

An Investigation on Greek Agricultural Cooperatives' Services: What is Missing?

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Abstract

Agricultural cooperatives have played a key role in helping farmers withstand major market changes. The Municipal Unit of Zagora in Greece has a long and successful tradition of agricultural cooperatives. In order to detect the characteristics that account for this success, this study investigates the views of cooperative members on the contribution of cooperatives and the measures which could further improve their operation. Overall, respondents acknowledged that cooperatives provide successful product marketing and, at the same time, play a positive role in the local area. In particular, they perceived that cooperatives ensure a good name for their products and open up the market for new products. Moreover, they viewed that cooperatives have boosted the local economy, enhanced the profile of the local area and offered opportunities for local development. However, respondents did not evaluate positively the training provided by cooperatives while they perceived that there are limited opportunities to invest in the cooperative with high return rates. To further improve the operation of cooperatives, decisions should be taken jointly by administration and market experts, while it is necessary to make investments in research and development R&D and equipment, as well as to establish product prices based on new criteria (such as the size and quality of delivered quantity).

Keywords

Agricultural cooperatives, agriculture, farmers' attitudes.

1. Introduction

Cooperatives have played a key role in the agricultural sector and historically have served as a major institutional and organizational tool that enabled independent farmers to endure the market power of local and international retailers [1]. They have also condensed the supply chain enabling farmers to integrate processing and marketing procedures into very few steps, thereby permitting considerable saving on intermediation costs [1]. In addition, cooperatives seek to both enhance the welfare of their members and add value to products. Other strengths include the decreased cost of production and member networking [2].

The relevant literature has focused on the factors affecting cooperative entrepreneurship and has inferred that a lot can be gained from investigating the relationship between conditions, strategies and impacts [3,4]. Although the establishment of agricultural cooperatives follows a rising trend, cooperatives keep facing significant challenges of both internal and external nature [5]. To understand which characteristics of cooperatives are effective, this study investigates the views on the contribution of cooperatives and measures that could improve the operation of cooperatives among members of agricultural cooperatives in a Greek study area which is renowned for its high quality products.

Proceedings of HAICTA 2022, September 22–25, 2022, Athens, Greece

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CEUR Workshop Proceedings (CEUR-WS.org)

2. Methodology

The population under study was farmers in the Municipal Unit of Zagora (Greece) which has a long and successful tradition in agricultural cooperatives with the most important being the apple growing cooperative “Zagorin” whose products have been designated “Protected Designation of Origin”. The findings in this paper are part of a larger research but here the analysis involved only farmers who are members of agricultural cooperatives. A structured questionnaire was constructed and all items drew on the findings of previous relevant research. Respondents were recruited by simple random sampling and, in total, 210 farmers participated in the study. The analysis in this paper involved only the responses of respondents who are members of agricultural cooperatives. Hence, the final sample was 199 farmers. The collected data were scrutinized with the Statistical Package for the Social Sciences (SPSS) software version 23, and, in specific, descriptive statistics, the non-parametric Friedman test and factor analysis were conducted.

3. Results

The sample involved 199 members of agricultural cooperatives in the Municipal Unit of Zagora. The majority were male (62.3%) and significant shares were aged between 41 and 50 years (49.2%) as well as between 31 and 40 years (23.1%). Most respondents were married (85.4%) and a considerable share of married respondents had two children (58.8%). In terms of education level, most farmers were middle school graduates (35.5%) and high school graduates (34.2%). Farming was the main occupation for most participants (82.9%). Respondents had a long experience in farming as an appreciable share of 35.7% had been engaged in farming for 25–35 years and 33.2% for 16–25 years.

Farmers evaluated the contribution of agricultural cooperatives. To that end, they assessed a set of different kinds of contribution which concerned not only the ways in which cooperatives benefit them personally but also the ways that cooperatives benefit the local area. To detect differences among respondents' evaluations, the non-parametric Friedman test was performed. The most important contributions were the ability of cooperatives to improve the profile of the local community (mean rank 17.52), to support the local society (mean rank 17.50) and to provide opportunities for local development (mean rank 17.42). According to respondents, cooperatives can also provide a good name for products and services on the market (mean rank 16.90) and open up the market for new products or services (mean rank 14.65). Another highly ranked variable was cooperatives' openness to new members (mean rank 13.43). There were, however, aspects that received much lower rankings with the lowest ranked aspects being the training that cooperatives provide to their members (mean rank 8.81) and the ability of members to invest in the cooperative with a high rate of return (mean rank 8.94).

To attain further insights into farmers' evaluation of cooperatives, factor analysis was performed because it can indicate how farmers distinguish between the various forms of cooperatives' contributions. Prior to the analysis, the Bartlett's test of sphericity (Chi-Square = 4060.953 with $df = 276$ and $p < 0.001$), the Cronbach's alpha value (0.955) and the Kaiser-Meyer-Olkin index (0.930) verified the suitability of the data for factor analysis. Results presented in Table 1 show that after rotation, four factors emerged. Based on the variables loaded, the first factor can be termed “*Member participation in decision-making and interest representation*”, the second factor “*Contribution to the local area and production of reputable and pro-environmental products*”, the third factor “*Information, training and opportunities for investments and cooperation*” and the fourth factor “*Product exclusivity and access to funding and new technologies*”.

Table 1

Rotated component matrix for respondents' evaluation of different aspects of cooperatives

	Factor loadings of the data after rotation			
	1	2	3	4
Participation in decision-making (for all members)	0.818	0.260	0.077	0.217
Equal rights in decision-making for all members	0.770	0.292	0.189	0.213
Ability to express concerns	0.763	0.193	0.204	0.279
Involvement of members in decision-making	0.713	0.281	0.344	0.096
Opportunities for all members to participate in administration	0.664	0.291	0.394	0.235
Open to new members	0.626	0.378	0.128	0.059
Opening up the market for new products and services	0.585	0.539	0.170	0.241
Representation of the interests of members	0.582	0.418	0.367	0.264
Improvement in the profile of the local community	0.250	0.840	0.065	0.210
Opportunities for local development	0.259	0.828	0.083	0.213
Support for the local society	0.222	0.813	0.109	0.183
Good name for products and services on the market	0.214	0.732	0.173	0.167
Environmentally friendly products	0.452	0.596	0.269	-0.001
Opportunities to invest in the cooperative with a high rate of return	-0.004	0.150	0.788	0.268
Professionalism of staff and managers	0.148	0.201	0.773	0.295
Encouraging the active participation of members	0.307	0.041	0.743	0.127
Information (by the administration) on the cooperative's plans and objectives	0.433	0.200	0.709	0.117
Promoting cooperation among members	0.499	-0.013	0.658	0.202
Training for new members	0.357	0.178	0.554	0.458
Products and services that cannot be found elsewhere	0.198	0.214	0.241	0.787
Easy access to funding (e.g., loan intermediation)	0.120	0.368	0.242	0.722
Useful website	0.454	0.082	0.255	0.662
Access to new technologies	0.512	0.135	0.297	0.613
Price stability (for supplies and products)	0.072	0.283	0.496	0.550

Then, respondents evaluated various measures which, if taken, may improve the operation of cooperatives. To detect statistically significant differences among responses, the non-parametric Friedman test was performed. The adoption of a decision-making model in which decisions are taken jointly by the cooperative administration and market experts (mean rank 10.63) was the highest ranked measure. This was followed by investments in equipment for the production of high-quality products (mean rank 10.33), investments in research and development (R&D) (mean rank 9.89), increasing the price of cooperative shares for new members (mean rank 9.51) and the establishment of different prices according to the delivered quantities (mean rank 9.36).

To gain a deeper understanding of farmers' views on these measures, responses were analyzed with factor analysis. The Cronbach's alpha value (0.867), the Kaiser-Meyer-Olkin index (0.834) and Bartlett's test of sphericity (Chi-Square = 1837.976 with df = 120 and $p < 0.001$) confirmed the eligibility of the data for factor analysis. According to the results in Table 2, four factors were loaded. Based on the content of the variables included in each factor, the first factor can be named "*Measures to improve price establishment, quality control and management*", the second factor can be termed "*Measures to improve price establishment and changes in shareholder regime, funding and voting*", the third factor can be named "*Investments in equipment and R&D and inclusion of market experts in decision-making*" and the fourth factor can be termed "*Equal vote and ability to transfer or sell shares for all members*".

Table 2.

Measures to improve cooperatives' operation shown with factor loadings after varimax rotation

	Factor loadings of the data after rotation			
	1	2	3	4
Establishing a mandatory delivery contract for each member	0.901	0.200	0.092	0.001
Imposing sanctions in case of not delivering the agreed quantities	0.870	0.246	0.037	-0.069
Establishing different product prices according to quality delivery criteria	0.869	0.250	-0.010	-0.016
Applying other quality systems for the cooperative's operation (e.g., ISO 9001)	0.835	0.214	0.147	0.126
Applying a system of integrated management (AGRO 2.1/ AGRO 2.2)	0.828	0.178	0.216	0.157
Establishing prices for supplies according to each member's purchase size	0.217	0.834	0.101	0.037
Establishing product prices based on the delivered quantity	0.365	0.634	-0.053	-0.114
Ability to receive funding from non-members (third parties, private persons and enterprises).	0.088	0.601	0.064	0.369
Losing cooperative shares in case of leaving the cooperative	0.283	0.572	0.096	0.354
Enabling members to acquire more votes according to the capital they invest in the cooperative	0.212	0.523	0.030	0.323
Investing in modern equipment to produce high-quality products	0.211	0.033	0.870	0.005
Investment in R&D	0.360	-0.097	0.829	0.032
Adoption of a decision-making model in which decisions are taken jointly by cooperative administration and market experts	-0.204	0.221	0.803	0.033
Enabling members to transfer or sell cooperative shares	-0.046	0.009	0.016	0.854
Increasing the price of cooperative shares for new members	-0.038	0.179	-0.052	0.635
Equal voting rights for all cooperative members	0.315	0.321	0.243	0.516

4. Conclusions

The area of study is renowned for its agricultural cooperatives and added-value products. In this regard, cooperative members' views can help understand what makes these cooperatives successful so that other cooperatives take the same steps to improve their operation. Respondents acknowledged that cooperatives in the study area have a positive impact on their products by providing a good name and opening up the market for new products. Moreover, they perceived that the cooperatives have provided significant local benefits by supporting the local economy, enhancing the profile of the local area and offering opportunities for local development indicating that members value the overall positive role of cooperatives in the local area. This can allow us to infer that the effective operation of cooperatives stems not only from successful product marketing but also from the positive role of cooperatives in the local area. Hence, it is important for the successful operation of cooperatives to add local development objectives in their agenda. There were, however, aspects that seem to require improvement; most importantly, the training provided to members and investments in the cooperative with high return rates were the aspects that received the lowest ranking suggesting that these aspects need to be improved. Results have also pointed to measures which could, according to members' view, improve the operation of cooperatives. These measures concern the inclusion of market experts in decision-making, investments R&D and in equipment that will enable both the production of high-quality products and changes in the establishment of prices by taking new criteria into account (such as the size and quality of delivered quantity). It can thus be argued that the application of these measures would further enhance the operation of cooperatives in the study area.

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