

## **Marketing Cooperatives' Re-engineering:**

### **Influences among Organizational Attributes, Strategic Attributes & Performance**

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#### **ABSTRACT**

In this paper we expand the agribusiness co-op literature by studying the re-engineering process of marketing cooperatives (co-ops). More specifically we discuss and empirically examine organizational innovations adopted by marketing co-ops in Greece. We hypothesize three types of relationships: a) the influence of organizational (i.e., collective ownership, control and cost/benefit allocation) and strategic (i.e., market and brand orientation) attributes on organizational performance; b) the influence of organizational attributes on market orientation; and c) influences among strategic attributes. Data for this study were collected from a large-scale survey with CEOs of marketing co-op in Greece. The results show that strategic attributes have a much greater influence on organizational performance than organizational attributes have, as only a few among the examined elements of re-engineered attributes have a (marginal) positive influence on performance. This result raises the question whether the influence of the re-engineered structures on performance has been over-emphasized in the co-op literature. Moreover, the results demonstrate positive influences among the strategic attributes of co-ops, contrary to the non-significant results of organizational attributes on market orientation. This may imply that organizational attributes do not seem to act as drivers or barriers to the adoption of strategic attributes, and, hence, reinforces the conclusion that emphasis in co-op theory and practice should also be placed on the strategies and tactics that co-ops should adopt and implement in order to capture market benefits.

*Keywords:* marketing cooperatives, attributes, organizational, strategic, performance, Greece

## 1. INTRODUCTION

Research in agribusiness has analyzed the re-engineering of cooperative (co-op) structures as mechanisms designed to accommodate end-user demand (e.g., Meulenberg, 1979; 2000; Nilsson, 2001; Kyriakopoulos, 2000; Chaddad & Cook, 2004; Kalogeras *et al.*, 2007). One of the arguments highlighted in agribusiness research and practice is that producer-owned organizations create value for their owners, but often fail to respond to rapid market changes because they lack a well-developed strategic focus (Van Dijk & Mackel, 1991; Peterson & Anderson, 1996). This lack of connection to demand limits the financial viability of co-ops and requires the re-engineering of their organizational and strategic orientation. Co-op's choices among organizational (e.g., ownership, governance) and strategic attributes (e.g., customer-focused strategies) are crucial in dynamic markets or periods of transition where product adaptations are required (Goldsmith & Gow, 2005, Kalogeras *et al.*, 2009).

Literature proposes a variety of organizational models for agribusiness co-ops (Cook, 1995; Nilsson, 1998; Kyriakopoulos *et al.*, 2004; Van Bekkum, 2001; Chaddad & Cook, 2004). Classifications for co-op models often use the unique attributes of co-ops as core-criteria. These attributes encompass the definition of co-ops as user-owned and user-controlled businesses that distribute benefits on the basis of use (USDA, 1995). The extent to which co-ops relax their definitional attributes (i.e., attribute elements) results in organizational forms that range from traditional (i.e., collectively organized based on the principle of equality) to re-engineered models (i.e., proportional or investor-owned firm -IOF-alike) (Kalogeras *et al.*, 2007). The proposed models are purported to better facilitate the adaptation of co-ops to agricultural industrialization, and their response to market challenges. Several strategic attributes, however, have been identified in business literature as having the same purpose. Notably, market, brand, and entrepreneurial orientation (e.g., Berthon *et al.*, 2008; Cano *et al.*, 2004; Kirca *et al.*, 2005; Matsuno *et al.*, 2002) are dominant attributes that improve performance and enhance organizations to maintain co-alignment with competitive, technological, social, politi-

cal, and turbulent market environments which occasionally pose threats and challenges to continued survival and effectiveness.

Despite the recognised need for better understanding, the influence of organizational attributes on strategic attributes and performance of co-ops, limited research has been devoted to the examination of these relationships. The rich economics literature on co-op competitiveness often does not account for historical, sociological and behavioural aspects of co-op entrepreneurship and broader implications for the re-engineering of their core attributes (Gray & Mooney, 1988). Past studies on the co-ops' performance have either focused primarily on financial analysis, such as balance sheet ratio assessments (e.g., Gentzoglani, 1997; Parliament *et al.*, 1990) or have maintained an analytical focus (e.g., Peterson & Anderson, 1996; Nilsson, 1998; Meulenbergh, 1979; 2000).

Moreover, empirical research addressing relationships among changing organizational attributes, strategic attributes and performance of co-ops is scant with a few notable exceptions. To the best of our knowledge, only the study of Kyriakopoulos *et al.* (2004) sheds light on the influence of structural attributes on co-op outcomes. The authors introduced and empirically tested a conceptual framework regarding the influence of organizational attributes and entrepreneurial culture on market orientation and performance of the agrifood co-ops in the Netherlands. The starting point of their analysis relied on the *a priori* classification of *ideal* attribute elements entailed in the traditional and proportional co-op model. However, *ideal* classification schemes may not capture decision context specificities and not fully account for empirical anchorage (Verhaegen & Van Huylenbroek, 2002) and actual complexity of (co-op) organizations (Borgen & Hergenes, 2005). That is, the *a priori* set-up of evaluation criteria (e.g., attribute elements entailed in a classification scheme) may mask the natural (i.e., actual) groupings of firms that could explain potential influences among organizational and strategic design parameters and performance when certain environmental conditions occur (McKelvey, 1982). Hence, the conceptualization and assessment of a framework accounting for influences among

organizational attributes, strategic attributes and performance of co-ops when a certain environmental condition occurs (e.g., policy reform), may further the understanding of researchers and policy makers regarding the re-engineering of co-op structure and strategic behaviour.

In this paper we expand the literature by discussing and examining organizational innovations adopted by marketing co-ops resulting from policy reforms. Such changes in the legal and institutional environment may substantially affect co-ops' structure and market behavior (Oustapassidis *et al.*, 1995; Chaddad & Cook, 2004). We develop an *actual*, real life, classification scheme for classifying organizational attributes of marketing co-ops that may or may not have been modified after the changes in the legal environment. As Cook (1995) and Hansmann (1996) have discussed, the study on whether anachronistic business forms adopt organizational innovations and develop their strategic focus when legal changes are introduced – organizational, regulatory or tax laws - is of value. Here, we are particularly interested in empirically studying the influence of re-engineered organizational attributes resulting from policy reforms on market orientation and performance of co-ops, the influence of strategic attributes (entrepreneurial, market, and brand orientation) on co-ops' performance, and the influences among strategic attributes of co-ops (e.g., the influence of entrepreneurial orientation on market orientation). Knowledge about these influences may be important to policy makers, managers and board members who need to foster specific organizational innovations and strategies that increase the performance of co-ops.

Data for this study were collected from a large-scale survey with marketing co-op CEOs in Greece in the spring of 2006. In 2000 a new legal Act (National Hellenic Act - NHA 2810/2000) was enforced in Greece. This undertaking removed several legal barriers and permitted the re-engineering of co-op attributes. The flexibility of the new law has formally challenged marketing co-ops in Greece to abandon their anachronistic (traditional) organization and passive-oriented market role (Iliopoulos, 2001). The current decision context presents a unique opportunity to develop an *actual* classification of “traditional” and “re-engineered” at-

tribute elements using as a turning point the policy reform regarding developments in the co-op entrepreneurship in the country. Agribusiness co-ops are dominant in the Greek economy, particularly, in food and drink industries. The high nutritious quality and health standards of several agrifood products in Greece (e.g., olive-oil, dairy-products and wine) are globally recognized (Damianos *et al.*, 1998). However, the majority of Greek co-ops lack well-developed marketing strategies and expertise. The vast majority of them are un-anchored by end-user demand and maintain a traditional ownership and governance structure (Baourakis *et al.*, 2002). Hence, the empirical investigation using the decision context of Greek co-ops is challenging and it may provide interesting perspectives on whether and how the re-engineering of co-op attributes affects strategic behavior and performance.

The remainder of the paper is organized as follows. We first elaborate on the development of a dichotomous classification entailing organizational attributes elements ranging within the “traditional vs. re-engineered cooperative” co-op paradigm, followed by an elaboration on strategic attributes. Then, specific hypotheses regarding the influences among organizational attributes, strategic attributes and performance are formulated. After discussing the survey design and operationalization of the measures, the empirical findings are presented. Finally, implications and suggestions ensue.

## **2 CO-OP ATTRIBUTES**

We classify attribute elements of marketing co-ops by using recent advances in co-op literature and empirical observations. Our aim is to draw-up a classification scheme which includes an original synthesis of key attribute elements which serve as a basis for further analyses. Emphasis is placed, therefore, on the specificities of our decision context which are studied by using an inductive approach (McKelvey, 1982). In this section we elaborate first on these specificities of the organizational attributes and subsequently we discuss particular strategic attributes.

## **2.1 ORGANIZATIONAL ATTRIBUTES**

A co-op is a user-owned, user-controlled business that distributes benefits on the basis of use (USDA, 1995). This definition is well accepted in the international community of agricultural economists and encompasses the basic organizational attributes on which the co-op structures rely (Van Dijk *et al.*, 1997). Co-op structures comprising these attributes may be organized along two different extremes ranging from “traditional” to “re-engineered” (IOF-like) (Van Bekkum, 2001).

The traditional organizational model of agribusiness co-ops entail: exclusive members’ ownership, democratic control, and uniform pricing policy (Barton, 1989). In contrast, the re-engineered co-op model is composed of individualized equity, non-member parties funding, proportional decision control, and allocation of benefits through price and personal shares (see: Chaddad & Cook, 2004). The degree of re-engineering is assumed to better accommodate the strategic-oriented goals of co-op business firms (Van Bekkum, 2001) and reinforce members’ commitment and willingness to invest in co-op operations (Kalogeras *et al.*, 2007).

Below we thoroughly discuss the attributes entailed in the dichotomous classification (traditional vs. re-engineered co-op structure) in the light of policy reforms. This involves looking into the case of agribusiness co-ops in Greece that have been challenged to restructure their organizational attributes after the National Hellenic Act (2810/2000) came into force in 2000. Empirical observations based on the determination of the articles of the new Act, relevant literature dealing with agricultural co-ops in Greece, and discussions with co-op experts and policy-makers in Greece and abroad were used as inputs for making up the dichotomous classification.

### ***2.1.1 Co-ops in Greece: A New Organizational Challenge***

Co-op business firms are dominant in the Greek agrifood industry. There are almost 6500 agricultural co-ops with 750000 members, totals which are amongst the highest in Europe

(COGECA, 2000; EUROPA, 2005). These co-ops are involved in activities such as farm input supplies, product processing, and marketing of agricultural produce, and imports/exports (Baourakis *et al.*, 2002). The organizational pyramid of co-ops in Greece consists of three levels. Co-ops that integrate farmers from the same geographical area are defined as first-order co-ops. They are responsible for commercializing their farmers' production, although other services are also offered (e.g., supplies, technical support). Even though they represent a first movement towards higher levels of integration in the agro-industry, their local orientation limits the volume and number of products they offer to their clients. Second order co-ops (Unions of Agricultural Co-ops-ACOs) were established to commercialize all, or portions, of the production of various first order co-ops. Most of the Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI) products in Greece are also marketed by ACOs (EUROPA, 2005). At the peak of the pyramid is the Panhellenic Confederation of Agricultural Co-ops (PA.SE.GES).

Although the sheer number of co-ops in the Greek agro-industrial sector indicates that collective action is flourishing, the total turnover of agribusiness co-ops in Greece (0,8 billion EUROS) is 18-times less than the European Union's (EU) average (14.2 billion EUROS) (MAICh, 2000). Studies provided evidence that in the midst of the 90s, the majority of marketing co-ops in Greece were medium-sized (in terms of employment and turnover), traditionally organized, their marketing approaches were generally weak, with products being far less differentiated than those of large-private firms and their strategies were short-term and ill-defined (Oustapassidis *et al.*, 1995; Ananiadis *et al.*, 2003). Lambrinopoulou *et al.* (2006) have identified the intermediate supply chain structures, the high degree of past governmental intervention, the missing social cohesiveness between co-op actors, and the lack of well-structured and focused strategic orientation as key barriers to successful collective action in Greece. Most Greek co-ops operating in downstream value-added activities (i.e., processing, marketing) lack

entrepreneurial vision and are not able to develop generic competitive advantages in the form of specialization through very selective market segmentation (MAICh, 2000).

In 2000, a new legal Act (NHA 2810/2000) sanctioned in Greece, which granted great flexibility as it permitted the re-engineering of their organizational attributes. The new Act has offered a unique opportunity to Greek co-ops to overcome their structural inefficiencies. The re-engineering of co-ops in Greece may enhance their strategic focus and competitiveness. Moreover, the rapidly changing marketing trends in the agrifood sector world-wide and the recent changes of the Common Agricultural Policy (CAP) of the EU, challenge Greek co-ops to reconsider their organizations (Iliopoulos, 2001).

We conducted an in-depth study of the new NHA 2810/2000 and we further discussed our inferences with several co-op experts and policy makers in Greece and abroad (e.g., the Netherlands, US). The review of the relevant literature, the study of the NHA 2810/2000, and the discussions, informed the development of a dichotomous classification with respect to the identification of attribute elements included in the traditional and re-engineered models. Below we discuss the organizational innovations introduced and present our dichotomous classification scheme.

### *Control Attribute*

The new Act stipulates that only members have voting rights, but it is specified that co-ops are free to introduce voting systems proportional to production rights. The voting rights of members, however, have to be in proportion to patronage. An upper limit of 3 votes per member for the first order co-ops and 5 votes per member-co-op for second order co-ops is suggested. Corporate control regarding resource allocation decisions (e.g., allocation of net income, approval of big investment projects and annual financial statements) are exercised by the member-patrons through their general assembly. However, the Board of Directors (BoD: elected repre-

sentatives by members) is allowed to transfer to professional experts almost all the management decision rights regarding tactical and operational issues.

### *Ownership Attribute*

The ownership attribute involves elements relevant to the financial instruments used to determine the claims of members on collective ownership rights, the nature of the right to residual claims, and the financial entry conditions. The NHA 2810/2000 states that co-ops have the right to issue non-voting preferred shares with fixed returns alongside the voting stock. It is also stated that non-members are also entitled to purchase this separate class of stock. In an effort to make these preferred shares highly attractive to investors, co-op's memorandum of association may stipulate that some incentives are provided (e.g., dividends on those shares from the co-op's annual net income). Alternatively, members or non-members may claim ownership rights when co-ops would set-up public limited companies (Ltd). In this case, co-ops hold the majority of equity ownership for developing strategic synergies with other co-ops or investors (non-members). Those Ltds are defined as "Cooperative Enterprises" and their stocks should always be registered (nominal shares). The Ltds' equity can only be transferred after the completion of the formalities required by law. Moreover, the law provides extra incentive for members to further invest in co-op activities. When stocks of co-op enterprises are for sale, other co-ops or co-op members that hold shares already should always have priority over external investors.

The regulation related to the alignment of equity investment with patronage suggests upfront equity investment by members to co-ops. Members are free to decide whether to acquire additional stocks or not, but always in proportion to patronage. So, the level of the upfront equity investment and issuance of extra voting stock in proportion to patronage is a members' choice. Furthermore, the transferability of ownership rights is left upon BoD to decide (i.e., whether stocks are transferred to members or not), but the appraisal of rights is left upon

member-patrons' preference and the relevant decision is formed via the general assembly (i.e., whether to increase or decrease the value of the voting stock owned by individual members). Also, it is suggested that members decide whether the voting stock is interest bearing. Strictly speaking, however, the NHA 2810/2000 does not mention that ownership rights are really appreciable, but, at least, points out how members' remuneration for their contribution to the collective equity capital, could be indirectly compensated for the opportunity cost of their invested risk capital. The regulatory items that refer to redeemability and tradability of ownership rights do not introduce any changes. Members enjoy the right to have the nominal value of their individualized equity refunded upon exit, whereas their ownership rights can not be tradable among them. The latter implies the absence of secondary internal markets within co-ops.

Although the element regarding the allocation of net income relates to the cost/benefit attribute, we consider (after having discussed this issue with several co-op experts) that it is even better tied-up to the ownership attribute, since the net income that an individual member receives is a function of his/her investment in the co-op and, hence, to his/her ownership titles. The relevant articles and associated regulations refer to the choices that a co-op business firm has for allocating net income. In the traditional organized co-ops the net income was allocated through product prices. The NHA 2810/2000 provides that the distribution of net income can be made through dividends in proportion to patronage or it can be retained as an individualized short-term loan from members to the co-op or even allocated for an investment project. Only the general assembly decides on the net income's distribution. It is mentioned that at least 10% of net income should be reserved for the unallocated form of equity (reserve funds) until the value of the latter equals the value of the individualized voting stock. Thereafter, no amount is retained, unless the value or the amount of individualized voting stock is increased. In this situation the unallocated equity has to be re-adjusted and the retained earnings mechanism has to be reintroduced. Hence, net income allocation cannot be applied as a price supplement and can only be returned as a dividend in proportion to patronage. Finally, the new act states that

the memorandum of co-op association may set a minimum period of time that a member has the right/obligation to patronize the co-op.

#### *Cost/Benefits Attribute*

The Act does not particularly specify the “price paid to members” rule which implies that the responsibility in making such a decision rests on member preferences as reflected through their contractual agreement. For the first time in the history of Greek co-ops, however, it is suggested that co-ops are free to adopt a differentiated pricing policy in terms of volume, quality and produce content to reflect as much as possible the handling costs and market returns of each member’s produce. The price level may be cross-subsidized with returns on transaction-based investment (e.g., account for product quantity and certain quality standards) or reflect the market equilibrium price paid through separate dividends (i.e., returns on capital invested). The supply management is determined also through the regulations which specify the delivery rights agreement. The latter may be obligatory whereas, co-ops are free to take a stance on the imposition of sanctions against members not fulfilling their delivery obligations.

The information from the above discussion on the re-engineering opportunities of attribute elements in agribusiness co-ops in Greece, constitute the basis for the development of the dichotomous classification scheme. After discussing excessively the organizational innovations introduced for Greek co-ops with experts in Greece and abroad, we considered that our dichotomous classification scheme should entail all the aforementioned elements. However, only these elements which are upon members’ or BOD’s choice to be settled, are utilized for further analysis. The NHA 2810/2000 lays down specific rules regarding the elements of net income allocation (no price supplement is received), redeemability of ownership titles (refund of nominal value on exit), and exchange of ownership rights among members (no tradable rights), and, hence, these elements are simply presented in our classification scheme but will

not be examined further. That is, these elements do not allow for the choice of adoption, but rather have to be compulsorily implemented as defined by the NHA 2810/2000. Table 1 describes the various attribute elements entailed in the traditionally and re-engineered co-op structure.

The strategic attributes which are hypothesized to influence performance of co-ops and to be influenced by the re-engineered attributes of co-ops, are discussed in the next subsections. After elaborating on these concepts, we present our hypotheses. We pose specific hypotheses regarding the influence of the organizational and strategic attributes on the performance of co-ops. Following Kyriakopoulos, *et al.* (2004) we view the performance of agricultural co-ops as a volatile variable resulting from the rapidly changing agrifood environment. Evaluating whether a co-op achieves its objectives is far more complex than using simple market-based performance measures as in the case of IOFs (Cook, 1994). Gray and Mooney (1988), Katz (1997), Sexton and Iskow (1988) contend that, due to the absence of secondary markets for co-op issued-stocks (and this is a relevant element to our decision context), simple market-based measures (e.g., financial ratio analysis) may mask crucial insights when one studies co-op performance. In addition, objective measures of performance are often difficult to obtain (e.g., Dess & Robinson, 1984). These arguments prompted us to view co-op's performance as a multidimensional subjective concept which is comprised of market and financial indicators proposed by previous studies in business literature (Deshpande *et al.*, 1993; Cadogan *et al.*, 2002).

## 2.2 STRATEGIC ATTRIBUTES

### *Entrepreneurial Orientation*

Entrepreneurial orientation refers to the processes, practices, and decision-making activities required to enter new or established markets with new or existing products (Lumpkin & Dess, 1996). An entrepreneurial orientation involves innovativeness, risk-taking, and proactiveness (Matsuno *et al.*, 2002). These elements may vary independently but together they give rise to an entrepreneurial business organization (Wiklund & Shepherd, 2005).

### *Market Orientation*

Market orientation has been conceptualized from both behavioral and cultural perspectives and has been proven to enhance business performance (Cano *et al.*, 2004; Homburg & Pflesser, 2000; Kirca *et al.*, 2005). Kohli and Jaworski (1990) define market orientation as “the organization wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments and organization wide responsiveness to it” (pp.6). Alternatively, Narver and Slater (1990) take a cultural perspective. They define market orientation as “the organizational culture and climate that most effectively encourages the behaviors that are necessary for the creation of superior value for buyers and, thus, continuous superior profit for business” (pp. 21). These two definitions encompass that market orientation consists of three behavioral components: customer orientation, competitor orientation and interfunctional coordination.

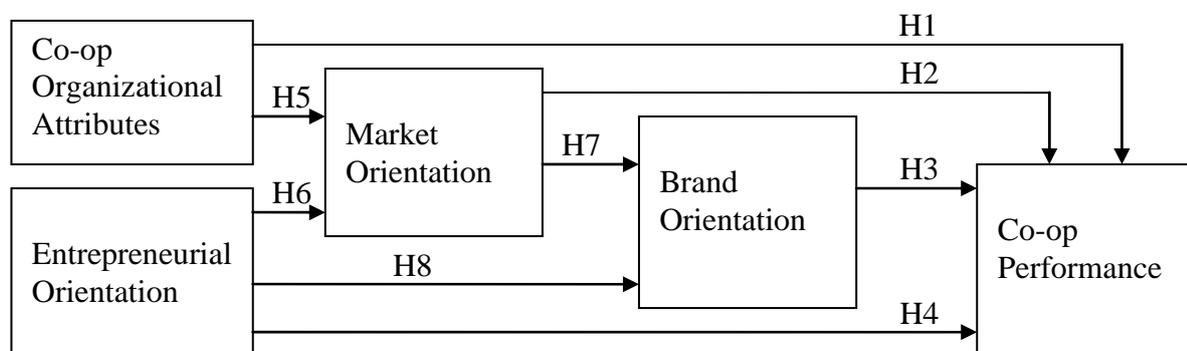
### *Brand Orientation*

Brand orientation refers to the processes of the organization that revolve around the creation, development, and protection of brand identity in an ongoing interaction with target customers for the achievement of competitive market advantages (Urde, 1994). The proper use of brand-

ing creates customer loyalty and functions as an entry barrier (Kotler & Keller, 2006). Customers more often view brands as an orientation guide for their buying decisions, especially in environments of increasing communication and information flows (e.g., agrifood industry) (Hanf & Kühn, 2005). However, creating, developing, investing in and protecting a brand (i.e., adopting a brand orientation) signals a choice of strategy (Urde, 1999). Management of brands should be approached strategically and take a long-term perspective, thereby facilitating the implementation of strategies and tactics (Davis, 2002).

### 3 HYPOTHESES

Inspired by Kyriakopoulos *et al.* (2004), we hypothesize that re-engineered organizational attributes of co-ops influence their market orientation and performance. Following recent advances in marketing science and agribusiness economics (e.g., Moorman, 1995; Matsuno *et al.*, 2002; Verhees & Meulenbergh, 2004), we extend this modeling framework by hypothesizing that the strategic attributes (entrepreneurial, market, and brand orientation) also influence the performance of co-ops and that particular strategic attributes have an impact on some other strategic attributes (e.g., entrepreneurial orientation influences brand orientation). Figure 1 displays the hypothesized relationships and the following sub-sections discuss each specific hypothesis.



**Figure 1:** Influences among Co-op Attributes, Strategic Attributes and Performance

### 3.1 ORGANIZATIONAL ATTRIBUTES – PERFORMANCE

Proportional voting may motivate members, especially large-sized producers (whose capital and patronage is instrumental for business success) to invest further in co-op activities. For instance, large-sized members (in terms of produce marketed, firm-size, ownership of landholdings, etc) engaged in a traditional organized co-op structure are essential to the continued success of co-ops (Reynolds, 1997). They are often capable of investing in co-op activities and projects which have long-term payoff, but co-op practice has shown that they feel that their economic interests are not captured by the traditional “one-member one-vote” rule (Royer, 1995). Members of any size often lack market-expertise and management capabilities. As co-ops expand and diversify, the need for hiring to employ professionals to deal with crucial strategic, tactical and operational decisions increases (Cook, 1994). Increasing the responsibilities assigned to professional management makes co-ops more viable and efficient, which allows them to better serve members’ needs (Adrian & Green, 2001). Dynamic and professional management makes co-ops efficient and competitive (Van Dijk, 1996). Therefore, we hypothesize that:

H1a: *Re-engineered control arrangements in co-ops positively influence co-ops’ performance*

Re-engineered co-ops relax the traditional ownership arrangements with the aim to reinforce the investment incentives of members. Increased willingness of membership to invest within co-op activities is expected to positively influence performance (Cook & Iliopoulos, 1999). That is, the establishment of internal capital markets provides investment opportunities to further invest risk capital within co-op operations. Recent research has also demonstrated

that reengineered ownership features enhance co-ops' performance (Cook & Iliopoulos, 1999; Van Bakkum, 2001). More formally:

H1b: *Re-engineered ownership arrangements in co-ops positively influence co-ops' performance*

Co-ops are continuously challenged to respond timely to markets with a constant supply of products bearing specific quality standards. Control of supply has been discussed in co-op literature as a significant determinant of operational success for co-ops (Cook & Iliopoulos, 2000). Besides, the foodstuffs produced by co-ops are, typically, subject to value decay over time and demand a well synchronized value chain (Goldsmith & Gow, 2005). Enforceable delivery agreements and differential pricing schemes can thus be important means of achieving the goals of constant supply and synchronization. In traditional co-ops, members may act opportunistically and shirk on quality and deliveries because they are not held liable for such behavior (Harris *et al.*, 1996). That is, by adopting a differentiated pricing policy in terms of volume, quality and produce content in order to reflect as much as possible the handling costs and market returns of each member's produce, co-ops may better satisfy the multi-needs of different groups of members (Kalogeras *et al.*, 2009). Therefore, we hypothesize:

H1c: *Re-engineered cost/benefit allocation arrangements in co-ops positively influence co-ops' performance*

### **3.2 STRATEGIC ATTRIBUTES – PERFORMANCE**

Overwhelming evidence for a positive influence of market orientation on performance has been reported and analyzed in business and marketing literature (Cano *et al.*, 2004; Kirca *et al.*, 2005). Market orientation provides the firm with market sensing and customer linking capa-

bilities. Understanding and anticipating customer needs subsequently increases firm innovativeness, new product success, customer's perceived product quality, customer satisfaction, customer loyalty and ultimately performance (e.g., Kirca *et al.*, 2005). The relationship between market orientation and performance seems particularly strong for manufacturing firms, like most agribusiness co-ops (Meulenbergh, 2000; Kyriakopoulos, 2000; Van Dijk and Van Boekel, 2004). Moreover, the relationship seems to hold for medium-sized firms, like most marketing co-ops in Greece (Pelham, 2000; Verhees & Meulenbergh, 2004). We hypothesize that:

H2: *Market orientation of co-ops positively influences co-ops' performance*

Brands increase performance because they create a higher price premium and higher market shares (Aaker, 1996). The chain of effects from introducing brands to higher performance, however, is complicated (Chaudhuri & Holbrook, 2001). Consumers may pay more for a product/service of a particular brand because they are mostly satisfied with the merits of specific attributes and cues of this brand rather than with its alternatives. Greater market shares may result from loyal customers. Brands may even reduce costs because they reduce marketing costs (since the brand is already familiar to already existing or potential clients), attract new customers and increase trade leverage. Awareness of the potential of brands puts brands at the center of company strategies (Urde, 1994). This enforces brand-oriented companies to emphasize on creating and efficiently using brand equity. Brand equity is used as leverage in all aspects of business management (Wong & Merilless, 2005). Brand orientation, therefore, increases brand equity by stimulating the chain of effects from product value and brand differentiation to customer loyalty, higher prices, higher market shares and eventually higher performance (Reid *et al.*, 2005). Moreover, research has shown that European co-ops which pursue and implement product differentiation aiming at the development of solid trade brands,

perform much better than co-ops with limited branded market presence (e.g., Mauget & Declerck, 1996). More formally:

H3: *Brand orientation of co-ops positively influences co-ops' performance*

Recent advances in business research identify a positive relationship between entrepreneurial orientation and performance (Lumpkin & Dess, 1996; Matsuno *et al.*, 2002; Naman & Slevin, 1993; Wiklund & Shepherd, 2005). Innovativeness, one of the elements of entrepreneurial orientation, is often referred to as a “basic function” of firms (Deshpande *et al.*, 1993; Drucker, 1954). Entrepreneurial orientation may be particularly important in co-ops to overcome an internal risk-avoiding member orientation (Fulton, 1995, Katz, 1997; Kyriakopoulos *et al.*, 2004). Most co-ops have an implicit understanding with their members that they are independent entrepreneurs who decide on the quality and quantity of produce for which the co-op firm subsequently will have to find markets. The reengineering of co-op attributes provides members with incentives to take the entrepreneurial lead in order to increase co-op performance by creating the finishing touch in value-added activities, either to the final consumer or the final distributor (Van Dijk, 1999). We hypothesize that:

H4: *Entrepreneurial orientation of co-ops positively influences co-ops' performance*

### **3.3 ORGANIZATIONAL ATTRIBUTES – MARKET ORIENTATION**

Voting principles of reengineered co-ops may appeal to members' incentives. For instance, members of differing sizes may be motivated to contribute more to the collective allocated equity, as they may realize that their investment strategy is now represented and rewarded proportionately to their patronage and financial contribution. Members' willingness to further invest in co-op activities may enhance co-op attempts to achieve a timely and well-organized

response to rapidly changing demands of final markets and, therefore, allow for the creation of more market-driven governance structures (Royer, 1995). Moreover, the assignment of decision rights to hired managers is expected to stimulate market orientation in co-ops. The decision-making in traditionally organized co-ops is more time consuming than in other organizational forms. It reduces flexibility and creates inertia with respect to the reaction to changing market circumstances (Nilsson, 2001). Professional managers are expected to be aware of the importance of being market oriented and retain more resources for the co-op (Russo *et al.* 2000). Sufficient resources and an awareness of their importance seem to suffice in rendering the co-op more market-oriented (Meulenbergh, 2000). Furthermore, re-engineered co-ops are expected to be more flexible and if they wish to be market oriented, they have to allow more entrepreneurial freedom to their management (Van Dijk, 1999). Flexibility stimulates market orientation (Jaworski & Kohli, 1993). More formally:

H5a: *Re-engineered control processes in co-ops positively influence the market orientation of co-ops.*

Producers have to be willing to fund market-oriented activities (e.g., market research, branding, new product development and product differentiation) that generate revenues in the long-run (Narver & Slater, 1990). Although investment in marketing is necessary to gain distribution on grocery store shelves, co-op members are often reluctant to provide significant equity capital for investments in their co-op's marketing program. The introduction of reengineered ownership principles reduces apathy among members to make long-term investments (Hardesty, 2005; Nilsson, 2001). The nature of the ownership structure of a co-op significantly affects member incentives to invest in their organizations (Cook & Iliopoulos, 2000; Kalogeras *et al.* 2007). Moreover, reengineered co-ops allow non-member investments, particularly, in projects which maintain a long-term focus (e.g., through preferred stock offerings and subsidi-

aries). This additional capital increases co-ops' potential to implementing ambitious marketing plans. We hypothesize that:

H5b: *Reengineered ownership principles in co-ops positively influence the market orientation of co-ops.*

Hendrikse and Bijman (2002) argue that, depending on the market valuation for specialty products, a self-selection process may develop among the members of a large co-op. Members of generic products maintain their membership of the co-op to benefit from countervailing power. Producers of specialty products may abandon the co-op and set up new small co-ops to benefit from improved innovation. This situation results in leaving co-ops with fewer innovative members thereby resulting in production- rather than market-oriented practices (Kyriakopoulos, 2000). The establishment of obligatory delivery agreements and individualized pricing mechanisms (e.g., paying a premium to members who deliver products of higher quality) may help co-ops to deal with the opportunistic behavior of members (Cook & Iliopoulos, 1999). They may enhance the loyalty and operational efficiency of members and, thus, guarantee resources and control mechanisms which enable a co-op to engage in value-added activities (e.g., market-oriented activities) and develop products with a good reputation. Therefore, we hypothesize that:

H5c: *Re-engineered cost/ benefit allocation processes in co-ops positively influence the market orientation of co-ops.*

### **3.4 STRATEGIC ATTRIBUTES**

Despite arguments that market orientation may inhibit an entrepreneurial orientation (Christensen & Bower, 1996), most authors find a positive relationship between entrepreneu-

rial orientation and market orientation (Kyriakopoulos *et al.*, 2004; Matsuno *et al.*, 2002; Slater & Narver, 2000). Entrepreneurial firms – characterized by high levels of innovation, proactiveness and risk attitude – are likely to fully exploit new ideas that emerge from market-oriented processes (Bhuan, *et al.* 2005). This also means that opportunities to meet latent customers' needs may not be missed (Slater & Narver, 1995). The co-op firm is used to unfold new entrepreneurial activities with the aim to give added value to the production of its members (Van Dijk, 1999). The entrepreneurial orientation of co-ops may increase their ability to pursue aggressive market-oriented activities in order to better serve various (existing and potential) market segments (Meulenber, 2000; Kalogeras *et al.* 2007). More formally:

H6: *Entrepreneurial orientation of co-ops positively influences the market orientation of co-ops.*

Market orientation stimulates brand orientation because market orientation capabilities (e.g., market intelligence) are critical success factors for creation of brands (Keller, 2000; Noble *et al.* 2002). Successful branding can be associated with the understanding of the three dimensions of market orientation, namely customers, competitors and organizational processes (Noble *et al.*, 2002). The agribusiness industry may benefit from creating brands that end-consumers use as an information and purchasing guide (Hanf & Kühn, 2005). Hardesty (2005) discusses how US agrifood co-ops could become more customer-focused through the adaptation of a brand-oriented focus. Co-ops which sell and market branded products have to be particularly resourceful in creating strong brands. Thus, we expect a positive relationship between market orientation and brand orientation of co-ops. More formally:

H7: *Market orientation of co-ops positively influences the brand orientation of co-ops.*

Entrepreneurial orientation positively influences brand orientation because innovation is important for brand creation (Weerawardena *et al.*, 2006). Being the first to exploit a new market segment, a new positioning or a market trend are important elements to firms' innovativeness and building of successful brands (Doyle, 1990). The entrepreneurial co-op firm has to function in a globalized food industry with the top brands as well as in the standard and private label products (Van Dijk, 1997). It is expected that the entrepreneurial orientation of co-op firms results in a beneficial interaction with their target customers when investments in branding are made (Hardesty, 2005). More formally:

H8: *Entrepreneurial orientation of co-ops positively influences the brand orientation of co-ops.*

## **4 RESEARCH DESIGN**

### **4.1 SAMPLE**

We selected marketing co-ops (second-order co-ops - ACOs) in Greece. The sampling was derived from relevant information provided through the official list of co-ops by PA.SE.GES. Besides ACOs, only first-order co-ops that commercialize all or part of their production themselves were included in the sample.<sup>1</sup> Based on that stratified criterion, a total of 155 co-op associations were selected (45 first-order co-ops and 110 ACOs). Following the method of key-informant we considered that for the case of Greek co-ops, the general managers are the most knowledgeable about co-ops' re-engineering as well as strategic issues.

A formal structured questionnaire including measures that are discussed in the next section was developed. We pre-tested this questionnaire with 6 respondents and no problems were encountered. A mail survey was used to collect data from the general managers of marketing co-ops. The response rate was 82%. Only respondents without missing values were included in

the analyses and 12 respondents were, therefore, excluded. One hundred and fourteen respondents were used in all the following analyses.

## 4.2 MEASURES

The survey contained multiple-item scales to measure the strategic attributes and performance and direct questions to measure the re-engineering of co-op attributes.<sup>2</sup> Below we discuss in more detail these measures for each variable.

*Co-op attributes* are measured using direct questions that determine whether control, ownership as well as cost/ benefit allocation elements are traditional or re-engineered. For re-engineered co-ops these questions are answered affirmatively – with a yes (coded as 1) and for traditional co-ops these questions are answered in the negative – with a no (coded as 0).

*Control attribute* was measured using two questions: one about voting rights and one about decision-making responsibility. *The voting* element can be traditional “one member one vote” (0) or re-engineered “proportional voting based on patronage” (1). The decision-making responsibility was measured by employing the scale of Andrian and Green (2001) adapted to the context of this study. Managers were provided with 11 activities and asked to determine whether responsibility for these activities falls upon the BOD or the manager. Each activity is scored on a 5-point scale ranging from 1 (“board most responsible”) to 5 (“manager most responsible”). These 11 variables were included in a Principal Component Analysis (PCA). The scree-plot suggests that a one-component solution is appropriate. All items had a loading higher than 0.563 on the first component and the first component accounts for 59 % of the variance. Cronbach’s Alpha equalled 0.93. The mean score of the 11 activities was used for further analyses.

*Ownership attribute* was measured using 7 questions about alignment of equity with patronage, transferability of ownership rights, 2 questions on the appraisal of ownership rights,

exit barriers, and 2 questions on the outside capital. For re-engineered co-ops these questions are answered with a yes (1) and for traditional co-ops these questions are answered with a no (0).

Finally *cost/ benefit allocation* was measured by asking 4 questions: two about prices paid to members and two about obligatory delivery agreements. The obligatory delivery agreements were determined by asking whether members are obliged to deliver their entire production to the co-op (based on contractual arrangements) and by asking whether members face sanctions in case of non delivery of the quantities set by the agreement. The answers to these 2 questions are highly associated (Cramer's  $V = 0.22$ ,  $p < 0.001$ )<sup>3</sup>. If co-ops have adopted either of the two arrangements, the newly formed variable was assigned a value of 1 (re-engineered), whereas if co-ops have adopted neither, this variable was assigned a value of 0 (traditional) (Kyriakopoulos *et al.*, 2004).

***Entrepreneurial orientation*** captures three elements: innovativeness, proactiveness and risk taking. The 9-item scale was developed by Covin and Slevin (1986). These 9 items were slightly modified (e.g., wording) to be comprehensible for the respondents. All items are scored on a 7-point Likert-type scale. The scree plot in the PCA suggests that a one- or two-factor solution is appropriate. In line with the original conceptualization of Covin and Slevin (1986) we chose the one factor solution. Based on the PCA, 2 reverse coded items were excluded from further analysis. Afterwards, all items had a loading higher than 0.50 on the first component, which accounts for 53% of the variance. Cronbach's Alpha was found to equal 0.85. The mean score of the 7 items was used for further analysis.

***Market orientation*** pertaining to the cultural perspective on market orientation was measured using 7 items. We used the cultural perspective rather than the behavioural perspective on market orientation because it provides a better explanation for the variations in business perform-

ance than the behavioural perspective (Oczkowski & Farrell, 1998). The cultural perspective on market orientation has been conceptualized as a one dimension construct (Hult *et al.*, 2005; Narver & Slater, 1990). The scree plot in a PCA suggests that a one-factor solution is appropriate. All items had a loading higher than 0.67 and the construct was sufficiently reliable. Cronbach's Alpha was equal to 0.81. The mean score of the seven items was used for further analysis.

**Brand orientation** was measured using 5 items adopted from Matear *et al.* (2004). An additional item was added to measure the extent to which co-ops invest into new brands according to member perceptions. Matear *et al.* (2004) suggest that the perceptions of all involved actors (e.g., investors, managers, employees) should be in harmony to serve as a basis for a truly brand-oriented company. The scree plot in a PCA suggests that the one-factor solution is appropriate. All items had a loading higher than 0.79 and the first factor accounts for 65% of the variance. Cronbach's Alpha was found equal to 0.89. The mean score of the items was used for further analysis. The brand orientation scale was also checked for consistency with the existing percentage of branded products marketed by co-ops. The correlation between the percentage of branded products and brand orientation is good (Pearson's  $r = 0.41$ ,  $p < 0.001$ ).

**Performance** was measured by a 3-item scale developed by Cadogan *et al.* (2002). This scale measures the respondents' level of satisfaction with respect to three performance indicators in the last three years, namely sales volume, new market entry and market share. The items of the scale were slightly modified for the purpose of this study because the original ones relate to export activities. We generated 4 additional items: organizational performance as perceived by management, organizational performance as perceived by members in terms of growth, and in terms of turnover, and performance in relation to profitability. PCA indicated two underlying components. One reverse-coded item had a low loading on both components after rotation and

was excluded from further analyses. We re-ran the PCA, which again yielded two underlying components. In the un-rotated solution, however, all items load higher than 0.65 on the first component and this component explains 57% of the variance. Cronbach's Alpha for the 6-item scale was found to equal 0.84, which could not be improved by deleting one more item. The mean score of the 6 items was used for further analysis.

#### **4 MODEL ESTIMATION AND RESULTS.**

In table 1 the percentages that show the adoption of organizational innovations appear next to each attribute element entailed in the traditional co-op model (as before, the introduction and application of NHA 2810/2000) and the re-engineered co-op model (after the introduction and application of NHA 2810/2000). The results reveal that the most marketing co-ops in Greece have only partially adopted organizational innovations. The vast majority of them maintain a traditional voting system (80%) and allow only members to claim rights on preferred shares (95.6%) and downstream investments in subsidiaries (75.2%). Also, most co-ops do not allow transferability of rights (74,0%) and appraisal of rights based on interest remuneration (96,8%). Seventy-three percent of them do not apply exit barriers and 70.7% do not apply differential cost-pricing policy. Slightly more than half of the co-ops impose obligatory delivery agreements (56.8%), sanctions (57,3%), and apply equity investment alignments (55,0%).

Only a few among the plethora of organizational innovations introduced by the NHA 2810/2000 were adopted by marketing co-ops. Specifically, almost all examined co-ops (95,6%) implement rights appraisal through changes in membership fees and 60% of them apply a differential pricing policy.

Table 2 depicts the results for the hypothesized relationships developed in the previous section. The results were obtained by ordinary least squares regression. An *F*-test is used to test specific hypotheses regarding groupings of explanatory variables (i.e., co-op attribute elements) (Maddala, 1989). In the first column of table 2 the explanatory variables are presented.

The second column in table 2 indicates the coefficients of the variables hypothesized to explain co-ops' performance. Overall, the results show that the regression model is significant ( $F = 5.99, p < 0.001, \text{Adjusted-}R^2 = .41$ ).

The first hypothesis, H1a, which predicts that re-engineered control elements positively influence performance ( $F = 0.860, p = 0.52$ ) is not supported. Decision-making responsibility is marginally significant when a one-sided significance test ( $\beta = 0.14, p = 0.06$ ) is performed. Likewise, H1b (re-engineered ownership attribute positively influence performance) is not supported ( $F = 0.766, p = 0.67$ ) and only the alignment of equity with patronage ( $\beta = 0.33, p = 0.07$ ) and the appraisal of ownership rights (interest) ( $\beta = 0.72, p = 0.07$ ) are marginally significant when a one-sided significance test is performed. Again, H1c (re-engineered cost/ benefit allocations positively influence performance) is not supported ( $F = 0.674, p = 0.64$ ). None of the predictors relating to cost/benefit allocation characteristics has a significant influence on performance. In contrast to the very limited support of the general thesis stating that re-engineered co-op elements positively influence performance, H2, H3 and H4 predict that market orientation ( $\beta = 0.32, p = 0.02$ ), brand orientation ( $\beta = 0.26, p < 0.01$ ) and entrepreneurial orientation ( $\beta = 0.26, p < 0.01$ ) enhance the performance of co-ops.

The third column in table 2 presents the results regarding the determinants of market orientation. Results show that the model is overall significant ( $F = 4.39, p < 0.001$ ) with Adjusted- $R^2 = .30$ . However, the findings indicate no support for H5a (re-engineered control attributes positively influence market orientation;  $F = 0.469, p = 0.83$ ) and H5b (re-engineered ownership positively influences market orientation;  $F = 1.337, p = 0.45$ ). Only the ownership element regarding exit barriers ( $\beta = 0.24, p = 0.08$ ) has a marginally significant (i.e., one-sided test is performed) and positive influence on market orientation, while claims through preferred shares ( $\beta = -0.53, p = 0.065$ ) has a marginally but negative significant influence on market orientation. Also, H5c (re-engineered cost/ benefit allocations influence market orientation of co-ops) receives no support ( $F = 1.681, p = 0.42$ ). Only differentiated prices paid to members ( $\beta =$

0.28,  $p = 0.045$ ) has a positive influence on market orientation when a one-sided significance test is performed. Finally, entrepreneurial orientation is the single most influential variable that explains market orientation of co-ops ( $\beta = 0.29, p < 0.01$ ), supporting hypothesis H6.

Finally, the fourth column in Table 2 presents the results of the regression analysis performed to test the third group of hypotheses concerning the remainder influences among strategic attributes. Results show that this model is also overall significant ( $F = 3.67, p < 0.001$ , Adjusted- $R^2 = .26$ ). Both, H7 (market orientation positively influences brand orientation) and H8 (entrepreneurial orientation influences brand orientation) are supported (H7:  $\beta = 0.56, p < 0.01$ ; H8:  $\beta = 0.37, p < 0.01$ ).

## 5 DISCUSSION

This paper is among the first to systematically examine influences among organizational attributes, strategic attributes and the performance of co-ops. We developed an actual classification scheme for providing detailed perspectives on whether and how re-engineered co-op attributes influence market orientation and performance. We further investigated the influences of strategic attributes on performance as well as influences among strategic attributes. While this research is considered as one of the first attempts to make-up an actual classification scheme and based on this to explore several relationships in the light of a policy reform, we hope the results obtained will be helpful to researchers and practitioners alike. Several challenging insights emerge from the findings of the current study.

First, marketing co-ops in Greece seem to be reluctant to adopt organizational innovations introduced by policy reforms. Although some of them have adopted innovations related mainly to cost/benefits allocation, most of them maintain a traditional governance and ownership structure even after the implementation of the NHA 2810/2000. This delayed adoption may raise the fundamental questions on whether policy reforms reflect the widely accepted

preferences of market participants (e.g., producers-members of co-ops) and whether and to what extent organizational change regarding co-op entrepreneurship in Greece drives, or is driven, by legal change. Based on our in-depth discussions with several co-op experts and managers regarding co-op entrepreneurial behavior in Greece, some facts (which were beyond the scope of the current research to be analyzed) were apparent. For instance, one might consider looking at some socio-economic dimensions of agribusiness development in the country. The high degree of micro-opportunistic political interventions and the missing social cohesiveness between co-op actors in Greece might determine the low speed with which Greek co-ops abandon their traditional-organized structures (personal contact, 2006).

Second, the findings indicate that only a few among the examined elements of re-engineered elements have a (marginal) positive influence on performance. Particularly, the managerial decision-making responsibility, appraisal of ownership rights, and the alignment of equity with patronage have a positive influence (albeit marginal in all three cases) on co-op's performance. These results may imply that these new organizational innovations are economically attractive to the corporate management of agribusiness co-ops in Greece and lead to cost-efficient contractual arrangements between co-ops and their members. Both professional management which acquires a high degree of market expertise (Cook, 1994; Van Dijk, 1996; Andrian & Green, 2001) and structural elements of new generation co-ops (NGCs), such as the alignment of equity with patronage and appreciation of ownership rights, have been analyzed in co-op literature as critical success factors for the performance of co-ops (Harris *et al.* 1996; Cook & Iliopoulos, 1999; Van Bekkum, 2001).

Moreover, differentiated pricing and establishment of exit barriers have a (marginally) positive influence on the market orientation of co-ops. As Reynolds (1997), Cook and Iliopoulos (2000), Nilsson (2001) and van Bekkum (2001), Kalogeras *et al.* (2009), among others, have analyzed, ownership and cost/benefit agreements that tie-up member economic resources to corporate operational (e.g., delivery agreements, exit barriers) and functional activities (e.g.,

pricing policies) help co-ops to stabilize their supply flows for serving specific market segments. This situation implies that the re-engineering of co-op structures should stimulate member investments in the long-run in order to serve and target effectively and efficiently their existing and potential customers. Although, building-up market-oriented co-op structures requires capital-intensive strategic plans and tactics that may result in reductions of member proceeds in the short run (Hardesty, 2005), these types of investments often reinforce co-ops' performance in the long-run and provide sustainable competitive advantages (Nilsson, 2001, Kalogeras *et al.*, 2007). The finding that entrepreneurial orientation has a strong influence on the market orientation of co-ops also enhances the view that co-ops' involvement in innovative, proactive and risk-bearing activities are the means for pursuing and implementing aggressive marketing strategies (Van Dijk, 1999; Meulenbergh, 2000). This is apparent in the case of agribusiness co-ops in Greece which are challenged to abandon their passive-oriented market role and create conditions for the development of a new entrepreneurial lead in their internal and external markets by becoming proactive and taking the necessary risks associated with their economic growth.

Finally, our results suggest that some strategic attributes of co-ops substantially influence some others. The entrepreneurial orientation and market orientation of co-ops positively and significantly affect their brand orientation. These results are in line with past analytical and descriptive work which emphasizes the importance of customer-focused strategies of agrifood co-ops (e.g., Peterson & Anderson, 1996; Meulenbergh, 1979, 1998) such as their branding (Hardesty, 2005). The competitive, innovative and proactive attitude that co-op firms should develop seem to influence their strategies and tactics aiming at the increase of customers' awareness and associations (Hanf & Kühn, 2005). These results also confirm recent advances in marketing-management sciences (e.g., Doyle, 1990; Keller, 2000; Noble *et al.*, 2002; Verhees & Meulenbergh, 2004; Weerawardena *et al.*, 2006) regarding the role of market and entrepreneurial orientation as stimulators of brand orientation.

### *Implications*

On balance, the results confirm and extend previous work on the influences among organizational attributes, strategic attributes and the performance of co-ops. These results may have implications for the continuing research of co-op organizational and strategic attributes. For researchers, this study will hopefully stimulate the use of empirical methodologies accounting for qualitative and quantitative observations/inputs in determining and providing detailed perspectives on co-ops' reengineering and strategic behavior. The results of the current study provide only partial evidence (some marginally significant relationships) that re-engineered attributes resulting from a policy reform influence performance while it provides strong evidence that strategic attributes influence the performance of co-ops. More research that examines the influences among different combinations of specific re-engineered attributes and strategic attributes on the performance of different types of co-ops (e.g., supply co-ops, services co-ops) in the light of other environmental conditions (e.g., technological changes; market-structure changes) is needed. Also, comparative research investigating the influences of a set of structural and strategic attributes on the economic performance of co-ops using both subjective and objective measures may prove particularly useful to the understanding of structural re-engineering and strategic behavior of co-ops.

This work may also be helpful to policy-makers, BoD members and managers of co-ops who are often challenged to cope with the re-engineering of specific organizational and strategic processes of co-ops under differing environmental conditions. Our study predicts that strategic attributes enhance performance much more than the re-engineered organizational attributes do. Greek co-ops are challenged to pursue and implement entrepreneurial, market and brand-oriented strategies no matter how difficult or expensive the adoption and implementation of these strategies might be. That is to say, aggressive marketing strategies eventually add value to product-market combinations of co-ops and, hence, the value-focused thinking and market orientation of co-ops can lead to substantial profits which benefit the members. How-

ever, the co-alignment of specific control, ownership and cost/benefit elements with these strategies should always be carefully considered and explored. Although it is beyond the scope of the current study and it is not easy in practice to make formulations of how specific re-engineered organizational and strategic attributes enhance the performance and the market behaviour of co-ops, the findings of the current study might provide some useful guidance. For instance, the creation of entrepreneurial values and attitude (e.g., innovative, proactive and risk taking behavior) within the internal and external environment of co-ops and to a lesser extent, the use of professional management at the corporate level, the establishment of exit barriers, the alignment of equity with patronage, and differentiated pricing policies, might constitute only some of the first steps that agribusiness co-ops in Greece should follow in order to improve their performance. Finally, the influence of other strategic attributes, such as the brand orientation on co-ops' performance, might highlight that co-ops are also challenged to develop brands that play a recognizable and trusted role in building customer loyalty.

### *Limitations*

The current study is subject to limitations inherent in this type of research. The use of an inductive approach for making-up a dichotomous classification scheme allowed us to conduct a detailed investigation of the influences of various re-engineered attribute elements on strategic attributes and co-op performance. This classification scheme may redeem the inherent weakness of the cross-sectional nature of our empirical study. Cross-sectional empirical research, unlike longitudinal research, does not allow for the investigation of causal relationships. Yet, the actual classification scheme used partly compensates for the inability to establish causality between the various relationships that are not well-grounded in theory. At this juncture, future research may re-examine the hypotheses put forward in this study by using a longitudinal research design.

Other limitations of this study stem from our conceptualization. First, we contended that businesses that are more entrepreneurial, market, and brand-oriented are best positioned for success under all environmental conditions. However, this study did not aim at studying whether the hypothesized relationships (e.g., the relationship between market orientation and performance) are moderated by other micro or macro economic conditions or not. Future research may consider the influence (direct or not) of other environmental conditions (i.e., heterogeneity in co-op participants preferences or external competitive forces) associated with the inherently re-engineered processes and strategic behavior of co-ops. Second, we conceptualized and tested that specific strategic attributes influence the performance of co-ops. The extension of this framework, by hypothesizing that specific elements of strategic attributes enhance performance, may be another important step in furthering our understanding regarding the strategic orientation of co-ops. For instance, co-op's innovative, proactive, or risk behavior might reveal interesting insights on whether and to which direction the entrepreneurial orientation of co-ops should be developed.

### *Concluding remarks*

Hopefully, the current research contributes to a better understanding of re-engineering, strategic behavior and performance of marketing co-ops in agribusiness. The recognition that re-engineered co-op attributes do not influence co-ops' performance as much as strategic attributes do, raises two questions. The first one, as Kyriakopoulos et al. (2004) mentioned, is whether the influence of the re-engineered structures on the performance has been over-emphasized in the co-op literature. And the second one is whether emphasis in co-op theory and practice should also be placed on the strategies and tactics that co-ops should adopt and implement in order to capture market benefits. We believe that only after BoD members and managers of co-ops have assessed the impact of a series of attribute elements on the performance of their co-ops can they attempt to make necessary changes in the organizational structure

of co-ops and set-up strategic marketing planning processes. We hope that this research highlights the need that the study and practice for the re-engineering of agribusiness co-ops should account not only for structural but also for strategic dimensions and characteristics.

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**Table 1.** Organisational Attributes of Co-ops in Greece

Attributes	Traditional: <sup>a</sup>	Re-engineered: <sup>a</sup>
	as before NHA 2810/2000	after NHA 2810 introduction
<i>Control</i>		
Voting rule	1 member-1 vote (79.2%)	Proportional (20.8%)
Corporate Decision-making <sup>b</sup>	BoD	BoD and Experts
<i>Ownership</i>		
Entry fees	No	Yes
Claim to ownership rights 1/preferred shares <sup>c</sup>	Members only (95.6%)	Non-members also (6.4%)
Claim to ownership rights 2/subsidiary <sup>c</sup>	Members only (75.2%)	Non-members also (24.8%)
Equity investment-patronage alignment	No (55.0%)	Yes (45.0%)
Transferability of rights	No (74.0%)	Yes (26.0%)
Tradable ownership rights	No	No
Redeemable ownership rights	Yes	Yes
Appraisal of rights 1 / interest	No (96.8%)	Yes (3.2%)
Appraisal of rights 2/change in fee	No (4.0%)	Yes (96.0%)
Net Income <sup>d</sup>	Through Price	Through Price and Dividends
Exit barriers	No (73.0%)	Yes (27.0%)
<i>Cost/Benefit Allocation</i>		
Nature of the delivery agreement	Non-obligatory (56.8%)	Obligatory (43.2%)
Sanctions	No (57.3%)	Yes (42.7%)
Differential pricing	Equal (42.4%)	Differentiated (57.6%)
Differential cost pricing	Equal (70.7%)	Differentiated (29.3%)

a The percentages relate to each attribute of the three organizational principles.

b There is no percentage for this attribute, as corporate decision-making was measured through a 5-point likert scale.

c The attribute “claim to ownership rights” was divided into two attributes; 1) claim through preferred shares and 2) claim through subsidiaries, as members (and external investors) can claim ownership rights through these two different ways.

d Net income is allocated through price and dividends in all cooperatives (unless the general assembly decides that net income is retained for other purposes, e.g., an investment project).

**Table 2.** Regression Parameter Estimates

	Performance	Market-Orientation	Brand-Orientation
<i>Strategic Attributes</i>			
Brand orientation	0.25***		
Market orientation	0.26**		0.56***
Entrepreneurial orientation	0.29***	0.29***	0.37***
<i>Organizational Attributes</i>			
<i>Control</i>			
Voting rule	0.11	0.04	
Decision-making	0.14*	-0.06	
<i>Ownership</i>			
Claim 1(preferred shares)	-0.20	-0.53 <sup>#</sup>	
Claim 2 (subsidiary)	-0.13	-0.13	
Equity-patronage alignment	0.33*	-0.02	
Transferable ownership rights	-0.16	-0.22	
Appraisal 1/interest	0.72*	0.37	
Appraisal 2/change in fee	-0.18	0.06	
Exit barriers	-0.23	0.24*	
<i>Cost/Benefit Allocation</i>			
Nature of delivery agreement / Sanctions <sup>a</sup>	0.12	0.20	
Differentiated pricing	-0.29	0.28**	
Differentiated cost pricing	0.21	-0.23	
Adjusted-R <sup>2</sup>	0.41	0.30	0.26
F statistic	5.99***	4.39***	3.67***
N	114	114	114

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  (one-sided tests), #  $p < 0.1$  (two-sided test)

<sup>a</sup> As mentioned in paragraph 4.2, the two attributes “nature of delivery agreement” and “sanctions” were combined into a new variable.

## APPENDIX: MEASUREMENT SCALES USED IN THE RESEARCH

The adaptations of each respective item to the context of this survey can be seen in *italics*.

Market orientation as a cultural approach (Market Orientation) [scale used by Hult et al. (2005).]

[Seven-point Likert-type scale ranging from ‘strongly disagree’ to ‘strongly agree’]

*Competitor orientation* [adapted from Narver and Slater (1990)]

- Our salespeople (*e.g. hired personnel from the sales department*) regularly share information concerning competitors’ strategies.
- Top management (*e.g. The General Manager*) regularly discusses competitors’ strengths and strategies.

*Customer orientation* [adapted from Narver and Slater (1990)]

- Our business objectives are driven primarily by customer satisfaction.
- Our strategies are driven by beliefs about how we can create greater value for customers.
- We measure customer satisfaction systematically and frequently.

*Interfunctional coordination* [adapted from Narver and Slater (1990)]

- All of our *operations and functions* (“business functions” in the original scale) are integrated in serving the needs of our target markets.
- All of our business functions are responsive to each other’s needs and requests.

Entrepreneurial Orientation [derived from Barringer and Bluedorn (1999). Items originally developed by Covin and Slevin (1991) and Naman and Slevin (1993)]

[Seven-point Likert-type scale ranging from ‘strongly disagree’ to ‘strongly agree’]

*Innovation*

- Managers (*e.g. The General Manager*) place a strong emphasis on innovation.
- *Our cooperative* over the last five years marketed many new products/services.
- Changes in our products/services over the last five years have been dramatic.

*Proactiveness*

- *Our cooperative* initiates actions to which competitors respond.
- When dealing with competitors *our cooperative* typically initiates action.
- *Our cooperative* typically seeks to avoid competitive clashes, preferring a “live and let live” posture. (reverse-coded item) \*

*Risk attitude*

- Managers (*e.g. The General Manager*) have a strong tendency for high risk investments.
- Managers (*e.g. The General Manager*) believe that bold changes are necessary to achieve the firm’s objectives.
- Managers *in our cooperative* favor a “wait and see” posture in order to minimize the probability of making costly decisions when faced with uncertainty. (reverse-coded item) \*

## Brand Orientation

[scale derived from Aaker (1992) and validated by Matear et al. (2004)]

[Seven-point Likert-type scale ranging from ‘strongly disagree’ to ‘strongly agree’]

- *In our cooperative we invest significantly in managing and promoting the reputation/image of our cooperative.*
- *In our cooperative we invest significantly in customer loyalty programs.*
- *In our cooperative we invest significantly in research into internal perceptions about our brand(s) (perception of frontline staff, core service providers, management, personnel).*
- *In our cooperative we invest significantly in research into external perceptions about our brand(s) (perceptions of customers, intermediaries, suppliers).*
- *In our cooperative we invest significantly in research into perceptions about our brand(s) by the members-farmers of our cooperative (new item).*

## Decision – making Responsibility [scale of Andrian and Green (2001)]

[The response rankings are defined as follows: 1 = board most responsible, 2 = board more responsible, 3 = board and manager equally responsible, 4 = manager more responsible and 5 = manager most responsible].

### *Decision-making responsibility*

#### Area of Responsibility

1. Setting the direction of the business for the welfare of the cooperative members
2. Managing the day-to-day operations of the cooperative
3. Maintaining accuracy of the minutes of the board of directors’ meetings (not included)
4. Acting in good faith with reasonable care in handling the affairs of the cooperative (not included)
5. Ensuring employees understand cooperative philosophy
6. Approving purchase of major capital assets (not included)
7. Developing programs for implementation of cooperative policies
8. Establishment and evaluation of programs
9. Furnishing information needed for long range planning
10. Educating the general public about the cooperative and its activities
11. Keeping current on legislation concerning cooperatives
12. Encouraging membership and active patronage
13. Informing members – *farmers* of developments within the cooperative
14. Hiring, training, and setting compensation for employees

## Overall Performance

### Perceived performance

[Seven-point Likert-type scale ranging from 'strongly disagree' to 'strongly agree']

- Our cooperative performs better than our competitors.
- The members-farmers of our cooperative think that our cooperative performs better than our competitors.
- Relative to our competitors, our cooperative is less profitable (in this question please try to think the cooperative as a company) (reverse-coded item) \*
- Relative to our competitors, our cooperative is growing faster (in turnover terms).

### Performance in relation to objectives [items derived from Cadogan et al. (2002)]

[Seven-point Likert-type scale ranging from 'very dissatisfied' to 'very satisfied']

- How satisfied are you with your cooperatives' performance over the past three years, in terms of your **sales volume**?
- How satisfied are you with your cooperatives' performance over the past three years, in terms of your **new market entry**?
- How satisfied are you with your cooperatives' performance over the past three years, in terms of your **market share**?

\* Denotes items dropped during analysis

## ENDNOTES

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<sup>1</sup> Our sample contains co-ops that only sell and market the produce of their members and do not present any type variation in activities (e.g., supply vs. marketing co-ops). That is, we do not control for the type of co-op in our modelling framework.

<sup>2</sup> The survey measures as used in the final questionnaire are available upon request to the authors.

<sup>3</sup> Cramer's V is a statistic measuring the strength of association or dependency between two (nominal) categorical variables in a contingency table.