

## **The dynamics of branding in a small agricultural cooperative**

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### **Abstract**

*Agricultural cooperatives represent one of the main pillars of local and regional development and their activity is recognized as an important factor for the welfare of rural economies. The study of cooperative activity is interesting both in respect of their participation in local development as well as with regards to their effect in the context of a village community. The role of product branding in the success of an agricultural cooperative is an additional research goal of the present study. The empirical research focuses on the agricultural Cooperative of Zagora, Pelion, which is one of the few experiencing consistent and dynamic growth. The Zagora apples, the main product of the Zagora Cooperative, are considered to be of excellent quality, recognized as early as 1996 by the EEC with the granting of the label "Protected Designation of Origin" (PDO) EL/PDO/0017/0342). The brand name "ZAGORIN®" relates to the quality of the apples and the geographical area of production. The analysis is based on primary data collected through a questionnaire that investigate consumer attitudes toward the brand. With the use of a CATREG model, we establish that the main factor influencing consumer preference is the price/ quality criterion while other factors such as being the product of a cooperative are less important.*

**Keywords:** Agricultural cooperatives, branding, Categorical Regression model.

**JEL classifications:** Q13 - Agricultural Markets and Marketing; Cooperatives; Agribusiness

### **Background: Agricultural cooperatives and branding**

The purpose of the present study is to demonstrate the dynamics of a small agricultural cooperative through the branding of a product which

is produced and packaged by a cooperative that operates in a competitive environment.

### **Agricultural cooperatives**

The re-investment in agriculture, which was activated a little before the 2008 food crisis, is essential in order to secure the right of populations to food. However, in the context of the ecological, food and energy crises, the most pressing issue is not "how much" but "how". The countries should strive to achieve a reorientation of their agricultural systems with the goal to formulate an agriculture of high productivity and sustainability, which will contribute to the overall economic development. (Olivier De Schutter 2010). Agricultural cooperatives are a unique entrepreneurial form which consists of an organized cooperation among its members towards mutual benefit. With the cooperation, both productivity and sustainability are enhanced, safety in food production is achieved, the farmers are protected from the risks they face and their standard of living is improved. (JONES, 1982). Therefore, cooperatives are the best instrument for the reorientation of agricultural systems.

Agricultural cooperatives play an important role in the economy and are founded in the rules and values of cooperativism, on which the references in economic bibliography are rather sparse. (Novkovic 2006) Among others, the cooperative should be oriented towards the international markets, should function as a social innovation, must adopt communal entrepreneurship, promote ethical and legal business practices and contribute to growth. While economic bibliography focuses mainly on proprietary rights and structured control as a source of differentiation, it does not consider how a cooperative can survive international competition, endure in a world of low labour mobility, overcome commercial failures, oligopolistic markets etc. (Novkovic 2008).

It is argued that the entrepreneurial activity of agricultural cooperatives is not generally different from that of other businesses. (Codrin et al. 2010). Cooperatives differ from a typical company of a similar size from the fact that they are a democratically run organization controlled by its members and based on the values of cooperation in its everyday functions. The seven most important rules of engagement of Cooperatives according to International Cooperative Alliance (ICA)<sup>1</sup> are:

- 1 Voluntary and Open Membership to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.
- 2 Democratic Member Control. Co-operatives are democratic organisations controlled by their members, who actively participate in setting their policies and making decisions.
- 3 Member Economic Participation. Members contribute equitably to, and democratically control, the capital of their co-operative.
- 4 Autonomy and Independence

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<sup>1</sup>ICA is an independent, non-governmental association which unites, represents and serves co-operatives worldwide. Founded in 1895, ICA has 267 member organisations from 96 countries active in all sectors of the economy.

- 5 Education, Training and Information. Co-operatives provide education and training for their members, elected representatives, managers, and employees and they inform the general public.
- 6 Co-operation among Co-operatives.
- 7 Concern for Community. Co-operatives work for the sustainable development of their communities through policies approved by their members.

Cooperatives are striving to find their position in the interrelated global economy. Population growth, reductions in disposable income, competition, economic crises, push cooperatives to search for customers outside their borders. (Dunn et al 2001). The establishment of an enterprise by a farmer is a difficult task, due to the high costs of the necessary inputs and the constraints in the access to credit, but also because a farmer cannot ensure by himself the security and quality of the foodstuffs he produces. (Pesonen 2001). In order to overcome these obstacles, farmers must organize themselves in joint-stock companies. (Suleman 2009). More specifically, the following steps are necessary:

- Organization of farmers in entrepreneurial type cooperatives.
- Education in entrepreneurship and in new technologies in order to improve productivity and performance,
- Investments for the increase and improvement of the agricultural crops and
- Easy access to money and capital markets

One of the characteristics of agricultural cooperatives is their small size. Unless they can offer quality products in competitive prices, that meet consumers' needs, they are condemned to go bankrupt. Therefore, cooperatives must "create" new products, new methods of production, flexible organizational structure and innovative marketing approaches. (Codrin et al.2010, Blanas 2008).

The need, therefore, to link small scale agricultural firms or agricultural cooperatives with the markets is very strong. The farmers could add value to their products through packaging, processing and marketing. Cooperatives can help so that farmers may achieve economies of scale which helps in the creation of added value. (Olivier De Schutter 2009)

Cooperatives should introduce their ideas to the market, confronting the associated business and financial risks and overcoming the obstacles. Moreover, cooperation with academic and research institutions in the areas of education, research and innovation would help them advance their goals at a lower cost. (Wennekers et al.1999).

Some farmers seem to believe that as soon as they associate themselves with a cooperative, competition stops. The cooperative is formed in order to organize the competition in quality aspects of the product among its members. Good cooperatives offer two advantages: the first is entrepreneurship and the second is better quality and better prices. If a cooperative possesses these advantages, it can obtain a brand name. ( Disk Van G., 2001).

### **Branding of agricultural products**

A brand name derives its strength from the name, the trade mark, the symbol, a slogan, the package or a combination of the above, among which the name is first and represents the main reference point. Moreover, a tourist destination is determined from also from the geography of the area. The destination branding can be defined as a chosen element of the mix for recognition and distinction through a positive image. (Cai A. Liping 2002). The agricultural cooperative of Zagora has given emphasis to the area brand name which has been a tourist destination for more than 50 years and this strategy adds value to both the seller and the buyer.

As Harker et al., (2003) mention, the apple producers of the world are experiencing a period of intense competition and many might consider that the level of competition in the fruit industry is a reflection of market saturation in terms of supply. Therefore, differentiation through branding makes the brand an imperfect substitute to other similar products so that buyers of the brand are more loyal, and therefore the customer base of the supplier is more secure; this makes the brand less susceptible to the activity of competitor brands (Romaniuk, et al, 2007). The more equity a brand has, the more we might think a person would use hedonic terms when describing their sensory experiences with the brand ( Wansink, et al. 2005). The brand name is a very important brand element, and may heavily influence the way a brand performs (Olavarrieta et al., 2009).

The creation of a brand name has become exceedingly difficult, especially for agricultural cooperatives, because it requires substantial capital, and cooperatives have limited funds. Hence, a typical name can be more successful because consumers have preconceived notions about what a brand name for a particular product should sound like (Kohli et al. 2005). Many companies in the food sector name their products with local names in order to appeal to the internal market, while simultaneously targeting export markets, aiming to generate economies of scale. (Ozretic-Dosen et al.2007).

The agricultural products that are produced in the Pelion area are using the brand name of the geographical area. Several studies have shown that the country but also the area play an important role in determining the value of brand name. Webb and Po (2000) demonstrated that many consumers are interested in the origin of the product, which functions as a quality and acceptance index, simplifying the process of collecting information. Marketing researchers consider that the brand name is a synthesis of consumer devotion, quality, knowledge and brand associations (Aaker, 1992). This fact, on the one hand improves efficiency, reducing marketing costs and improving prices and profit margins, while on the other hand helps consumers in the decision making process. Other researchers proved that the area of origin is important for the formulation of the brand name. Paswan and Sharma, (2004) and Ahmed et al. (2004) found that Country Of Origin plays a role in consumers' evaluation of low-involvement products, although its effect is weak. The authors attribute this weak effect to the characteristics of the products.

### **Agricultural cooperatives in Greece**

According to Patronis V. (2001), the historical analysis of cooperatives in Greece shows that the Greek state succeeded early on

The organization and representation of Cooperatives did not emerge as the result of the actions of the agricultural movement but was designed by the established political power, aiming at the aligning of farmer's interests with the government's policies. Only after 1990 some efforts were made for the entrepreneurial organization of the cooperatives for the benefit of the farmers.

After a century of operation, agricultural cooperatives in Greece have exhausted their growth capabilities. This is mainly due to the lack of control of the Directors Councils and the routine approval of their actions by the annual General Assemblies of the members. The problems and issues that brought most of the cooperatives to a financial dead-end included among others: the dependence of the cooperatives from the ruling party, having as a consequence excess hiring as a form of social policy, the fact that often the organization of the agricultural products markets resulted in prices which could not support profitable results, the lack of transparency and accountability in management and in undertaking investment projects and the low educational level of the Boards.

In order for the Greek agricultural cooperatives to function in the context of the free market economy and collect a large part of the added value of their products, they need a new business design focused in the satisfaction of consumer's needs and possessing a comparative advantage versus the competition. This goal can be achieved through the branding of their products. Simultaneously, however, cooperatives must invest in trained staff and to cooperate with research institutes and universities. Thus, cooperatives will succeed to increase production and productivity, to create new jobs, to improve agricultural income, social benefits and the overall standard of living of the farmers. (Theodossiou, 2008)

### **Area profile**

The present research is focused on the agricultural Cooperative of Zagora, Pelion, which is one of the few, among the approximately 7000 such first level organizations established in Greece that experiences consistent and dynamic growth. The Zagora apples, the main product of the Zagora Cooperative, are considered to be of excellent quality and this fact has been recognized as early as 1996 by the EEC with the granting of the label "Protected Designation of Origin" (PDO) EL/PDO/0017/0342). Moreover, 100% of the apples are produced with the "integrated crop management" methodology, which aims to minimize the use of pesticides. The brand name "ZAGORIN®" relates to the quality of the apples and the geographical area of production (Pelion).

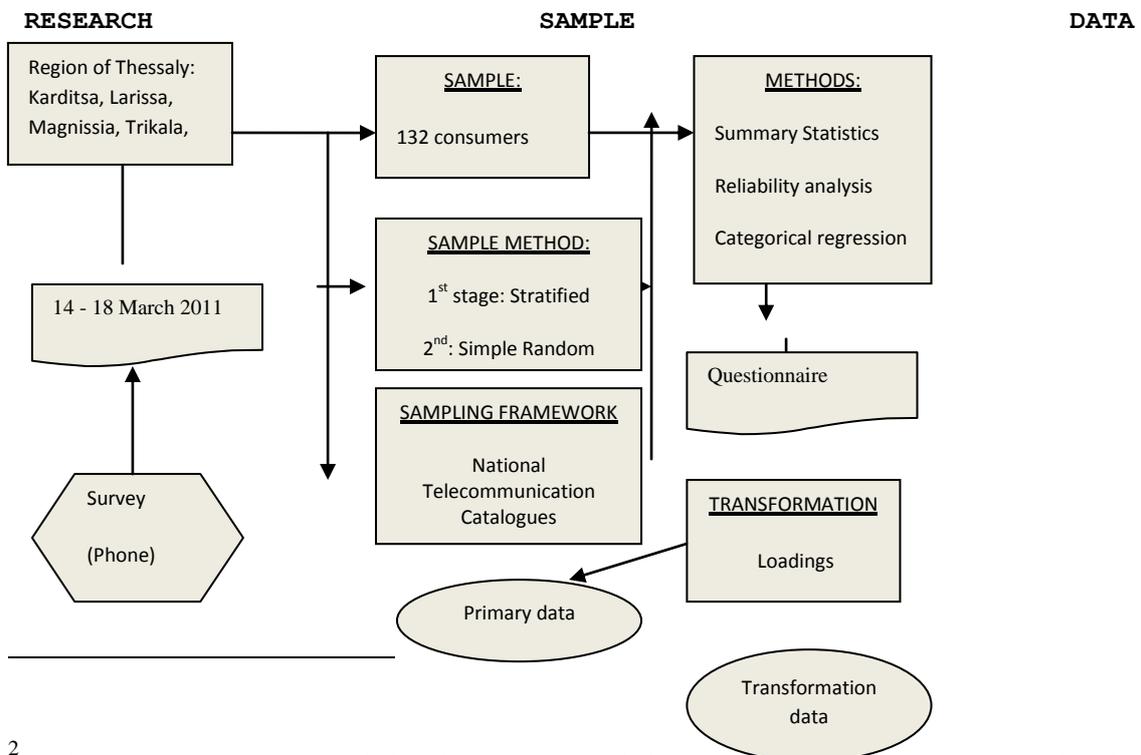
The Agricultural cooperative of Zagora, founded in 1916 is among the first cooperatives established in Greece and since 1982 it is considered a model cooperative. Today, it collects, stores, conserves, packages and distributes almost 100% of the apples produced in the area (between 10.000 to 15.000 metric tons per year) as well as the other produce of the region. It is one of the most important economic organizations in the Magnesia prefecture and represents the main carrier of commercial activity and economic growth for Eastern Pelion. At the same time, it is one of the most dynamic first level cooperatives in Greece, which in 1982 was declared a "pilot cooperative" by the Ministry of Agriculture. In 1996 the apple ZAGORIN® obtains the PDO and an innovation is introduced, namely a

label stuck on every single apple, which from that moment becomes "eponymous". Furthermore, the cooperative becomes certified by Agrocert<sup>2</sup> concerning its application of integrated crop management methods and begins to use barcode technology in order to ensure traceability of its products. (Premetis et. al. 2011).

Agricultural cooperatives represent one of the main pillars of local and regional development and their activity is recognized as an important factor for the welfare of rural economies. The study of cooperative activity is interesting both in respect of their participation in local development as well as with regards to their effect in the context of a village community. The empirical work that follows investigates the effects of branding in the development of an agricultural cooperative.

### Methodology and data

The main goal of the empirical research is the investigation of the consumer recognition of the ZAGORIN® apples in the Thessalia region (prefectures of Magnesia, Larissa, Karditsa, Trikala). In parallel, we recorded the demographic characteristics of the individuals in our sample and attempted to investigate their satisfaction from the Zagora Agricultural cooperative. The research is based on primary data that were collected with the utilization of a questionnaire filled during telephone interviews. (Premetis et. Al. 2011). Subsequently, the answers were codified in statistical tables and analyzed with the help of SPSS statistical package, through which the results were derived.



<sup>2</sup> Agricultural Products Certification and Supervision Organization, under the distinctive title AGROCERT is a Private Law Legal Entity operating for the public benefit under the supervision of the Ministry of Rural Development and Food (L. 2637/98). It is an established body responsible for the implementation of national policy on quality in agriculture.

The primary research was conducted between March 14 and March 18, 2001 within the geographical limits of the Thessaly area. The telephone interviews were conducted with the use of a structured questionnaire<sup>3</sup> in a sample of 132 Thessaly residents aged over 18. The sample was selected using the multistage sampling method. The design of the sample includes, at a first stage the proportional representation of the four prefectures of the area and, in a second stage, the proportional representation of rural and urban residents within each prefecture. The aim was to obtain a representative random sample so that the results may be generalized for the population of the research area. All those who answered the phone survey were chosen randomly from telephone directories of the area of research, correspond to telephone numbers registered in the area and are considered potential ZAGORIN apples consumers. We cannot rule out the possibility that some of our respondents are not permanent residents of the Thessaly area but happened to live there for a limited period. However this possibility is not significant and cannot alter the results of our research nor does it hinder the generalization of our findings to the population being investigated.

We define the framework of sampling to be the residential telephone directories of the Telecommunications Organization of the Thessaly region from which the sample is selected randomly. The random element of the sample is based on the hypothesis that various consumers are randomly distributed in telephone directories as the initial letter of their last name is not a factor undermining randomness since their decisions are not related to their last name. It is worth mentioning that in international literature, similar forms of randomness are widely used since all relevant research has proven that there is no correlation between the letters in last names and consumer behavior. (Oppenheim, 1992. Stathakopoulos, 1997).

In the present study, we use the technique of the analogous sampling in layers (multistage sampling) and an effort was made to approach the composition of the population in terms of area, sex and age. This way, we gathered the sample of 132 consumers. However, after the collection of the sample, it was observed that its distribution in terms of the abovementioned characteristics was not optimal. This was the result of our inability to distinguish from the area number among urban and rural residents. Therefore, in order to restore the population proportions we proceeded to identify each questionnaire by applying to each one of them a weight ranging between 0,44 and 2,10. Only two of the questionnaires were definitively excluded from our sample by applying to them the minimum weight of 0,01. The average weight of all 132 questionnaires was 1.

Regarding the total population of the research area and its composition in terms of area of residence, sex and age, we used the data of the 2001 census conducted by the Greek National Statistical Service (ESYE, 2001). As our sampling unit we considered an individual that corresponds to each telephone number. The selection of the sample took place in two stages: In the first stage we applied the multistage sampling procedure with proportional distribution of the sample among the local areas of the research, where each local area was considered to represent a layer. In the second stage of the sample generation, in

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<sup>3</sup>The questionnaire is available upon request.

every local area / layer we randomly selected a proportional number of consumers on the basis of age, sex and urban/rural resident status. We consider that the application of the above described procedure ensures the selection of a representative sample of the total population being investigated.

Based on the organization of the sampling procedure, it is believed that the sample of the 132 individuals corresponds to a population with similar characteristics, whose size is within the amplitude required by the application of the multistage sampling methodology. (Stathakopoulos, 1997:219).

The composition of the questionnaire started in September 2009 and was completed a month later. After its preparation, it was tested in a test sample of 20 persons. The main purpose of the pilot research was to identify possible weaknesses and necessary improvements of its structure. At the same time, we average length of time needed for its completion was measured. Thus, the questionnaire took its final form.

It should be mentioned that the composition of the questionnaire was based in a study of the relevant literature, after the necessary adjustments in order for it to correspond to the specific goals of the research. (Oppenheim, 1992. Daoutopoulos, 2000. Javeau, 1996. Karameris, 1996. Siardos, 1997, Kyriazi, 1998).

More analytically, the five sections of the questionnaire are as follows: The first part includes questions on the demographic characteristics of the respondents. In the second part, the individuals were asked to respond to questions relating to the frequency of their fruit consumption. The third part included questions regarding the consumption of cooperative products from all household members. In the fourth part the respondents expressed their intention to buy a specific cooperative product ("Zagorin" apple) while in the fifth and sixth sections there were open ended questions such as their opinions on the cooperative product and their willingness (%) to buy the cooperative product ("Zagorin" apple).

CATREG (Van der Kooij & Meulman, 1997) has been used in order to highlight possible relations between "admitting and supporting the apples ZAGORIN" and a set of other selected independent categorical reasons. In fact, CATREG (one of the recent options in SPSS ver.17) is a modern regression technique, much more holistic and effective than the multiple regression analysis and the analysis of multiple regression with categorical variables. Actually, the CATREG model can deal more optimally with both qualitative and quantitative data, as it works on two discrete and simple stages: firstly, the nominal and ordinal variables are transformed to interval scales, in order to maximize the relationship between each predictor and the dependent variable, and secondly, multiple regression analysis is applied to the transformed variables (SPSS, 2007, p. 188). The main difference between CATREG and multiple regression analysis with categorical variables is the option for handling how categorical variables are coded for parameterization of the coefficients; reference cell or effect cell parameterization. CATREG tools provide the framework for choosing between reference cell and effect cell parameterization. This means that categorical variables, or interaction terms that include categorical variables, will drop or add the entire variable or interaction term and evaluate changes in model fit, rather than dropping one categorical level at a time. Comparatively, even though

CATREG is relatively complicated and sophisticated involving advanced statistical techniques such as optimal scaling techniques for multivariate categorical data analysis, there are several advantages in using this model. The main advantage is that categorical regression can be run with the least assumptions: (a) the normality assumption of the predictor variables is relaxed, (b) factor levels are coded simultaneously into values, therefore sample sizes need not necessarily be large, (c) only one coefficient is needed for a predictor variable and (d) nonlinear associations can be detected with these models. Relative importance indicates the importance of each predictor, using Pratt's measure (Pratt, 1987). This measure is roughly equivalent to the product of the regression coefficient and zero-order correlation. The Pratt index is primarily used to uncover suppressor variables. That is, in the case that a predictor yields a relatively high beta but low importance, the situation suggests that the variable may have been suppressed by other predictors. In addition, partial and part correlations are similar to zero-order correlations, except that the effect of all other predictors has been controlled. Finally, tolerance is utilized to identify multicollinearity. According to the econometrics literature (Pratt, 1987; Siardos, 2002, p. 109; SPSS, 2007, p. 212, Michaelidis et al 2006) relative importance measures are much more useful than the usual standardized beta weights. In particular, relative importance indicates the percentage of explanation of the dependent variable while they can also be used to predict the future values of the dependent one.

## Results

According to the questionnaire, the main reasons of admitting and supporting the apples "ZAGORIN" are: (a) excellent quality -best price, (b) co-operative product, (c) support the employees of the co-operation, (d) support the co-operation, (e) co-operation supports the farmers, (f) support the income of farmers and (g) support the income of the rural residents. In this section we are going to analyse the above reasons and connect them to the research findings.

The multiple determination coefficient of the categorical regression  $R^2$  took a value of 0.866 which means that 86.6% of the variation of the transformed dependent variable is explained by the transformed independent variables which participate in the regression equation. Moreover, the relevant variation analysis gave a value of  $F=1.668$  which corresponds to a zero statistical significance level, indicating the good fit of the categorical regression model to the statistical data.

**Table 1: Categorical regression model ( $R^2=0.866$ )**

Independent variables	Standardized coefficients		F	Correlations			Relative importance	Tolerance	
	b	St. error		Zero order	Partial	Part		Before	After
Excellent quality - best price	0.382	0.074	26.756	0.433	0.431	0.371	<b>0.315</b>	0.945	0.536
Co-operative product	0.179	0.072	6.134	0.221	0.222	0.179	0.088	0.965	0.746
Support the	-0.168	0.115	2.145	-0.117	-0.181	-0.167	0.075	0.932	0.832

employees of the co-operative									
Support the co-operative	-0.194	0.119	0.645	-0.212	-0.156	-0.158	0.046	0.887	0.867
Co-operative supports the farmers	-0.278	0.115	7.234	0,178	-0.173	-0.171	0.034	0.912	0.888
Support the income of farmers	0.484	0.102	22.567	0.314	0.318	0.279	<b>0.249</b>	0.931	0.794
Support the income of the rural residents	0.166	0.180	6.932	0.178	0.192	0.185	<b>0.193</b>	0.941	0.862

The relative importance of the independent variables appears greater for the "excellent quality - best price" variable, followed in turn by the "support the income of farmers" and the "support the income of the rural residents". Taken together, these variables account for 75.7% of the aggregate importance. The lack of multicollinearity becomes apparent from the very high values of the tolerance of the independent, values that express the participation of the variance of each independent variable that cannot be explained by the remaining independent variables.

## Conclusions

Connecting the main research findings with the theory and principles of co-operation and rural development we can point out that: (a) although an attitude of dependency on local resources is strongly embedded in the socio-psychological outlook of the participants, the strong majority of respondents are particularly cautious to support any co-operative units, (b) income reasons represent the main driving forces behind this adoption of the project, (c) through "best value for money" products the project will probably create employment opportunities.

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