategy of the studied retail organizations is related to different levels of strategic consistency?
2. How and why the organizational resources of the studied retail organizations are related to different levels of strategic consistency? And finally,
3. To what extent does the level of strategic consistency explain organizational survival and death?

To answer these research questions, we conducted an in-depth historical analysis of the development of the Finnish retail industry after World War II. We, especially, concentrated on identifying the decisions and development paths related to strategy and structure. The findings of the historical analysis led to three research propositions, which are then scrutinized in our quantitative analysis of the levels of strategic consistency. This allows us to draw conclusions on the antecedents and consequences of strategic consistency.

A HISTORY OF COMPETITION IN THE FINNISH RETAIL INDUSTRY

In order to understand the context-specific antecedents to and consequences of competitive behavior and the levels of strategic consistency, we next offer an historical account of the development of the Finnish grocery market and, especially, of the activities of the main industry players. We concentrate on showing the corporate level structural properties and strategic foci, as these are both the antecedent and consequence of market-specific competitive behavior in the shared competitive landscape.

Our research focuses on a retail industry in Finland, and more specifically on its grocery sector, during the post-war period of 1945-1995. During this period, Finnish society went through a dramatic transformation from a pre-industrial, regulated economy to a post-industrial high-technology society within the European Union. In the grocery sector, competition intensified acutely in the 1960s. The four dominant retail organizations during the period of study were Kesko, SOK, TUKO and EKA[3]. At the end of the studied period, two of these organizations (TUKO and EKA) had met their demise. EKA was proclaimed insolvent in 1992 and TUKO was split and restructured in 1996, after years of financial crisis. The four retail organizations dominated the grocery sector totally during the entire period of the study. Other retailers never accounted for more than 5-10 per cent of total sales volume.

[3] TUKO=Tukkukauppojen Oy, Kesko=Kauppiaitten Keskuskunta r.l. osuuskunta, SOK=Suomen Osuuskauppojen

According to the major institutional and environmental changes, we have divided the observation period of 1945-1995 into three distinct sub-periods: (1) 1945-1965, "*The era of regulation*"; (2) 1966-1980, "*The era of deregulation*"; and (3) 1981-1995, "*The era of new means of competition.*" The first sub-period characteristically continued wartime (1941-1945) regulatory policies which constrained, for example, the availability of many grocery products (typically coffee, sugar and other imported items), prices and advertising. Finland in 1945 was a society with low income levels, a large rural sector and consequent low demand for basic grocery items such as bread and meat. Towards the mid-1960s, the consumer market changed considerably due to increasing urbanization, motorization and constantly increasing levels of income: Finland as a market for the grocery business rapidly achieved features similar to other Western societies. In the 1980s, the major development changing the grocery competition was an increasing economic integration with other Western European countries as well as a dramatic change in information technology related to value chain management in retail companies.

Structure, Strategy and Organizational Resources

In terms of their structure and strategy the organizations fall into two broad categories. Kesko and TUKO represent organizations whose original purpose was to support the business of their owners with wholesale operations. TUKO was owned by dozens of small wholesale companies whereas Kesko belonged to private local retailers. EKA and SOK, in turn, were owned by regional co-operatives. SOK was an agrarian co-operative, whereas EKA was an ideological co-operative controlled by the Social Democratic and Communist parties and labor unions. It is important to note, however, that in the 1960s all four organizations were predominantly grocery organizations. Even in EKA, which was the most diversified of the four organizations, the grocery sector accounted for over 80 percent of total sales in

Keskusosuuskunta r.l. EKA=E-osuuskunta EKA (1918—1982 OTK=Osuustukkukauppa).

the 1960s. Thus, each organization was involved in competition for the same customers in a common target market. Table 1 summarizes the main characteristics of the four organizations. Table 2, in turn, summarizes the historical development of the Finnish grocery sector.

Insert Table 1 around here.

Insert Table 2 around here.

The dramatic change in the 1960s materialized in two issues. First, the grocery market was de-regulated, which meant increasing opportunities, especially in marketing. Second, simultaneously with the deregulation process, a new type of grocery shop – the self-service outlet – quickly came to dominate the market. As can be expected, the transformation period from a regulated to a deregulated market was perceived differently in the four retail organizations. They were differently prepared and motivated for the changing environment. Especially the strategic foci of the organizations played an important part in this process.

Insert Figure 2 around here.

Figure 2 illustrates the strategic focus of the four organizations given to wholesaling, retailing and manufacturing operations[4]. The frequency and rhythm of decisions evident in Figure 2

[4] We constructed an event database for each organization in which the key historical events are sequenced chronologically in accordance with issues related to corporate strategy. These events encompass both discrete competitive actions and explicit expressions concerning intended future actions, i.e. overt signaling actions (Lyon and Ferrier 2002). Altogether, we found 2207 such events that constituted the historical chronologies of the four organizations. The events were coded into three aggregate-level categories: 1. grocery retailing, 2. wholesaling, and 3. other industries. Sources: Annual reports 1945-1996; Talouselämä (Finnish business magazine) 1953-1995; Company histories as listed in the references.

demonstrates the differences in how the four organizations evolved in terms of the corporate strategy underpinning their market-specific competitive actions in the grocery business (cf. our quantitative analysis).

Kesko concentrated on business areas that were directly or closely related to the grocery business. It started to invest in grocery-related activities already in the mid-1950s, and continued this until the end of our research period. Thus, Kesko was the most active of the four organizations to develop its grocery business already a decade before the industry was deregulated in the 1960s. The activities of Kesko in the grocery and retail business before deregulation included, for example, the development of new store types, education of retail personnel, attending international retail conferences, adopting a punch card system for inventory control, systematized acquisition of sites for new outlets, market research, establishing an advertising department, and the building of a unified brand image under the “K” label. In strategic terms, Kesko concentrated almost entirely on its core activities around the grocery business.

Kesko was organizationally motivated and prepared to exploit the emerging opportunities since it was a combination of independent retailers with a light central administrative body. Furthermore, individual retailers had a strong economic incentive to be flexible. They acted as entrepreneurs and jointly owned the central organization. In Kesko’s organization, the entrepreneurs also held many representative positions, and in practice controlled strategic decision-making. In essence, throughout the organization, actors acknowledged the wider development trends and had the motivation to act accordingly.

TUKO’s attention was, and remained in, the wholesale business. Taking into consideration the development in business logic in the grocery sector since the 1940s, TUKO’s strategic choices were almost contrary to changes in the environment. When Kesko started to strengthen its grocery-related capabilities in the early 1950s, TUKO focused further on wholesaling. During the first sub-period of our study, TUKO, for instance, invested in centralized freezing and cold storage and banana-ripening facilities, increased its imports of foreign groceries (such as vegetables), and generally made efforts to systematize and centralize its wholesale procurement. This tendency continued until the early 1980s. During the whole period after deregulation, the most severe problem of TUKO was the high mortality rate among country stores and small urban service stores. This made the position of many smaller wholesalers problematic since their customer companies were closing. However, the small wholesale companies were not usually willing to exit before actual bankruptcy. Consequently, the non-profitable wholesale companies demanded both financial and managerial resources from TUKO's central organization:

> "TUKO cannot be managed in an efficient way if the owner-wholesalers do not follow existing contracts and TUKO consequently loses its profitability …our market position is weakening rapidly, which is a result of the low number of new grocery outlets and the overall aging of the existing outlets." (CEO, Marketing Strategy Meeting of TUKO, September 1976)

In addition to the problems in wholesaling, TUKO's grocery business until 1973 was divided into three distinct chains and into independent stores that had contractual relations with wholesalers but usually no marketing co-operation. The TUKO group, for example, invested aggressively in advertising (e.g. almost 50 per cent of all advertising volume in 1970 in the whole industry), but the subsequent market share effects were rather modest. In the 1980s, TUKO's inability to channel resources to new hypermarkets and related large-scale advertising made it both an under-advertiser and an under-the-average store founder in comparison with the other three organizations. In the early 1990s, TUKO's competitive and economic position was so seriously weakened that it no longer had any possibility to challenge Kesko or SOK. In 1996, TUKO was acquired by Kesko, although later divested due to a decision made by the European Union competition authorities.

We may say that TUKO's owners intentionally decided to behave against the changes in the business environment. It is characteristic that, for example, in 1977 when its top management team explained that TUKO should focus on large-scale retailing and hypermarkets, one of the most influential wholesalers commented: “we all know that we should do that — but we cannot because we are not Kesko… we are a wholesale company…” (Marketing Strategy Meeting of TUKO, September 1977). In short, TUKO’s top management recognized the changes in the competitive environment but the entire organization and especially the major owners were not motivated to react:

> “The problem of TUKO is that the more independently the wholesalers make decisions concerning the grocery business (especially related to outlet building) the lower the probability that we can reach the expected level of profitability. In other words, the long-term competitiveness of the TUKO group is in controversy with the independence of its wholesaler-owners.” (CEO in Strategic planning meeting October 1976)
> “We have had no comprehensive planning or strategy. Rather, we have acted or not acted without thinking…our competitors have had a long-term vision and plan and consequently they have gained market share.” (TUKO manager, Board meeting 1974).

The third observation from Figure 2 is that after the mid-1960s EKA started to intensify its activities in non-grocery businesses. At that time EKA had its own production in, for example, wood products, animal feed, roofing felt, book printing, furniture, building bricks, and quarrying. The basic logic in this development was that when grocery competition started to intensify, EKA’s top management started to tighten the link between its own industrial production and groceries. For example, in the mid-1960s when over 80 percent of EKA’s sales and over 90 percent of its profits were produced in the grocery business, over 80 percent of its investments were channeled to manufacturing and other unrelated businesses. Over time, these decisions accumulated in an increasingly complex organizational structure. The grocery sector remained the most profitable and largest business segment, but the attention of the top management was increasingly focused on the management of the other sectors of the conglomerate. The following dialogue in the board of EKA in 1969 illustrates the difficulties that the multi-unit strategy fostered:

> CEO of the grocery division: ”…we must concentrate all our efforts to develop the grocery business, which generates over 90 percent of our profits.”
>
> Director of the board: ”This was not a planned speech but rather a personal opinion…these numbers are dramatized. The fact is that it is very difficult to develop the grocery business in the current organizational structure. The board and top managers of EKA cannot take the full responsibility for the problems.”
>
> CEO of the grocery division: ”Our store concepts do not match our competitors’ stores…sometimes I think that we are not focused. There is no direction in our operations.”

Director of the board: ”…as long as the current organizational structure stands…the management of EKA has no possibilities to make an intervention in store founding.”

EKA’s strategic problems continued in the 1970s and 1980s. Compromises in strategies, an emphasis on its own manufacturing activities and political tension between top executives and local co-operatives undermined most re-organization attempts, the final result being its *de facto* bankruptcy in 1992. Due to the fact that the entire company was established on the basis of a socialist ideology which aimed at serving working-class customers, its strategic options in practice were rather limited.

Among the four organizations, SOK’s development was similar to that of Kesko. For example, it was active in the grocery business already before the deregulation, constantly invested in developing its marketing capabilities and was relatively attentive towards the consumer market. Indeed, from the beginning of our period of study, SOK was active in experimenting with new methods of marketing by, for example, having national “Christmas parades,” testing television advertising when television broadcasting began in Finland in the early 1950s, and utilizing the Olympic Games held in Finland in 1952 in its advertising. In addition, SOK was, like Kesko, utilizing computer technology in inventory control already during the first sub-period. The large and persistent problem of SOK, however, was the fact that its competitive position was strongest in the declining rural areas of the country. During the 1980s, SOK was able to make a significant turnaround by moving its operations to urban areas, and by simultaneously concentrating on efficient logistics and large grocery outlets. This process completely changed the structure and logic of the organization, and established it as the most successful organization in the grocery business in the late 1980s and the 1990s in terms of market share development. As an organization, SOK had a centralized bureaucratic organizational structure, with defined rules and procedures. Accordingly, major strategic changes, such as the founding of the first hypermarkets or the company re-structuring in the 1980s, were the results of formal analytical processes.

Drawing on extant literature (Research questions 1 and 2) and our historical analysis we offer the following two propositions to be investigated in the quantitative analysis:

Proposition 1. The more resourceful and focused the administrative body of an organization (Kesko and SOK), the higher the probability to achieve an optimal level of strategic consistency. Likewise, the more fragmented and weaker the administrative body of an organization (TUKO and EKA) the higher the probability of strategic inconsistency.

Proposition 2. The less disputed a new strategic direction (Kesko) is, the easier it is to achieve an optimal level of strategic consistency. Likewise, the more disputed a new strategic direction is among political coalitions (TUKO and EKA), the higher the probability to choose easily available (e.g. advertising versus store founding) and potentially inconsistent competitive actions.

Market feedback

The mutual market share changes between the studied organizations during the period of study were considerable. The market share of Kesko increased from 12 to 43 percent, whereas that of TUKO declined from 56 to 21 percent. As a logical consequence of the different responses after deregulation, Kesko can be identified as the winner for the 1st and 2nd sub-periods, whereas TUKO can be identified as the loser for these two sub-periods. Similarly, for the 3rd sub-period, SOK can be considered as the winner, with the highest growth in its market share, and EKA as the loser. In terms of economic performance, Kesko was the only constantly-profitable firm during all of the three sub-periods. Figure 3 and Table 3 illustrate the development of the relative market shares of the studied organizations in the Finnish grocery sector.

Insert Figure 3 around here.

Insert Table 3 around here.

Taking into consideration these significant differences in market performance (Research question 3) we offer the following proposition:

> *Proposition 3. The less optimal the level of strategic consistency, the weaker the market position and consequent financial slack. Likewise, the weaker the market position and consequent financial slack of an organization, the more difficult it is to achieve an optimal level of strategic consistency.*

QUANTITATIVE RESEARCH SETTING

In previous competitive dynamics studies (for a review see Smith *et al.*, 2001), researchers have focused on a variety of competitive actions relevant to the studied industry. Our approach for the quantitative analysis differs from these earlier studies as we decided to concentrate on actions that our historical analysis and interviewed informants identified as the most important market-specific activities in the grocery competition (cf. Porter, 1974). The underpinning idea is that a narrow set of market-specific measures is relevant when focusing on a specific competitive setting instead of firm-to-firm dyads. Thus, as a measure of strategic consistency we concentrated on two main types of competitive actions: actions concerning (1) store configuration, and (2) advertising. In other words, we focused on the Promotion and Place variables in the marketing mix of the companies (McCarthy, 1960). Simultaneously, we omitted the Product and Price variables. Throughout our period of analysis, all of the four organizations offered a practically identical product mix (bread, fruits, coffee, etc.) for comparable prices (over 95 per cent average correlation) in the grocery goods segment (see e.g. Aalto-Setälä *et al.*, 1995; Hyvönen-Rajecki and Peura-Kapanen, 1983; Vuorio, 1987). In other words, the grocery sector product mix and price levels have been found to be on average identical in all of the four companies during the period of study, whereas the industry-specific literature (e.g. Porter, 1974; Popkowski Leszczyc et al., 2000), as well as our interviewed informants, identified the size and number of outlets, and the volume and the nature of advertising, as the main competitive weapons in the grocery business in the studied setting.[5]

Store configuration refers to the number of retail outlets of three different size categories in a given year. Corresponding competitive actions alter this configuration. Advertising, in turn, refers to the number of newspaper advertisements of three different size categories in a given year. Corresponding competitive actions collectively constitute the annual advertising profile of a company. Thus, as both main action types contain three different sub-categories, the competitive behavior of each company is captured by a six dimensional variable space.

Strategic consistency was measured by utilizing the distance *d* between two subsequent points in the above-described six-dimensional variable space and the angle α between two vectors pointing to and from the point under examination. Figure 4 illustrates these measures in a two-dimensional situation

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Insert Figure 4 around here.

The measure of strategic consistency itself was defined as the inverse of 1 plus the product of distance *d* and the angle α using a sampling interval of one year:

$$C = \frac{1}{1 + \alpha d} \qquad (0 < C \leq 1) \qquad (1)$$

The measure of strategic consistency captures consistent behavior in two different ways. First, if the competitive behavior of a company in a given year is identical with its behavior in the previous year, it remains in the same position in the six-dimensional variable space (*d* and α are both zero).

[5] The importance of advertising in the Finnish grocery business has traditionally been larger than in other Western countries. In Finland the activities of grocery companies is the main channel for brand promotion, whereas in the US, for example, industrial producers have carried the main responsibility of the promotion of their products. For a throughout theoretical discussion of this issue see Porter (1974).

Second, if a company qualitatively alters its behavior exactly the way it altered its behavior in a previous year, it remains on the same trajectory of movement in the variable space (α is zero). In sum, a very high level of consistency yields values close to one, whereas a very low level of consistency is exhibited by values close to zero. Formally, Figure 5 illustrates the measurement in a multidimensional situation.

Insert Figure 5 around here.

Thus, the measure for strategic consistency in a multidimensional situation was defined as follows:

$$C = \frac{1}{1+\alpha\, d} \qquad (0 < C \leq 1) \qquad (2)$$

where

$$\alpha = \arccos\left(\frac{\langle \Delta\bar{x}_t , \Delta\bar{x}_{t+1} \rangle}{\|\bar{x}_t\|\|\bar{x}_{t+1}\|}\right) \qquad (\text{in radians, } 0 \leq \alpha \leq \pi) \qquad (3)$$

$$d = \|\Delta\bar{x}_{t+1}\| \qquad (0 \leq d) \qquad (4)$$

and

$$\langle a,b \rangle = \sum_{i=1}^{n} a_i b_i \qquad (\text{where } i \text{ denotes the vector elements) and} \qquad (5)$$

$$\|a\| = \sqrt{\langle a,a \rangle}\ . \qquad (6)$$

In addition to measuring the level of strategic consistency the temporal development of the competitive behavior of the studied firms was illustrated by projecting the firm-specific development trajectories in the six-dimensional variable space onto a two-dimensional plane using principal component analysis (PCA). PCA is a method that can be used to project multidimensional data onto a lower-dimensional subspace so that a minimum amount of information is lost (Jolliffe, 1973a; 1973b). In our study, PCA illustration was an important addition to the quantitative analysis, as it visualizes the temporal development in the competitive behavior of the studied organizations. Also, the PCA illustration allowed us to compare firm-specific development trajectories to each other.

Data

The data set concerning advertising behavior is based on archival research consisting of 19,428 grocery advertisements published in three major newspapers (Helsingin Sanomat, Keskisuomalainen and Turun Sanomat) during 1945-1995. The sample includes the total number of advertisements for six weeks (one week every other month starting in January 1945) of each year. When compared to the total volume of advertisements for, the years 1945, 1965, 1980 and 1995 our sample corresponds with a rate of over 98 per cent to the total population. A data entry for each advertisement contained three properties, as described in Table 4 (the total number of advertisements for each category is shown in parentheses).

Insert Table 4 around here.

We operationalized the competitive actions concerning grocery outlets by compiling a data set encompassing the yearly configuration of different store types for each organization in terms of shopping floor surface area from two types of sources. First, we collected archival data for 1978-1995 from AC Nielsen's directory of grocery outlets. Second, since AC Nielsen's archives contain no data prior to 1978, we compiled store configurations for the remaining years from company histories (Perko, 1979; Hoffman, 1983; Kallenautio, 1992) and earlier studies on the studied retail industry (Utter, 1971;

Kaupan keskusvaliokunta, 1974; Home, 1977; Alhava, 1975). If we were unable to find data for a certain year for an individual organization, the missing value was interpolated. In order to make the different store surface area classifications used in different sources mutually commensurable, we constructed three aggregate-level surface area categories as described in Table 5

Insert Table 5 around here.

STRATEGIC CONSISTENCY

Table 6 exhibits the average values for strategic consistency as calculated with formula (2) for the four studied retail organizations for each sub-period, including upper and lower limits at the 95% confidence level.

Insert Table 6 around here.

In essence, the quantitative analysis supports the propositions generated in the historical analysis above. This supports our assumption of the positive effect of strategic consistency on firm evolution. Our results indicate that during the 1st and 2nd sub-periods, a low level of strategic consistency was related to weakening performance in terms of relative market share. For these sub-periods, TUKO was identified as the loser of market share, exhibiting the lowest level of strategic consistency vis-à-vis other organizations.[1] In general, our analysis shows a fairly robust relationship between a low level of strategic consistency and deprived organizational performance in the context of the post-war grocery sector in Finland.

As shown in the preceding quantitative analysis, the studied four organizations differed significantly in terms of the level of strategic consistency across the three sub-periods. To further examine the effect of strategic consistency on firm survival, we employed principal component analysis (PCA) to illustrate the movement of the four organizations in the competitive landscape. Figure 6 illustrates the results of PCA. Appendix 1 presents the validity assessment of the principal component analysis.

Insert Figure 6 around here.

In Figure 6, movement toward the upper right-hand corner of the PCA plane is characterized by growth in the number of small retail outlets and small advertisements. The horizontal travel to the right is characterized by growth in the number of medium-sized advertisements and to some extent also by growth in medium-sized retail outlets (i.e. supermarkets) and large advertisements. Finally, movement towards the lower right-hand corner contains growth in large advertisements and medium-sized or large (hypermarket) retail outlets.

As Figure 6 demonstrates, the four organizations followed apparently different development paths in the competitive landscape during the period of the study. The differences are rather modest during the first sub-period ("*The era of regulation*", 1945-1965) due to the highly regulated and stable industry setting. During the second sub-period ("*The era of* deregulation", 1966-1980), the most successful organization (Kesko) moved consistently first upwards and then right on the axis of the 1st principal component. The paths of those organizations that experienced no major market share changes during this sub-period (SOK and EKA) are equally consistent, but incline downwards towards the end of the sub-period. In the competitive behavior of the least successful organization (TUKO), there is no consistent pattern. During the last sub-period ("*The era of new means of competition*", 1981-1995), in turn, the two successful organizations (Kesko and SOK) are clearly distinguishable from the two organizations that perished (TUKO and EKA). Whereas the paths of Kesko and SOK generally incline downwards along the 2nd principal component, EKA and especially TUKO drifted around with no particular direction. Thus, the more resourceful and grocery-focused Kesko and SOK were both more consistent in terms of their historical development but they also exhibited the largest movement in the competitive landscape. On the other hand, a low level of consistency, especially in the case of TUKO, resulted in undirected movement in the competitive landscape.

DISCUSSION

The results of this study support and help to develop further our theoretical framework regarding the long-term effects of competitive actions. In essence, the successful retail firms in the Finnish grocery market exhibited higher strategic consistency in their competitive behavior in comparison to the less successful firms. In our case, the differences in the competitive behavior of the studied firms were considerable. Already during the era of regulation, Kesko and SOK focused strongly on developing their grocery businesses, whereas TUKO concentrated on wholesale activities and EKA increasingly on diversification. Thus, the more successful firms and their top management incrementally conducted grocery-related actions, learned from these actions and their outcomes, and finally, acted mindfully when the environment moved rapidly towards deregulation in the 1960s. The less consistent firms, TUKO and EKA, were less focused on the grocery business, leading to a negative recursive effect on capability development and, later, on the repertoire of available competitive actions.

Thus, the interrelations between organizational structure and strategy, outcomes (success vs. failure) and strategic consistency constitute either a learning or a vicious circle leading to consistent or inconsistent competitive behavior. Building on our initial theorizing and the results of our historical and quantitative work, we offer the following notions which develop further our research propositions and link the results with the existing knowledge of the antecedents of competitive behavior (cf. Miller and Chen, 1994; Chen, 1996).

First, concerning Proposition 1, the studied organizations differed considerably in terms of their administration. In TUKO, the central administration was very light, partly as a consequence of the suspicions of the larger wholesaler-owners. In essence, the majority of the owners wanted to restrict the size and influence of TUKO's central administration. Thus, although the quality of the top management team and supporting staff was probably on a par with its competitors, the size of the central bureau was smaller. EKA's problem was that, until the late 1970s, the scanning and analysis function was divided into two independent organizations. Moreover, the strong independence of some local co-operatives and the large importance of its own manufacturing resulted in an organizationally and regionally fragmented administrative body, although large in terms of the number of employees. In the context of Kesko and SOK, the central administrative bodies were unified and large. Especially SOK was known for its bureaucratic and centralized organizational culture, which was manifested, for example, in rigidly controlled strategic planning and implementation. Moreover, as the interviewed managers stated, SOK and Kesko simply had more reserves for managerial action than the two organizations that perished. In essence, the larger business intelligence and market analysis functions facilitated the awareness of future trends, instead of a short-run mentality (cf. Hambrick and D'Aveni, 1992).

Second, concerning Proposition 2, our study illustrates that every time an organization faced a political struggle in its intra-organizational environment, this led to a decrease rather than an increase in strategic consistency. It is interesting that on at least three occasions top managers reacted to political/governance struggles by making changes that were under their immediate control, in other words relying on easily available and appropriate competitive actions (cf. March, 1991); they were not motivated to conduct competitive actions that would have been contested by power coalitions. For instance, from the 1960s onwards, TUKO's marketing management was unable to invest in hypermarkets, but rather answered the intensified competition through (over)advertising. The same phenomenon occurred in the late 1980s, when Kesko's influential owner-retailers opposed investments in computer-based inventory systems, yet left free hands for advertising. Organizational politics also affected the level of consistency through the allocation of slack resources. For example, in TUKO, profits were routinely channeled to the wholesaler-owners instead of to investments in hypermarkets or other kinds of capital-intensive maneuvers. Similarly, EKA's internal politics blocked the focusing of investments, especially during the 1960s and the 1970s, leading to a fragmented structure and strategy.

Third, concerning Proposition 3, the role of organizational slack resources was of crucial importance. TUKO and EKA were in desperate need of capital already from the 1960s onwards. The lack of unabsorbed organizational slack resources primarily explains why, for instance, TUKO was unable to found any hypermarkets. The causal relationships between the slack resources and competitive actions were, however, exceptionally complex. The industry logic in retailing in the studied setting was that the grocery goods manufacturers subsidized the retail chain's marketing efforts on the basis of the historical development of sales. Consequently, the more TUKO and EKA lost market share, the more they lost in subsidies (cf. Porter 1974). What is more, they also had to pay a higher price for their products. Over the years, this process of decline weakened the position of TUKO and EKA to such an extent that they had practically no possibility for such a level of strategic consistency in store founding and advertising as did the more successful Kesko and SOK (cf. Hambrick and D'Aveni, 1988).

CONCLUSIONS

After their pioneering work in the 1990s, competitive dynamics researchers have progressed in conceptualizing the importance of sequence and rhythm in supplying actions (e.g. Ferrier, 2001; Ferrier and Lee, 2002). An important advance has also occurred in the identification of the antecedents of actions. To be more specific, the awareness-motivation-capability framework (Chen, 1996; Chen *et al.*, 2007) has highlighted the importance of firm-internal processes for competitive actions and behavior. The main message of our article to this developing discussion is the importance of the long-term and recursive influences of competitive actions. This importance is manifested either in strategic consistency or the lack of it. Essentially, our theorizing and the related historical work positions competitive actions and consequent levels of strategic consistency into a central position in firm and industry evolution. In this process, a series of actions feeds evolutionary mechanisms both in the marketplace and within firms (cf. Durand, 2006). This said, changes in the competitive landscape are caused by the competitive behavior of the firms. In turn, the firms must be capable of interpreting these changes and of mindfully choosing from a repertoire of available actions (Levinthal and Rerup, 2006). Through this process, highlighted in our research framework, firms can act upon the chances the marketplace offers. As de Rond and Thietart (2007: 547) state, "strategic choice can only ever be understood in terms of its relevant social and material context…it is here – in the gap between the context for choice and choice itself – that freedom is expressed."

Our long-term view to competitive actions adds to the competitive dynamics literature by noting that frequent changes in competitive behavior turn into a disadvantage in longer periods. Our message is that it is important to understand competitive actions as a movement from a position to the next one along the most efficient path within the competitive landscape. This longitudinal perspective to competition brings forward the importance of the context of competitive actions, thus importing ideas from the business history and evolutionary literatures to the field of competitive dynamics research. One way to proceed in this direction is to fuse a competitive dynamics perspective with historical/ideographic methodology (Üskiden and Kieser, 2004) that takes into account the impact of context and temporal change in the evolution of firms and their strategies.

Although we took steps toward this more historical direction, we also recognize that our approach contains limitations. First, the strategic consistency thesis would not necessarily stand in other contexts than such a mature and oligopolistic setting as the studied retail industry. Second, although the measure of consistency may be of more general use, the data used in the measurement is industry- and context-specific. These limitations, however, motivate areas of future research. First, our theoretical framework of competitive actions as a central constituting mechanism in firm and industry evolution needs to be tested in varied industry settings. Second, as our research propositions demonstrate, the firm internal processes leading to consistency, or, the lack of it, are extremely complex and context-specific. Thus, in-depth historical studies are needed to reveal the cognitive and ideological changes related to competitive strategy and consistency.

The most important message for practicing managers is to understand that each competitive action is embedded in a complex dynamic system consisting of the marketplace, competitors and the society as a whole (for a related argument see Farjoun, 2002). Thus, maintaining an optimal level of strategic consistency requires a constant awareness of the competitive situation vis-à-vis the firm's internal slack resources, capabilities and structures. To be more specific, the results of our analysis provide the following practical implications. First, strategic consistency is a result of the interrelatedness of different types of actions. Using a military metaphor, different weapons must be used in coordinated ways, bearing in mind the perceived direction and rate of change in the competitive landscape. Second, competitive actions not only require slack resources, but, due to the market process, they also bring in resources. In the short term, this recursive effect is not realized. In the long-term, however, the lack of consistency leads to the erosion of both profitability and legitimacy. This vicious cycle can only be halted by deeply changing the systemic properties of how the firm relates to the competitive landscape (cf. our research framework). Third, in the situation of a radical change in the competitive landscape, it is important to have efficient intra-firm routines in place to channel resources where they are most desperately needed. For example, Intel would most probably never have been able to change its business focuses without a selection mechanism that was independent of the business-area related politicking (Burgelman, 1994). Similarly, as the marketplace gives feedback about appropriate competitive actions, firms should have routines in place which incorporate these signals with the series of competitive actions the firm conducts. Finally, to be mindful and thus potentially consistent, requires an effective central administration that can create the above mentioned evolutionary mechanism guiding actions, objectively scan the environment, and create a cognitive understanding of the desirable direction of the firm. Indeed, if competitive actions have been previously seen as punches in a boxing match (Chen, Smith and Grimm, 1992; Ferrier and Lee, 2002, p. 162), a more long-term conceptualization resembles the Chinese go-game, in which the movement in and invasion of a certain area is often equally or more important than competitive interaction between the opponents.

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APPENDIX: VALIDITY ASSESSMENT OF PRINCIPAL COMPONENT ANALYSIS

Table 7 addresses the validity of the principal component analysis in terms of how much variance is explained with different numbers of principal components.

Insert Table 7 about here.

As the six-dimensional variable space was projected onto a two-dimensional principal component representation, the amount of variance explained by this projection is 83 per cent.

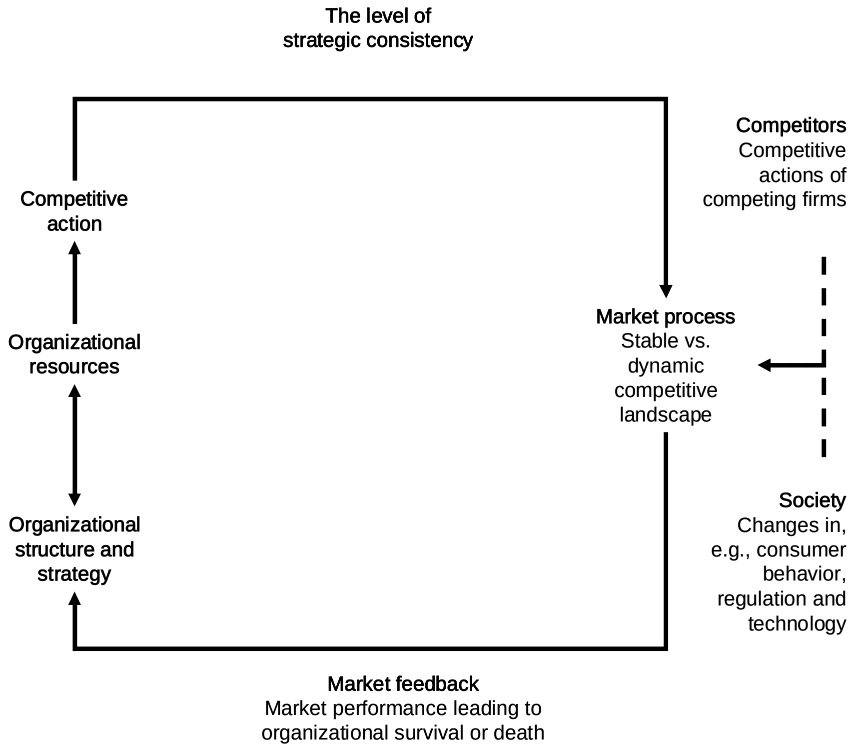

Figure 1. Research framework.

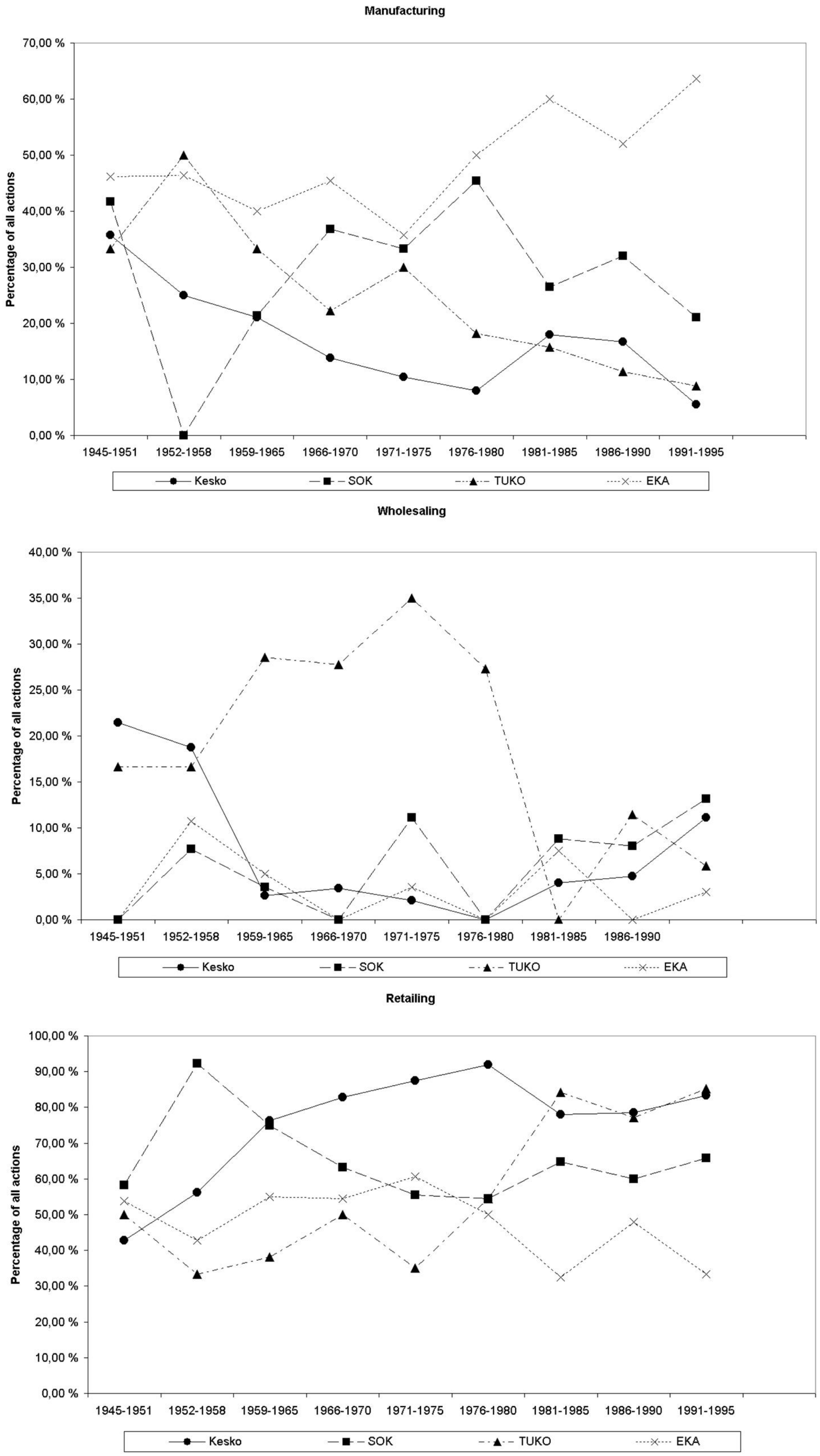

Figure 2. Foci of corporate strategies in Kesko, Tuko, EKA and SOK 1945-1995

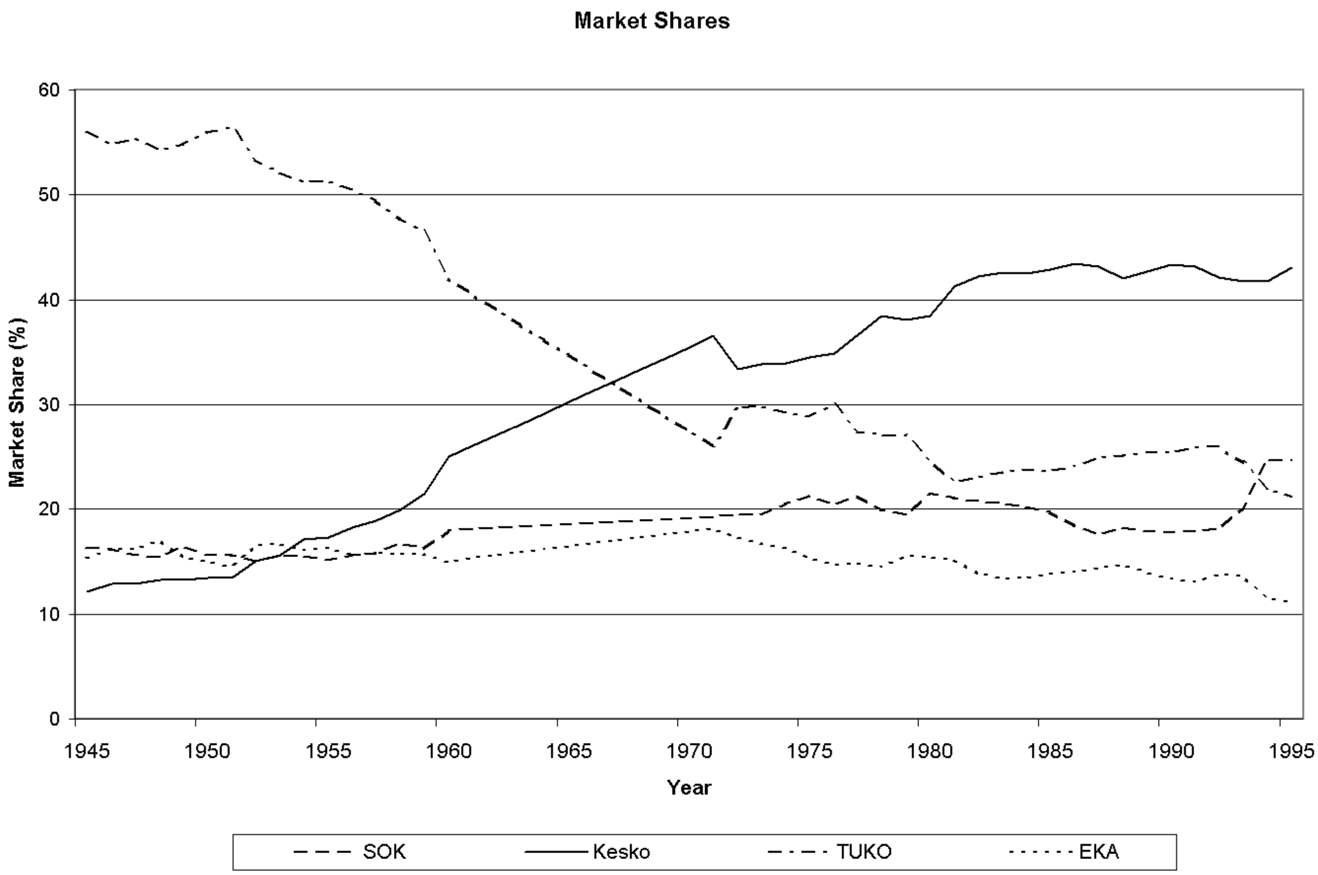

Figure 3. Mutual market share development of Kesko, TUKO, EKA and SOK 1945-1995. Sources: AC Nielsen / Marketindex statistics 1963-1995; Annual reports 1945-1965; Company histories as listed in the References

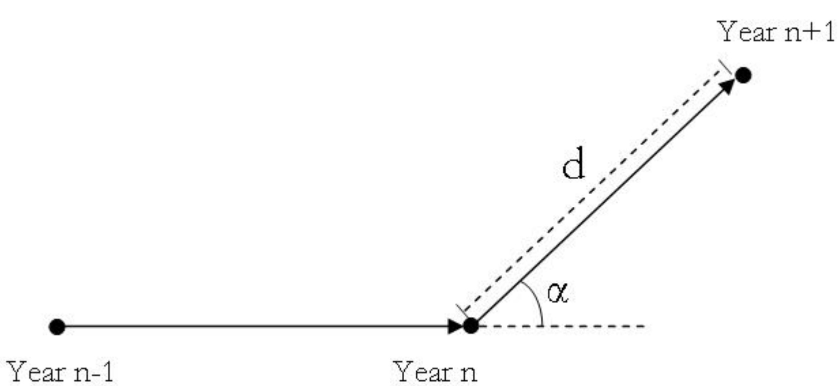

Figure 4. Components of the measure of strategic consistency in a two-dimensional situation.

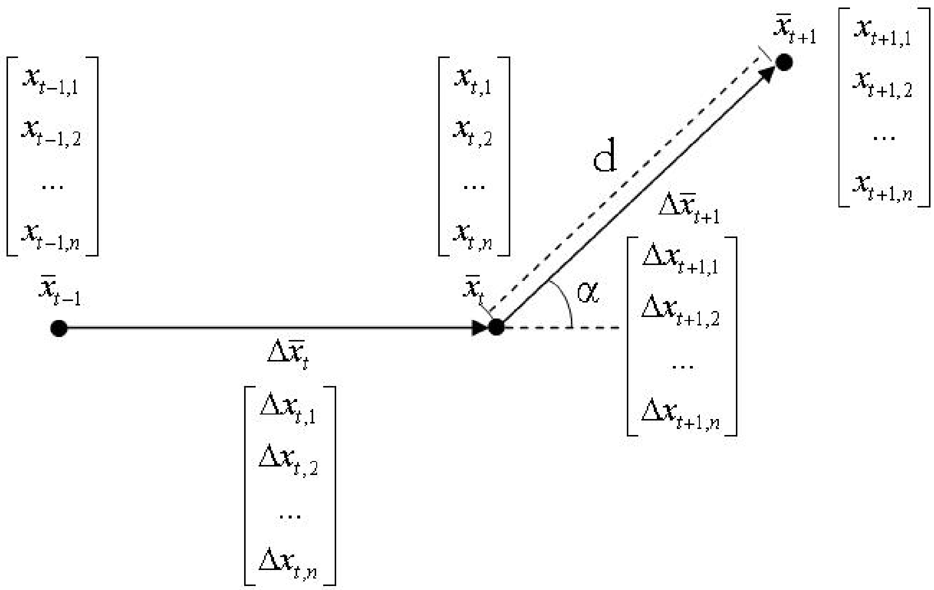

Figure 5. Components of the measure of strategic consistency in a multidimensional situation.

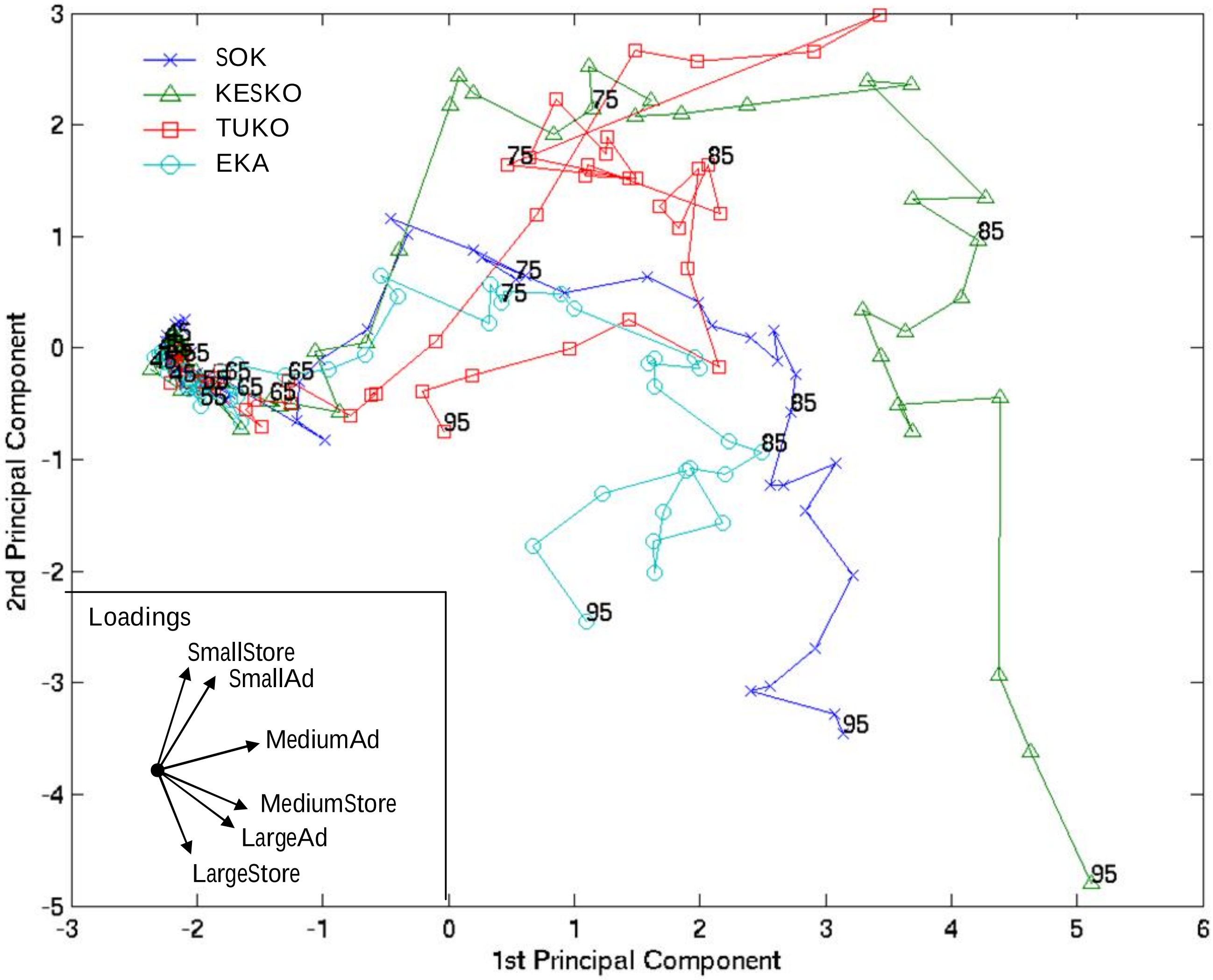

Figure 6. PCA illustration of competitive action variables.

Table 1. Main characteristics of the studied organizations

Organization	Ownership structure	Strategic focus	Core structure / organizational mission
Kesko Entry: 1941 Exit: -	Independent retailers (private)	Retail	Network based retail company
TUKO Entry: 1942 Exit: 1996 (merger with Kesko; later divided to two independent units	Independent wholesale companies (private)	Wholesale — retail	Wholesale company
EKA Entry: 1918 Exit: 1992 (to the control of banks)	Co-operative (leftist)	Manufacturing — retail	Conglomerate, socialistic co-operative
SOK Entry: 1904 Exit: -	Co-operative (agrarian ideology)	Retail — manufacturing	Agrarian co-operative

Table 2. Historical development of the Finnish grocery sector 1945-1995

Sub-period	Societal environment	Institutional environment	Dominating store type	Dominating type of advertisement	Technological innovation
Regulation (1945-1965)	Essentially rural society with homogenous consumption behavior.	Highly regulated	Small shop (service)	Less than ½ page	
Deregulation (1966-1980)	Urbanizing and motorizing society with multiple consumer segments	Increasingly deregulated	Small shop (self-service); supermarket	½ page and bigger	Self-service; centralized distribution systems.
New means of competition (1981-1995)	Sub-urban and urban consumers; growing demand for specialized offerings	Deregulated	Supermarket; hypermarket	Full page or bigger	Computer-based logistics and consumer relationship management systems

Table 3. Sub-period-level market share changes for the studied organizations

	Kesko			TUKO			EKA			SOK		
Period	Change[1]	Avg.[1]	S.D.[2]	Change[1]	Avg.[1]	S.D.[2]	Change[1]	Avg.[1]	S.D.[2]	Change[1]	Avg.[1]	S.D.[2]
1945-1965	+18.08*	+4.79	4.23	-21.33†	-2.24	2.73	+1.09	+0.38	4.87	+2.16	+0.70	4.05
1966-1980	+7.14*	+1.84	3.31	-8.70†	-1.82	5.28	-1.32	-0.22	3.38	+2.89	+0.40	2.88

1981-1995	+1.80	+0.80	2.34	-1.41	-1.40	4.41	-4.00†	-1.93	4.97	+3.61*	+1.71	7.34

* Highest value for the sub-period

† Lowest value for the sub-period

[1] Per cent

[2] Percentage unit

Table 4. Properties recorded from advertisements

Property	Scale	Unit / categories
Date of publication	Numerical (absolute)	Date
Advertiser	Categorized (nominal)	1. Kesko (6,027 advertisements) 2. TUKO (6,011 advertisements) 3. EKA (3,407 advertisements) 4. SOK (3,983 advertisements)
Size	Categorized (ordinal)	1. Less than ½ page [<1,000 column millimeters] (13,291 advertisements) 2. ½ page or bigger but less than a full page [>= 1,000 and <2,000 column millimeters] (3,880 advertisements) 3. Full page or bigger [>= 2,000 column millimeters] (2,257 advertisements)

Table 5. Aggregate-level surface area categories for retail outlets data

Category	Surface area		First appearance in data
Hypermarket	Over 2,500 m^2	(Over 26,910 sq. ft.)	1968
Supermarket	400 m^2 – 2,500 m^2	(4,306 – 26,910 sq. ft.)	1946
Small shop	Under 400 m^2	(Under 4,306 sq. ft.)	1945

Table 6. Sub-Period-Level Values of Strategic Consistency for Organizations[1]

Period	Kesko Value (Upper limit) (Lower limit)	TUKO Value (Upper limit) (Lower limit)	EKA Value (Upper limit) (Lower limit)	SOK Value (Upper limit) (Lower limit)
Regulation (1945-1965)	0.425 (*) (0.468) (0.382)	0.380 † (†) (0.426) (0.333)	0.414 (0.433) (0.395)	0.509 * (0.556) (0.462)
Deregulation (1966-1980)	0.483 (*) (0.501) (0.465)	0.363 † (†) (0.397) (0.329)	0.631 * (0.663) (0.599)	0.560 (0.591) (0.530)
New means of competition (1981-1995)	0.303 † (0.326) (0.280)	0.484 (0.527) (0.442)	0.510 * (†) (0.550) (0.470)	0.454 (*) (0.484) (0.423)

* Highest value for the sub-period

† Lowest value for the sub-period

(*) Experienced best market share development during the sub-period

(†) Experienced worst market share development during the sub-period

Table 7 Variance explanation of PCA

Number of principal components	1	2	3	4	5	6
Variance explained	63 %	83 %	90 %	94 %	98 %	100 %

Endnotes:

[1] When observing the numerical values for the measure of strategic consistency, it must be borne in mind that as the measurement was carried out in a six-dimensional variable space, the measure is rather sensitive to changes in consistency even in one of the sub-dimensions alone. Therefore, of particular interest here are the mutual differences of the values among organizations.