

Marketing and Performance of Fruit and Vegetable Co-operatives

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Agricultural co-operatives represent a significant percentage of the fruit and vegetable production in Europe. The objective of this paper is to analyse the marketing behaviour of the agricultural co-operatives, relating that behaviour to their performance. Information was collected from the managers of the co-operatives via personal interviews with a structured questionnaire. The results revealed that the co-operatives with more experience, resources and skills followed a diversification strategy, obtaining a higher efficiency (sales per asset) as a result of implementing marketing activities addressed to the last stages of the distribution channel and the consumer.

The social and economic importance of co-operatives in the agricultural sector is confirmed by the sheer number of them, their turnover, the number of jobs they provide and the number of associated companies in the sector that are involved (Arcas and Munuera 1998). Within the European Union agri-food industry, there are estimated to be 30,000 co-operative enterprises, with over 12 million members processing and marketing over 60 per cent of agricultural products (Hind 1999). In Spain there were 3,930 agricultural co-operatives in 1998, selling over 50 per cent of agricultural products. Given the importance of such business in European agriculture, the strategies of co-operatives and consequence performance are clearly of relevance to those involved in the agricultural sector and agriculture policy.

If we consider the agricultural co-operatives involved in marketing in the fruit and vegetable sector, their importance is reflected in the high percentages of the volume of production that they manage. We find countries such as Denmark, The Netherlands and Belgium where these marketing co-operatives deal with 70-80 per cent of the total commercialised volume of fruit and vegetables. In Spain the figures are around 37 per cent for fruit and 12 per cent for vegetables (Comisión Europea 1998).

However, companies in this sector have not tended to place a lot of importance on marketing. This is not due to the fact that marketing activities are beyond the reach of farmers, nor is it because agricultural products are very similar (Bateman 1976). On the contrary, it is our conclusion that the traditional attitude towards marketing amongst businessmen in this sector can be attributed to the high level of protectionism in the sector, to the specific nature of agricultural activity and, more pertinently, to the small size of most agricultural organisations, making the effective application of active strategic marketing policies virtually impossible.

In this context, this study of the marketing strategies of co-operatives in the fruit and vegetable sector aims to contribute to a greater understanding of the co-operative formula from the marketing perspective, because the majority of the existing studies about co-operatives are very theoretical and centred on the doctrinal, philosophical and legal side of these companies, paying no attention to the business side. More specifically, we will analyse the commercial behaviour of co-operatives dedicated to the fruit and vegetable sector in Spain. The identification of different types of co-operatives according to the marketing strategies that they employ is the basis used in order to study the activities undertaken by each group, and the effectiveness of these activities relating to the marketing of the products.

Marketing in the agricultural co-operative

Agricultural producers participate in the marketing system either individually or collectively through co-operatives or some other type of producer marketing organisations, to which Schroder et al (Schroder Wallance and Mavondo 1993) refer generically as Producer Marketing Organisations. The objective of these organisations is to use collective forward integration into processing and marketing to achieve market power for their members.

Among the major goals that co-operatives, as organisational forms with a big tradition in many countries, have sought to achieve are the following (Farris 1997):

- (i) provide information and education to its members to

- enhance their own business management;
- (ii) improve bargaining power in purchasing farm supplies and selling farm products;
- (iii) obtain products or services which are either costly or not otherwise available;
- (iv) improve product or service quality in both farm inputs purchased or commodities marketed;
- (v) reduce costs of marketing farm products; and
- (vi) increase farmers' income.

From a marketing perspective, co-operatives offer great possibilities of collaboration to its members such as helping them to achieve economies of scale in production and marketing activities, coordinating production, marketing, and processing activities to meet final consumer demands, providing competition in contract markets by setting contract payment rates and other terms, and capturing profits from other stages in the market channel (Royer 1995). More specifically, Arcas (Arcas 1999) points out some possibilities concerning marketing research, new product development, portfolio diversification, branding, and the development of promotions, selling and distribution activities, as well as access to new markets.

Varadarajan and Rajatman (Varadarajan and Rajaratnam 1986) named this type of agreements as “symbiotic marketing”, a term that was previously used by Adler (Adler 1966) to define the alliances between two or more independent organisations in order to improve their marketing potential. Bucklin and Sengupta (Bucklin and Sengupta 1993) call these agreements “co-marketing alliances” and refer to them as associations created to coordinate the marketing activities of its members, which can even be extended to production activities.

Co-operatives can play a very important role in agricultural marketing. From the consumer orientation perspective, co-operatives facilitate the exchanges to boost the physical and communication flows between the consumer and the agricultural company, in order to improve the value for the consumer (Wierenga 1997). Through market research, these co-operatives can provide their members with information concerning consumers' needs. Furthermore, they can develop communication activities to promote their products

and improve the consumer knowledge concerning the nature of the supply and production processes in which that consumer is more and more interested.

Strategic marketing of co-operatives in the agricultural sector

If we examine the literature relating to development strategies that agricultural co-operatives could adopt, we find Ansoff's (Ansoff 1957) matrix of expansion product/market with four strategies: product/market penetration (the firm tries to increase the share of its products in the markets which it already serves), market development (which involves developing new markets for the firm's current product lines), product/market development (the firm maintains its existing markets but develops new product markets within them), and diversification (which involves the firm entering new product markets outside its present product markets).

Nonetheless, before establishing its product-market portfolio, the co-operative needs to examine the nature of its "competitive advantages", which may be rooted in cost leadership, differentiation or focus according to Porter (Porter 1980). These competitive advantages will act as a starting point for later development strategies, as well as for the decision making process regarding tactical marketing variables.

As regards competitive advantages, the concentration in distribution strategies and the high level of competition in the agricultural sector have forced co-operatives to seek a specific market niche, by establishing regional identities through forms of process assurance and traceability (Brown 1995). He also refers to the importance of quality for agricultural co-operatives in the UK, not so much as a differentiation factor but because the supermarkets demand it. Fleming (Fleming 1992) also points out the need to adopt focused strategies in order to develop exports of fresh produce.

The operational marketing of agricultural co-operatives

Operational marketing issues refer to how well the company communicates and implements its marketing strategy. In order to achieve this goal, the company use the marketing-

mix elements regrouped into the popular four Ps: product, price, promotion and place (Bradley 1995).

If we examine the different marketing variables, it is obvious that the product is the variable over which agricultural co-operatives have the greatest power to act, since there are various attributes of particular fruit and vegetable produce which may assist in the differentiation of the product. Amongst these, the most important are quality, packaging, presentation, place of origin, production system, brand and additional services (Baker and Crosbie 1994; Conklin and Thompson 1993; Steenkamp 1995).

Nowadays, more and more branded fruit and vegetable have been introduced into the European market by both the producers and the retailers (Lamperjee, N and Vliet 1993). However, according to Olmeda and Rivera (Olmeda and Rivera 1983), Spanish agricultural co-operatives either lack distinctive brand identity or employ brand names with little personality. Branding policies in agricultural co-operatives should seek to emphasise the prestige of their own brands, with surplus production or marginal products marketed under the brand names of distribution outlets.

Of the four marketing variables, price offers the least flexibility upon which the agricultural co-operatives can act. One of the main features of these products is the differences in price which can occur in the market, and which may be due to factors such as the place of origin, variety, quality condition and pack, as well as the method of sale (How 1991). Of the three methods of sale (outright sales, on consignment and in deposit), outright sale is the most interesting for agricultural co-operatives, since it allows them to defend themselves against price fluctuation and thereby guaranteeing a certain price to their members. However, it is the least favoured by the buyers which is why its use will always depend on the negotiating powers of the co-operative.

With respect to advertising activities aimed at the buyers of fruit and vegetables, How (How 1991) classifies them in three groups: generic advertising, brand advertising and private label advertising. In the case of Spanish agricultural producers in general, and of agricultural co-operatives in particular, the main characteristic regarding brand advertising is its low level of use, which is a result both of the small size of the companies and of a lack of business awareness about

the role of marketing. Because of this, institutional promotion is the most common promotional activity in Spain, specially state programmes to develop generic advertising based in “umbrella” or geographic brands (Olmeda 1989). Other ways in which agricultural co-operatives can carry out their marketing include trade fairs, price reductions, tastings, free gifts, company tours or sponsorship activities (Olmeda 1989; Rivera 1996; Caldentey, Haro, Titos and Briz 1994).

Fourthly, in order to develop effective distribution strategies for fruit and vegetable products, co-operatives need to pay particular attention to the choice of a marketing channel, logistical planning, and relationships with clients. These considerations are especially important for several reasons. First, agricultural products are perishable and therefore require special transport and storage. Second, seasonal production has to correspond with a consumption pattern that extends over a long period of time. And third, because there are many small product suppliers and consumers in agricultural and food markets, considerable effort goes into collection, regrouping and dispersing products (Meulenberg 1997).

In Spain, the channel traditionally used to market these products has been made up of producers, shipping point firms, destination wholesalers and retailers (De la Jara Ayala 1988; Caldentey Albert 1986; García and Langreo 1992). This channel is still widely employed in this sector, as proven by the high level of participation of the MERCAS network¹, as destination wholesalers, in the distribution of fruit and vegetables (Crespo 1994), compared to other sectors where this intermediary has a low participation or has even disappeared. However, more recently we are noting a change in the type of distribution of these products with the appearance of shorter channels (Distribución y Consumo 1993).

Co-operative performance

Performance evaluation of co-operatives has always been a topic of considerable interest in agricultural economics, primarily because of the significance of the co-operative formula of organisation in agriculture (Lerman and Parliament 1991).

Previous research has analysed how co-operatives'

performance is affected by size and industry (Lerman and Parliament 1991) or how it differs compared to non-co-operatives (Hind 1994; Katz 1997; Ferrier and Porter 1991). Nonetheless, there is a lack of research relating marketing practices to this co-operative's result, although literature recognises the relevance of these practices in present markets.

Essentially, there are potentially two main areas of measurement of co-operative performance (Hind 1998): (1) conventional corporate measures which are used for traditional business; and (2) social and member benefit measures which attempt to quantify the benefits accruing to individual members or the community. In this sense, some argue that the performance of co-operatives should not be measured in specifically financial terms alone (Pratt 1998). Nonetheless, as Haines and Al Hasan (Haines and Al Hasan 1998) point out, co-operatives which exist to provide economic benefits to members (as fruit and vegetable co-operatives) and employ the same business techniques and methods as other competitor businesses must therefore be judged primarily by the same financial and management measurement techniques as their competitors, since they are only likely to stay in business and serve member interests if they perform equally well.

It is absolutely necessary to take into account that co-operatives operate in a commercial environment and must, therefore, meet minimum corporate performance measures in order for the corporative body to survive and be in a position to deliver member and social benefits (Hind 1998).

Empirical study of the marketing management of fruit and vegetable co-operatives

Data

The sample is made up of the census (forty three) of agricultural co-operatives from the south-east of Spain, one of the biggest fruit and vegetable production areas in the country. The information was collected from the managers of the co-operatives via personal interviews with a structured questionnaire.

Table 1

Profile of Co-operatives in the Sample

A profile of the sample is provided in table 1. This profile refers to age of the co-operative (years), size (sales), structure (the number of partners), activity (services that the co-operative offers to its partners and its range of products), human resources (the number of permanent workers), results (profits), and partner profile (average sales per partner and the percentage of them exclusively dedicated to the agricultural sector).

Results concerning the marketing activity of the co-operatives

The first step in the analysis was aimed at obtaining a

Characteristic	Mean	Std Dev
Age (years)	10	6.82
Sales (Millions of Pesetas)	842	939
Number of partners	289	434
Range of Products	3.9	2.01
Services offered	5.5	1.9
Number of permanent employees	7.3	7.8
Average turnover per partner (Millions of Pesetas)	8.0	13.2
percentage of partners exclusively dedicated to the agricultural sector	37.9	37.9

better knowledge of the marketing activity developed by the fruit and vegetable co-operatives in Spain. More specifically, we outlined their strategic marketing decisions, their sources of competitive advantage which determine the strategic decisions and the marketing actions used to

implement them.

(i) Development Strategies

With the aim of identifying the development strategies (according to Ansoff's classification) that our sample companies have employed, we have analysed two quantitative variables: the product range and the percentage of sales in the principal market. The combination of these two dimensions yields four situations highly associated with the growth strategies:

- a. Narrow range of products and high percentage of sales in the principal market, which can be associated with a product/market penetration strategy (developing the present markets with the present products);
- b. Wide range of products and high percentage of sales in the principal market, associated with a product/market development strategy (developing new products in the present markets);
- c. Narrow product range and a low percentage of their sales in the principal market, associated with a market development strategy (exploring new markets with the present products (market development));
- d. Wide range of products and a small percentage of sales in the principal market, associated with a diversification strategy (developing new products in new markets).

In order to ascertain the extent to which different groups of co-operatives adopt any of the aforementioned policies, we have applied a cluster analysis to the two previously mentioned variables (range of products and percentage of sales in the main market), using the squared Euclidean measure of similarity and the minimum square method, a combination which produces better results (Punj and Stewart 1983).

Two criteria were used to select the appropriate number of clusters for further analysis: (a) the interpretability and practicality of the derived clusters in terms of the dimensions of innovativeness discussed earlier; and (b) the drop in the overall root-mean-square prediction error at different merger levels as shown by a dendrogram of the clusters process

(Manu and Sriram 1996).

Two groups of co-operatives (of 14 and 29 co-operatives, respectively) were identified in the cluster analysis based on a two cluster solution. Given the small group sizes, the statistical approach used to validate this solution was the non-parametric Wilcoxon test in order to detect significant differences between the two groups. Results are shown in table 2.

Table 2

Wilcoxon Test of the Range of Products and Sales in the Main Market by the Two Groups Identified in the Cluster Analysis

The Wilcoxon test enables us to distinguish between two types of fruit and vegetable co-operatives in terms of their growth strategies, because significant differences exist between the two clusters. Cluster 1, made up of 14 co-operatives, presents a smaller product range than cluster 2, which comprises 29 co-operatives, and a higher sales percentage than that cluster in its principal market. Thus, we can assert that the co-operatives of cluster 1 follow a product/market penetration strategy, and those in cluster 2 adopt a diversification strategy.

(ii) Sources of competitive advantage

Table 3

Factor Analysis Results on the Variables of Competitiveness

	Mean score		W	p
	Cluster 1	Cluster 2		
Range of Products	3	4.5	231.5	0.04
% Commercialised in the main market	93	47	435	0.00

of the Agricultural Co-operatives

Note: 1=Position compared to the competition using a scale ranging from 1 (much worse) to 5 (much better).

To capture the sources of competitive advantage we factor analysed the 18 items from the questionnaire (items referred

to the position of the co-operative compared to the competition, using a scale ranging from 1=much worst to 5=much better) which were related to the marketing competitiveness with principal component extraction, iterations and varimax rotation. With eigen values of 1.00 or higher as the criterion, we found a presence of five factors which explain 67.6 per cent of the variance. By using a criterion of factor loadings of 0.45 or higher, we selected the items pertaining to each factor. The results of the factor analysis are shown in Table 3. The statements provide insights into the interpretation of the factors of competitiveness.

Factor (% of variance explained)	Variables	Factor loadings	Mean
Loyalty by ability in the distribution (35'8)	Collaboration with the distributors	0.60	3.4
	Fidelity to the distributors	0.67	3.5
	Capacity of quick reaction to market changes	0.47	3.2
	Prestige among the distributors by a quality offer.	0.77	3.8
	Ability to attend big orders	0.87	3.4
Productive ability (9'3)	Coordination agricultural demand-purchasing	0.80	3.1
	Purchasing of Auxiliary materials	0.71	3.3
	Handling equipment	0.62	3.1
	Handling Experience	0.60	3.2
Supply ability (8'7)	Capacity to change qualities and productions	0.66	2.9
	Logistics ability	0.57	3.3
	Product variety	0.80	2.9
	Regular supply	0.62	3.2
	Production out of season	0.59	2.8
Market Orientation (7'9)	Worry for the needs of the consumers	0.80	3.2
	Understanding of how and why the distributors buy	0.65	3.3
Costs (5'9)	Handling costs	0.9	3.2
	Purchasing costs	0.6	3.3

Factor 1 represents the highest percentage of the variance and is explained by three variables related to the distribution channels (partnership/co-operation, prestige and loyalty) and the ability of the company to react quickly to market changes, secure large orders and offer quality products; that is why we

call it *loyalty by ability in the distribution*. Factor 2 saturates in the variables related to production, which leads us to call it *productive ability*. The variables related to the characteristics of supply are addressed by Factor 3 which we will call *supply ability*. We refer to factor 4 as *market orientation*, which covers the concern of the companies for consumer needs and the understanding of how and why wholesalers buy. Finally, factor 5 is called *cost* because it includes the variables related to both supply costs and the costs of handling and transforming raw materials.

(iii) Operational Marketing Decisions

Once the marketing actions followed by the co-operatives at a strategic level have been analysed, we proceed to evaluate the actions undertaken at a tactical level, based on the distribution policy, method of sales and communication.

Table 4 shows the importance of the different intermediaries used by the co-operatives. The results confirm that they use mostly the wholesaler at the point of destination and the industry.

Table 4

Marketing Actions Undertaken by the Co-operatives

¹ % of the total sales in value.

² Importance of the communication actions in a scale of 1 (very low) and 5 (very high).

On the other hand, concerning the methods employed in securing sales, we find that the most frequently used method is outright sales ahead of consignment or deposit. Furthermore, they pay more attention to the visits of the distributors to their companies than to advertising undertaken in collaboration with the distributors and generic advertising. They show the least interest in trade fairs.

The two groups of co-operatives

In this section we analyse the behaviour of the two groups of co-operatives identified (G1 follows a product/market penetration strategy and G2 follows a diversification strategy) in relation to the marketing decisions that they take. More

specifically we consider the differences concerning their factors of competitiveness, operational marketing decisions, and other characteristics of these companies.

Again, given the small group sizes, we applied the non-

Actions	Mean¹	Actions	Mean²
DISTRIBUTION AGENTS		COMMUNI- CATION ACTIVITIES	
Industry	31.1		
Commission merchants	19.7		
Second order (federal) co-op	5.7		
Destination wholesaler	33.1		
Retailers	6.9		
Others	3.5		
METHOD OF SALES			
Outright sales	63.8		
Consignment	36.0		
Deposit	0.2		
		Attendance at Fairs	2.6
		Visits of the distributors to their facilities.	3.7
		Promotions in collaboration with the distributors	3.3
		Generic advertising	3.1
		Brand advertising	3.5
		Company advertising	3.3

parametric Wilcoxon test (W) in order to detect significant differences between the two groups. Only significant results are shown in table 5.

From the above data we can conclude that there are significant differences in the behaviour of the two groups of co-operatives.

The co-operatives in cluster 1, those following a product/

market penetration focus mainly on the costs of the products sold as their factor of competitiveness in order to cope with their present market. In terms of their marketing actions, they commercialise a bigger proportion (than group 2) in the industry, approximately 50 per cent, but significantly less through the commissionists, co-operatives of second order and wholesaler at the point of destination. The method of sales is largely outright sales and, in general, they make a lesser use of the communication marketing activities

On the other hand, co-operatives in cluster 2, which adopt a diversification strategy, base their competitiveness in productive and supply abilities that allow them to enlarge their product portfolio. Furthermore, instead of concentrating in industry to distribute their products, they use commissionists, second order co-operatives and wholesalers at the point of destination which improve their possibilities of accessing new markets. And additionally, in order to ease that access to new markets they promote the visits of their distributors to their facilities, and use generic and brand advertising extensively.

Table 5

Factors of Competitiveness and Operational Marketing Decisions of the Two Groups of Co-operatives

Having identified the differences in marketing behaviour of the co-operatives, we can describe them according to the dimensions laid out before as a sample profile. Again, as we have quantitative variables that characterise two small subsamples, we use the non-parametric Wilcoxon test to detect the characteristics that differ significantly between the two groups. The results are shown in table 6.

Table 6

Profile of the Two Groups of Co-operatives

Based on the information in table 7 we can get a better understanding of the two groups of co-operatives. Cluster 1 co-operatives, which follow a product/market penetration strategy and sell their products mainly in industrial markets are younger companies with smaller dimensions (both in terms of sales and permanent employees) compared to cluster 2.

On the other hand, those co-operatives that form the cluster 2 and adopt a diversification strategy have a more

intense activity because their partners demonstrate a higher level of professionalism (higher percentage of members exclusively dedicated to the agricultural sector) and tend to farm larger areas than those in cluster 1. The higher level of professionalism is given both to a higher number of

Behavioural aspects	Mean score		W	P
	Cluster 1	Cluster 2		
Productive ability	-0.5	.2	214	0.03
Supply ability	-0.3	0.2	240	0.09
Costs	0.4	-0.2	507	0.09
Industry	48.6	22.8	562	0.05
Commission	16.8	21.1	244	0.09
Co-operative of second degree	1.1	7.9	240.5	0.04
Wholesaler at destiny	18.9	39.9	228.5	0.03
Outright sales	84	54.1	502	0.00
Consignment	16	45.6	173	0.00
Visits of the distributors to the facilities	3.4	3.9	247	0.09
Generic advertising	2.6	3.4	240	0.07
Brand advertising	3	3.7	251	0.09

permanent employees and a higher percentage of partners exclusively dedicated to the agricultural sector, while the farming of larger areas is associated with a higher turnover per partner.

Performance of the co-operatives

After describing the behaviour of the agricultural co-operatives, it is interesting to know what is the performance of such behaviour. The objective of this section is to determine whether the co-operative performance is related to the marketing strategy and operational decisions.

Characteristics	Mean score		W	P
	Cluster 1	Cluster 2		
Age (years)	8	11	242	0.08
Sales (Millions of pesetas)	225.9	1140.7	176	0.00
Number of permanent employees	2.6	9.6	187	0.00
Average turnover per partner (Millions of pesetas)	1.6	11.3	180.5	0.00
% of partners exclusively dedicated to the agricultural sector	16.5	48.3	211.5	0.01

Identifying the performance of each group of co-operatives previously described, may help to determine whether co-operatives should emphasise one or other strategy and its associated operational decisions.

The lack of accepted measures of co-operative performance is a result of an objective function of co-operatives much less clearly defined than investor-owned firms. The reason is that co-operatives exist in order to provide a service to their members and the benefits of the co-operative form of organisation are not restricted to earning a return on investment (Lerman and Parliament 1991). By adopting different measures of business performance we can overcome this difficulty.

Two measures of performance were available through the data obtained from their annual reports: efficiency (*Sales/Total assets*) and profitability (*Profit before tax/Total assets*). The relevance of these ratios that combine accounting and market performance, and their relationship with firm strategy has been shown by the literature (Lerman and Parliament

1991; Hind 1994).

The financial ratios of all the co-operatives were calculated from their annual reports during years 1993 and 1994. The mean for these two years was chosen as the descriptive statistic to account for a better representation of the co-operative, given that it is less affected by particular situations that could affect its activity during one of those two years.

Table 7

Performance of the Two Groups of Co-operatives

Results based on the Wilcoxon test (cf Table 7) show that the two groups of co-operatives differ significantly in efficiency but not in profitability. Thus, those co-operatives that follow a diversification strategy, basing their competitiveness in productive and supply abilities and their sales in commissionists, second order co-operatives and wholesalers at the point of destination are more efficient (selling more per unit of investment).

And the opposite happens to the other group of co-operatives whose strategy is based on diversification. Their lower efficiency is related to a large product portfolio (the base of their strategy) distributed by different intermediaries (commissionists, second degree co-operatives and wholesalers at the point of destination) and using more generic and brand advertising than cluster 1.

Concerning profitability, the finding of no significant differences is also accompanied by very low levels of return on investments. Nonetheless, a certain tendency can be observed in the data associating a higher profitability with a higher efficiency.

Conclusions

Traditionally, marketing activity has not been considered a relevant aspect in the management of agricultural co-operatives, neither from a theoretical nor from an empirical perspective. Nonetheless, the relevance of marketing in these co-operatives comes, first of all, because they act as business organisations, and second because fruit and vegetable co-operatives need this activity in order to reach

Performance measures	Mean score		W	P
	Cluster 1	Cluster 2		
Efficiency	1.6	3.1	92	0.02
Profitability	0.009	0.019	166	0.44

the consumers in the present competitive markets.

In our study we have found two types of fruit and vegetable co-operatives clearly identifiable in terms of their development strategy. The first group is made up of companies that have adopted a strategy of product/market product development, and the other group is made up of co-operatives that have followed a diversification strategy.

As regards the marketing behaviour and characteristics of these co-operatives, different patterns are associated with each of the two groups previously mentioned. Firstly, the co-operatives that have more experience, resources and skills follow a diversification strategy based on their higher potential to implement marketing activities. These activities consist of a more intensive advertising and the distribution through different intermediaries in order to maximise their potential to reach different markets. Secondly, the other group of co-operatives, due to their lower resources and skills prefer to supply raw materials to the industry and compete on prices, assuring their sales through the outright method.

Furthermore, a clear relationship exists between the marketing strategy followed by the co-operatives and their performance. The diversification strategy is associated with a higher efficiency, obtaining bigger sales per asset as a result of implementing marketing activities addressed to the last stages of the distribution channel and the consumer.

Nevertheless, a lack of relationship appears when considering profitability and marketing strategy. Therefore, although large co-operatives with a diversification strategy are more efficient, this emphasis on growth may not always produce beneficial results in terms of profits. In essence, this result confirms that the co-operative's primary objective is that of the welfare of its members, rather than one of long term profit maximisation as in non-co-operative businesses. As Hendrikse (Hendrikse 1998) points out, co-operatives fail in their ability to retain capital that has been earned because the

farmer prefers having that money to buy another piece of land or plant another orchard. Short-term and individual interests dominate the long-term and collective interests of the farmers.

From the conclusions, some useful recommendations for the business administration of the fruit and vegetable co-operatives can be outlined. Firstly, the co-operatives need to increase in size and improve both the resources and the skills which would allow them to obtain higher efficiency. Particular attention should be devoted to gain competitive advantages related to marketing. They need to offer a differentiated package to clients and respond to customer demands through greater collaboration, wider product range and improved regularity of supplying produce out of season.

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Note

- 1 The MERCAS network is made up of food centres located in big cities and founded by MERCASA (an association controlled by the central government, local authority and private sectors) with the joint objectives of promoting, building and exploiting the central wholesale markets for food products in Spain.

References

- Adler, L (1966) "Symbiotic marketing". *Harvard Business Review*, No 44, 59-71.
- Ansoff, H I (1957) "Strategies for diversification". *Harvard Business Review*, September-October, 47-55.
- Arcas, N and Munuera, J L (1998) "El Cooperativismo como estrategia para mejorar la competitividad de la empresa agroalimentaria. *Distribución y Consumo*", No 42, 55-71.
- Arcas, N (1999) *El Marketing de las cooperativas agrarias*. Valencia: Ciriec.
- Baker, G A and Crosbie, P J (1994) "Consumer preferences for food safety attributes: A market segment a roach". *Agribusiness*, Vol 10 (4), 319-24.

- Bateman, D I (1976) "Agricultural marketing: A review of the literature of marketing theory and of selected applications". *Journal of Agricultural Economics*, Vol 17 (2), 171-225.
- Bradley, F (1995) *Marketing Management*. Prentice Hall. London.
- Brown, R E (1995) "UK Agricultural co-operatives. Responding to change". *The World of Co-operative Enterprise*. Plunkett Foundation: UK, 221-24.
- Bucklin, L P and Sengupta, S (1993) "Organizing successful co-marketing alliances". *Journal of Marketing*, Vol 57 (April), 32-46.
- Caldentey Albert, P (1986) "Comercialización de productos agrarios". Madrid: Ed Agrícola Española.
- Caldentey, P, Haro, T, Titos, A and Briz, J (1994) *Marketing agrario*. Madrid: Ed Mundi-Prensa.
- Comisión Europea (1998) *La situación de la agricultura en la Unión Europea. Informe de 1997*. Brussels: European Commission.
- Conklin, Neilson C and Thompson, G (1993) "Product quality in organic and conventional produce: Is there a difference?" *Agribusiness*, Vol 3 (9), 295-307.
- Crespo, J A (1994) "La red MERCASA de unidades alimentarias en la moderna distribución comercial". *El Boletín*, No 16, 22-6.
- De la Jara Ayala, F (1988) *La comercialización agroalimentaria en España*. Madrid: Ed MAPA.
- Distribución y Consumo (1993) "El sector de frutas y hortalizas y la gran distribución". *Distribución y Consumo*, No 11, 72-5.
- Farris, P L (1997) "Market structure and institutions". In D I Padberg, C Ritson and L M Albisu (Eds) *Agro-food marketing*, 135-63, New York: CAB International.
- Ferrier, G D and Porter, P K (1991) "The productive efficiency of US milk processing co-operatives". *Journal of Agricultural Economics*, Vol 42 (2), 161-74.
- Fleming, E (1992) "Strategic agricultural export marketing in South Pacific Island Nations: Some implications for strategy selection in small developing countries". *Journal of International Food and Agribusiness Marketing*, Vol 4 (3), 77-105.
- García, T and Langreo, A (1992) "Tendencias en el abastecimiento de frutas y hortalizas de las grandes superficies". *Agricultura*, No 723, 826-28.
- Haines, M and Al Hasan, S (1998) "Benchmarking and the Evaluation of Co-operative Performance" *The World of Co-operative Enterprise*. Plunkett Foundation: UK, 19-29.
- Hendrikse, G W J (1998) "Screening, competition and the choice of the co-operatives as an organisational form". *Journal of Agricultural Economics*, Vol 49 (2), 202-217.
- Hind, A M (1994) "Co-operatives. Under performers by nature? An exploratory analysis of co-operative and non-co-operative

- companies in the agri-business sector". *Journal of Agricultural Economics*, Vol 45 (2), 213-19. Hind, A M (1998) "Assessment of co-operative performance". *The World of Co-operative Enterprise*. Plunkett Foundation: UK, 9-18.
- Hind, A M (1999) "Co-operative life cycle and goals". *Journal of Agricultural Economics*, Vol 50 (3), 536-548.
- How, R B (1991) *Marketing fresh fruits and vegetables*. New York: Van Nostrand Reinhold.
- Katz, J P (1997) "Managerial behavior and strategy choices in agribusiness co-operatives". *Agribusiness*, Vol 13 (5), 483-95.
- Lamperjee, N and Vliet, C H (1993) "The economic value of branded fresh and green products for producers and retailers in the Netherlands", 22th European Marketing Academy Conference, No 1, 565-78.
- Lerman, Z, and Parliament, C (1991) "Size and industry effects in the performance of agricultural co-operatives". *Agricultural Economics*, No 6, 15-29.
- Manu, F A, and Sriram, V (1996) "Innovation, marketing strategy, environment, and performance". *Journal of Business Research*, No 35, 79-91.
- Meulenberg, M T G (1997) "Distribution". In D I Padberg, C Ritson and L M Albisu (Eds), *Agro-food marketing*, 351-72, New York: CAB International.
- Olmeda, M and Rivera, L (1983) "Diferenciación de productos agrarios y política de marcas comerciales". *Agricultura*, No 616, 858-64.
- Olmeda, M (1989) "Marketing y promoción de ventas en empresas hortofrutícolas". *Horticultura*, No 48, 7-25.
- Porter, M E (1980) *Competitive strategy*. New York: The Free Press.
- Pratt, G (1998) "The need for performance measurement in co-operatives: a practitioner's view". *The World of Co-operative Enterprise*. Plunkett Foundation: UK, 1-8.
- Punj, G, and Stewart, D W, (1983) "Cluster analysis in marketing research: Review and suggestions for application". *Journal of Marketing Research*, No 20, 134-148.
- Rivera, L M (1996) "La Publicidad institucional de los productos agroalimentarios". *El Boletín*, No 31, 26-33.
- Royer, J S (1995) "Potential for co-operative involvement in vertical coordination and value-added activities". *Agribusiness*, Vol 11 (5), 473-81.
- Schroder, B, Wallance, T and Mavondo, F (1993) "Co-operatives, statutory: Marketing organisations, and global business strategy". *Agribusiness*, Vol 9 (2), 175-87.
- Steenkamp, J B E M (1995) "Dynamics in consumer behavior with respect to agricultural and food products", Working Paper, University of Leuven.

- Varadarajan, P R and Rajaratnam, D (1986) "Symbiotic marketing revisited". *Journal of Marketing*, Vol 50 (January), 7-17.
- Wierenga, B (1997) "Competing for the future in the agricultural and food channel". In B Wierenga, A Tilburg, K Grunert, J B E M Steenkamp (Eds) *Agricultural marketing and consumer behavior in a changing world*, 31-55), Boston: Kluwer Academic Publishers.