



International Food and Agribusiness Management Review
Volume 17 Issue 1, 2014

Farmers' Satisfaction with Fresh Fruit and Vegetable Marketing Spanish Cooperatives: An Explanation from Agency Theory

Narciso Arcas-Lario^a, Juan Francisco Martín-Ugedo[ⓑ] and Antonio Mínguez-Vera^c

^a*Associate Professor, Technical University of Cartagena, Department of Business Economics, School of Agricultural Engineering, Paseo Alfonso XIII, 48, 30203, Cartagena, Spain*

^b*Associate Professor, University of Murcia, Department of Business Economics and Finance, Faculty of Economics and Business, 30100, Murcia, Spain*

^c*Associate Professor, University of Murcia, Department of Business Economics and Finance, Faculty of Economics and Business, 30100, Murcia, Spain*

Abstract

Agricultural cooperatives have specific characteristics. Coop members may have different roles (owners, buyers, sellers and controllers) and, consequently, these players may have different objectives. The various stakeholders may also have different objectives from the management of the cooperative. This makes agency theory a good framework for the analysis of farmers' satisfaction with their cooperative. Based on a sample of 277 members of fruit and vegetable marketing cooperatives in Spain, the results show that members' satisfaction with the cooperative exerts a positive influence on members' desire to continue as members of that cooperative. The results also confirm the positive influence of trust, information and control on satisfaction.

Keywords: Agricultural cooperative, satisfaction, information, control, trust

[ⓓ]Corresponding author: Tel: + 34 868883837

Email: J. F. Martín-Ugedo: juanfran@um.es

N. Arcas-Lario: arcas.lario@upct.es

A. Mínguez-Vera: minver@um.es

Introduction

Cooperatives play an important role in the development of agriculture in many countries as suppliers of farm produce, marketers of agricultural commodities, and providers of services such as storage and transport (Ortmann and King 2007).

In the European Union (EU) there are around 40,000 cooperative companies, with about 600,000 workers and an aggregate turnover of more than 300,000 million euros per year (General Confederation of Agricultural Cooperatives in the European Union - Cogeca 2012a). Cooperatives account for over 50% of the supply of agricultural inputs and over 60% of collection, processing and marketing of agricultural products (Cogeca 2012b). Spain stands out in the European Union, with almost 10% (3,918) of cooperatives, which employ roughly 93,000 workers and have a turnover of more than 17,000 million euros (Cooperativas Agro-alimentarias 2011). These figures clearly indicate the importance of cooperatives in the EU and particularly in Spain.

In 2011, the fresh fruit and vegetable sector accounted for 19.6% of total agricultural production in the 27 countries of the EU. In fact, this sector was the largest in terms of output value. The importance of this sector is particularly evident in Spain. Fresh fruit and vegetables account for 33.1% of total Spanish agricultural production, which corresponds to 18.4% of all EU fresh fruit and vegetable production (European Commission 2012). Moreover, Spain is the EU country with the highest number of fresh fruit and vegetable cooperatives, with 945 (Cogeca 2012b). These cooperatives have a turnover of more than 5,000 million euros and provide 71.4% of the business volume in Spanish agricultural cooperatives (Cooperativas Agro-alimentarias 2011).

The study of the performance of agricultural cooperatives has attracted growing attention in recent years. This is due, on the one hand, to the previously mentioned economic importance of those firms and, on the other hand, to the significant role they play in rural development and attaining of the objectives of the Common Agricultural Policy (Guzmán et al. 2009). However, the evaluation of the performance of cooperatives is particularly controversial (Guzmán and Arcas 2008).

In contrast to investor-owned firms (IOFs) that are operated in the interests of investors, cooperatives are member-owned, member-controlled and operated for the benefit of producer-members (James and Sykuta 2005). Thus, many authors agree that the evaluation of the performance of cooperatives must not be limited to a simple analysis of traditional financial ratios (i.e. solvency, efficiency, liquidity and profitability) (Lerman and Parliament 1991; Pratt 1998; Hind 1998). Therefore, it must be borne in mind that cooperatives should give priority to maximizing the satisfaction of the needs of their members, by offering a list of services that can create a state of well-being for their associates, and that the criteria of success go beyond simply optimizing profitability (Michelsen 1994). Hence, members' satisfaction with their cooperative is being increasingly used by researchers as a measure of the success or performance of such organizations (Sayers et al. 1996; Hansen et al. 2002). Satisfaction influences the desire to continue as a cooperative member and thus the survival of the cooperative as a functioning organisation (Hernández-Espallardo et al. 2013).

The aim of this paper is to examine the determinants of members' satisfaction with their cooperative. In addition, the paper also examines the effect of members' satisfaction on their desire to continue as cooperative members. There is very little previous literature that examines these issues (Hansen et al. 2002; Nilsson et al. 2009; Hernández-Espallardo et al. 2013). This, together with the fact that the present study employs agency theory as a framework, is the significant contribution of this manuscript. Agency theory is appropriate for the examination of the relationships in any firm and, therefore, in agricultural cooperatives (Ortmann and King 2007).

The rest of the paper is organized as follows. First, the theoretical framework and the hypotheses are presented. Then, the methodology and the methods of data selection are described. The next section contains the results of the study. Finally, conclusions are presented.

Theory and Hypotheses

The Concept of a Cooperative

Many definitions of cooperatives are available. However, one of the most frequently employed is that of the International Cooperative Alliance (ICA). This organization defines a cooperative as “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise” (International Cooperative Alliance 2012). As a general rule, the running of these firms is guided by seven cooperative principles recognized by the ICA: voluntary and open membership; democratic member control; economic participation of members; autonomy and independence; provision of education, training and information; cooperation among cooperatives; and concern for the community (International Cooperative Alliance 2012).

In addition to these general principles, each country usually develops its own legislation about cooperatives. In the case of Spain, the relevant legislation is the Spanish Cooperative Law (BOE 1999). This law states, in Article 1.1, that, “A cooperative is a firm constituted by people who freely associate and voluntarily retire, to conduct business activities directed to satisfying the economic and social needs of its members, with democratic structure and functioning in accordance with the principles formulated by the ICA”. Considering this definition and other precepts of the law, it can be concluded that both its capital and the number of members may vary over the life of the organization.

One characteristic of agricultural cooperatives is the peculiar relationship of the organization with its members, because these are simultaneously the owners, users (buyers and sellers), controllers, and beneficiaries (Nilsson 1996). From the above it follows that a cooperative is essentially a user-owned and user-controlled business that distributes benefits equitably on the basis of use or patronage (Barton 1989). The fact that partners maintain individual property holdings that are coordinated by the management of the cooperative through administrative controls means that cooperatives have both market-associated characteristics and company-associated characteristics. For this reason cooperatives have been considered to be a hybrid form of business governance (Ortmann and King 2007).

Cooperatives, especially large ones, can employ managers and other salaried staff, in order to implement the decisions of members (Chaves 2004). Cooperative members may participate in the day to day administration of the cooperative by becoming administrators, but there are other ways for members to influence decisions and exert control. One way to exert influence is through the Board of Directors. The Board is the top level of administration, supervises the managers and represents the interests of the cooperative. Another way to exert influence is through the General Assembly, which is the meeting of members, constituted in order to consider and to adopt agreements on those matters that, legally or statutorily, are within their competence. Decisions of the Assembly are binding on all members. The General Assembly is the equivalent to the shareholders' meeting in corporations, except that shareholders differ in terms of their contribution to the firm's capital, while cooperative members differ in terms of the cooperative activity they undertake. Finally, members may also participate in the governance of the cooperative by taking part in non-statutory action (section meetings, commissions, etc.) (Barraud-Didier et al. 2012).

The principle of democratic governance is generally considered to be one of the most important characteristics of cooperatives. This principle implies that each member has one vote in the General Assembly. From the point of view of democratic governance, cooperative management rests on several premises: the members decide democratically at the General Assembly; the members participate actively in the General Assembly as well as in the election of representatives; elected representatives, including the Board of Directors, represent and manage the cooperative; and elected representatives are accountable to the membership. However, recent studies have highlighted a decline in the democratic life of cooperatives (Levi and Davis 2008; Siebert and Park 2010).

Agency Theory

According to Jensen and Meckling (1976), an agency relationship is, "A contract under which one or more persons (the principal/s) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent". That is, the principal (cooperative members) hires an agent (board members and managers) to carry out a task on the principal's behalf. When both parts of the relationship are utility maximizers, act rationally and form unbiased expectations of the impact of the agency relationship on their utility function, agents will try to reach their objectives, which may or may not coincide with those of their principals.

A divergence of objectives will lead to agency conflicts and agency costs. However, agency problems arise when, in addition to conflict of objectives between the principal and the agent, there is information asymmetry between them. That is, the agent typically has more information than the principal about the environment in which decisions are being made, leading to that information asymmetry. The limited access to information that the principal usually has allows the agent considerable discretion to adopt opportunistic behavior that does not always translate into a greater benefit for the principal.

When a conflict of objectives exists, but the principal has perfect information about the agent's performance, the loss of efficiency can be overcome by the principal including the actions that

the agent should perform in the contract, as well as checking if the agent has followed instructions, with the possibility of including penalties in case of breach of contract. Thus, the agency costs are the sum of (Jensen and Meckling 1976): a) the cost of monitoring: the principal will limit the autonomy of the agent by installing controls, maintaining checks, establishing budgetary limits, making direct supervision, using the payment and reward system to structure the agent's incentives, etc.; b) bonding costs: agents can voluntarily accept clauses in their contracts restricting their discretion and such restrictions may cause additional costs, for example costs associated with profitable investments that may be rejected, or direct costs associated with the formalization of the contract, and so on.; and c) residual loss.

Shareholders of large quoted firms usually have the same objective: maximizing the firm's market value. This objective conflicts with maximizing the managers' utility function. However, the picture is more complicated in cooperatives. Since, as previously stressed, the members of the cooperative may play different roles simultaneously (owners, buyers and sellers, controllers and beneficiaries) they may also have very diverse objectives (Hansmann 1996). Members usually delegate day-to-day decisions to managers, probably to avoid the costs arising from decision making in a collective process.

As a consequence, cooperatives face two problems. On the one hand, in most cooperatives the administration is delegated to managers or professional agents. On the other hand, the multiplicity of objectives that member have leads to a lack of definition in collective objectives, increasing the managers' discretion, making it more probable that they take decisions that benefit themselves to the detriment of members. In addition, the multiplicity of objectives makes it much more difficult to establish incentives and control mechanisms that minimize conflicts between members and managers (Tirole 2001).

Agency problems in agricultural cooperatives, arising from the diversity of objectives of cooperative members (principals), members of Board of Directors and professional managers (agents), are compounded by the existence of asymmetric information. This could lead agents to adopt opportunistic behavior that does not benefit the principals. Cooperative members must have information and control mechanisms to avoid agency problems.

Corporate governance examines the mechanisms that the organization can employ in order to provide incentives for the agents to persuade them to behave in the principal's interest, as well as to reduce the information gap and to provide the appropriate control mechanisms. Problems associated with the governance of cooperatives have not attracted the research interest that has been focused on capitalist firms and the field of interest has been rather slow to develop. Most studies on this subject agree that problems in cooperatives are more complicated due to the fact that there are more players than in capitalist firms and, in addition, some of them assume more than one role. In fact, although some studies suggest that there is no separation between ownership and control in cooperatives and that, consequently, conflict does not arise (Hansmann 1988), other studies, such as Spear (2004), put the emphasis in the limited extent to which cooperative members can influence the behavior of managers, to the point of concluding that in such companies the discretion of the managers is larger than in capitalist firms.

The literature usually classifies control mechanisms for Inc. corporations as either internal or external to the firm. These control mechanisms help reducing information asymmetry. Internal control mechanisms, which include the ownership structure of the firm, boards of directors, and compensation systems, are particularly important when markets, and hence external control mechanisms, are less well developed. An example is Spain, where markets are less developed than in Anglo-Saxon countries. Focusing on cooperatives, the market for corporate control, which is the main external control mechanism, does not work because residual rights in the cooperative cannot be transferred. Thus, in cooperatives, the only effective control mechanisms are the internal ones. For this reason, the classification of controls as internal or external is not usually employed in cooperatives (Coque 2008).

An alternative to that classification classifies corporate governance mechanisms for cooperatives into direct and indirect mechanisms (Coque 2008). The direct mechanisms are related to information and decision flows, including participation in the internal organization of the cooperative through the election of the positions in the General Assembly and in the other established democratic processes, and control, both ex-ante and ex-post, to prevent managers adversely affecting the interests of members. The indirect mechanisms are related to real and financial flows; for example, the extent to which members choose to use the services of the cooperative rather than alternative services offered by competitors. A recent paper by Pascucci et al. (2012) illustrates this matter by examining members of the cooperative who do not deliver to their cooperative, as well as non-members who do deliver to cooperatives.

Consequences and Antecedents of Satisfaction (Hypothesis)

Because the cooperative (as agent), is created to serve its members (as principal) and operate for their benefit (James and Sykuta 2005; Ortmann and King 2007), from the perspective of agency theory, members will be satisfied with their cooperative when the cooperative is perceived to act in their interests. The most obvious reason why farmers join cooperatives is to satisfy their economic goals. However, in addition to this goal, some members may also seek to satisfy social goals through their cooperative membership (Hansen et al. 2002). Economic objectives are related, among other things, to obtaining higher prices for the products, or receiving high quality services (Ortmann and King 2007). Social goals may include the desire to interact with other members and develop personal relationships (Hansen et al. 2002).

In a similar way, Nilsson et al. (2009) indicate that the members' degree of satisfaction with the cooperative may be related to the organization as well as to the business. Satisfaction with the organization might mean, for example, how satisfied members are with the information they receive and the treatment they are offered by the cooperative. However, satisfaction with the business is related to how satisfied the members are with the prices and services offered by the cooperative.

Given that members may play several roles in their relationship with the cooperative, and therefore have different interests or goals (Nilsson 1996), another generally accepted definition of satisfaction in business relationships provided by Anderson and Narus (1984) may be relevant: "A member's satisfaction with the cooperative is a positive affective state resulting from the appraisal of all aspects of the relationship with the cooperative".

Satisfaction is not only a close proxy for concepts such as perceived effectiveness but also a predictor of future actions by the cooperative's members. A review of the literature reveals that there is consensus about the positive influence of satisfaction on the relationship and the desire, by active members, to continue that relationship or leave it. This desire to continue is considered one dimension of the commitment of members (Kumar et al. 1995; Kim and Frazier 1997; Barraud-Didier et al. 2012) and the end result of the process of interaction between the parties (Frazier 1983). Parties who are satisfied with a relationship will be more interested in maintaining it than in starting a new relationship, given the uncertainty that any new relationship may bring (Ramsey and Sohi 1997).

In the field of the supplier-distributor relationships, there are empirical studies, such as Biong (1993) and Ping (1993; 1994), that give support to the highlighted theoretical considerations. If the parties have their expectations fulfilled by the relationship they will want to keep that relationship, and will reject other interesting alternatives (Ping 1994).

Therefore, increasing a farmer's satisfaction with the cooperative leads the cooperative member to increase his or her intention to continue his or her membership, and this has implications for the survival and future success of the cooperative as an organization (Hernández-Espallardo et al. 2013). In line with this reasoning, we propose the following hypothesis:

Hypothesis 1: Increasing a farmer's satisfaction with the cooperative increases his/her intention to continue his/her membership of the cooperative.

Principal-agent problems in a cooperative are likely to give rise to member dissatisfaction (Ortmann and King 2007). According to the general formulation of the principal-agent model, if members are not able to monitor managers' behavior, then managers have an incentive to behave opportunistically by maximizing their own utility instead of that of the members (Russo et al. 2000).

Moreover, this problem is exacerbated by the presence of information asymmetry, a characteristic that clearly exists in the relationship between a farmer and the cooperative (Hernández-Espallardo et al. 2013). As explained above, the relationship between the member and the cooperative is often based on information asymmetry. The cooperative has information which the member does not. For example, the cooperative has information about market prices, and about clients' behaviour (Borgen 2001). In this sense, Garnevska et al. (2011) also note that communication between members and management is important for the successful development of cooperatives.

Nilsson et al. (2009) argue that to the extent that a cooperative becomes very large and develops very complex business operations, the members are no longer able to control the cooperative and they have difficulty keeping themselves informed about the business and assessing what is happening in the firm. This hinders the participation of the partners in the governance of the cooperative and they will probably become dissatisfied with it.

Therefore, from the point of view of agency theory, to the extent that partners have information about the cooperative and mechanisms of control (i.e. through the correct functioning of the General Assembly), they may prevent opportunistic behaviour of members of the Board of

Directors and professional managers, so that their decisions will help them to achieve their objectives. Therefore, we propose the following hypothesis:

Hypothesis 2: The more information a member has about his/her agricultural cooperative, the more satisfied he/she will be with it.

Hypothesis 3: The more control a member has of his/her agricultural cooperative, the more satisfied he/she will be with it.

Trust is another mechanism identified in the literature on agricultural cooperatives than mitigates agency problems (Borgen 2001). Many studies confirm that trust is essential in a cooperative (James and Sycuta 2005; Nilsson et al. 2009; Österberg and Nilsson 2009; Nilsson et al. 2012), by reducing behavioural uncertainty (Theuvsen and Franz 2007), to the extent that it can act as a control mechanism that reduces the opportunistic behaviour of managers (Arcas-Lario and Hernández-Espallardo 2003).

In most definitions, the trust of a party in another person or organisation is a belief, feeling or expectation about the intentions and capabilities of that person or organisation to adopt behaviour that produces positive results for the first party (Ganesan 1994; Wilson and Möller 1995). Thus, in agricultural cooperatives, the trust of members in their cooperative may be defined as the members' belief that their cooperative will take decisions and adopt behaviour that will allow them to reach their goals.

Several papers confirm the positive influence of trust on satisfaction with inter-organizational relationships (Anderson and Narus 1990; Andaleeb 1996). This is also the case, but with less intensity, in agricultural cooperatives (Hansen et al. 2002). It is to be expected that members that trust their cooperative will perceive that the decisions of their cooperative will allow them to achieve their objectives. This will stimulate members to feel confident and satisfied with the cooperative.

Therefore we propose the following hypothesis:

Hypothesis 4: The more a member trusts his/her agricultural cooperative, the more satisfied he/she will be with it.

Figure 1 shows the model that combines the proposed hypotheses

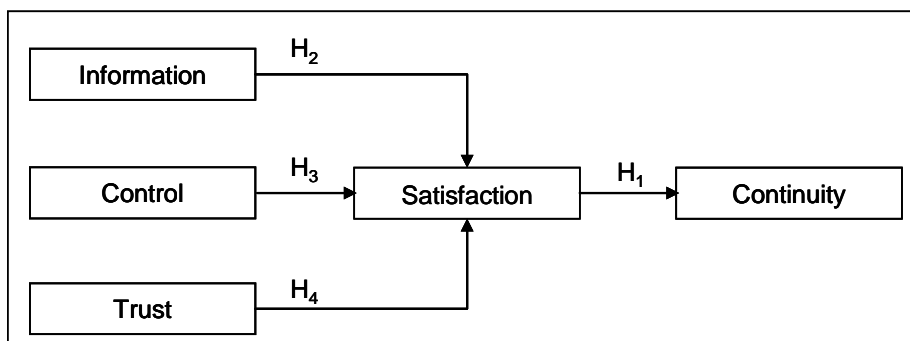


Figure 1. Model with the proposed hypothesis

Methodology

Data Collection

We collected data from farmers who are members of fresh fruit and vegetable marketing cooperatives in the Spanish Region of Murcia. This region specialises in fruit and vegetables, which represents 65.4% of its total agricultural production and 9.4% of the total fresh fruit and vegetable production in Spain. Another characteristic of the Murcia fruit and vegetable sector is the existence of a large number of cooperatives. For these reasons the marketing cooperatives of fruit and vegetables based in Murcia may be considered an appropriate universe for the testing of the hypotheses presented above.

To identify the cooperatives and their members we had the collaboration of the Confederation of Agricultural Cooperatives of Murcia (FECOAM, the regional affiliate to Cooperatives Agro-alimentarias). The data provided by FECOAM indicate that 45 of its associates belong to the fruit and vegetable sector. FECOAM represents 91% of all the fruit and vegetables cooperatives in Murcia, and they account for 31% of the production of fruit and vegetables in the region.

Due to the population's characteristics (the fact that their members are in most cases active workers and/or are older people) and the difficulty of obtaining information, personal surveys were used. To develop the questionnaire we previously carried out several interviews with key persons (cooperative members and directors). This allowed us to have a broad knowledge of the relationships to be analysed. Later, in order to develop the final version of the questionnaire, we conducted a number of pre-tests.

Geographical dispersion made it difficult to get in touch with cooperative members, so we took advantage of the celebration of the XIII Day of the Agricultural Member, organized by FECOAM. This event coincides with the Mediterranean Agricultural Fair, so the sampling was including a wide range of members. The presence of about 6,000 members and the procedure employed to select the sample (simple random sampling) guarantees the representativeness of the sample. A total of 334 completed questionnaires were obtained. 57 questionnaires that were not answered properly or lacked relevant information were removed from the sample. Thus, the final sample consisted of 277 questionnaires.

Some characteristics of the sample are presented in Table 1. Most members are men (91%) with a mean age of 60 years and an average of 18 years as cooperative members. Their level of education is low. 42% of members completed their studies with primary education, and 40% did not even complete that level of studies. About 15% of members completed secondary education, 9% in general education and 6% in vocational education. Only 2% of the cooperative members have a university degree. The fact that only 54% of the members' revenues come from agricultural activity highlights the fact that agriculture is a part time activity for many cooperative members. In addition, most of the members' agricultural activity, and thus of their agricultural revenues, come from their cooperative activity (a mean of 87% of their agricultural revenues). In relation to their participation in the governance of the cooperative, only 25% of the members have ever been members of the Board, roughly half of whom were board members at the time of the survey. Their average time as board members is 10 years.

Table 1. Profile of Cooperative Members

Variable	Minimum	Maximum	Mean
Men-members (%)			91
Woman-members (%)			9
Age	23	87	60
Years as cooperative member	2	66	18
Level of studies (%):			
Less than primary education			40
Primary education			42
General secondary education			9
Vocational secondary education			6
University degree			2
Other			3
Percentage of income that comes from agricultural activity	2	100	54
Percentage of agricultural income that comes from cooperative activity	1	100	87
Percentage of members that have ever served as a Board member			25
Number of years as Board members	1	30	10
Percentage of members of the cooperative that are presently serving on the Board			12

Measures

To measure the concepts, we used multiple indicator scales that were inspired by the literature (for references, please see Table 2). Because most of the scales have not previously been applied in the field of agricultural cooperatives, they were adapted during the pre-test phase. We used a 0 to 10 points Likert-type scale with “completely agree” and “completely disagree” as anchors. Table 2 shows the concepts, their measures, and descriptive statistics, as well as their theoretical source, once the scales had been refined.

To determine the quality of the scales employed, we tested whether they meet the criteria of reliability and convergent and discriminant validity. To test the reliability, we use the Cronbach’s alpha (α), whose optimal figure depends on the purpose of the research (Churchill 1979). Thus, for the early stages of any research, 0.5 - 0.6 may be acceptable figures.

To deal with validity, we conducted a factor analysis with the items of each variable, removing those that did not load heavily onto the factor. Finally, discriminant validity is tested by performing a factor analysis with all items that meet the previous criteria of reliability and validity. In this way we can check that the items of other scales do not load on the same factor or dimension, to determine discriminant validity. Thus, so long as the items load onto the appropriate dimension and the analysis has significant goodness-of-fit measures, we may conclude that there is discriminant validity.

Table 2. Descriptive Statistics

Variable	Mean	Standard deviation	Minimum	Maximum
Continuity (Ping 1993; Biong 1994; Selnes 1998)				
1. Your relation with the cooperative is a long-term partnership	8.40	2.091	0	10
2. You wish to continue as a cooperative member	8.91	1.588	0	10
Satisfaction (Kumar et al. 1992; Hansen et al. 2002; Nilsson et al. 2009)				
1. You are very satisfied with your overall relationship with the cooperative	8.41	1.666	1	10
2. You are very happy with the price paid by the cooperative for the products delivered	7.80	2.085	0	10
3. The services that the cooperative provides you help you achieve your business goals	7.90	1.96	0	10
4. You are very pleased with the running of the cooperative as a firm	8.28	1.780	0	10
Information (Heide and John 1992; Mohr and Sohi 1995)				
1. The cooperative always explains decisions that may affect its members	8.22	1.970	0	10
2. You are well informed about the results of the cooperative	8.16	2.013	0	10
Control				
1. You attend all meetings of the General Assembly	7.68	2.788	0	10
2. You frequently intervene in the General Assembly	5.76	3.397	0	10
3. Your interventions in the General Assembly are taken into account	6.80	3.190	0	10
Trust (Ganesan 1994; Kumar et al. 1995)				
1. When facing adverse situations, members have the help of the cooperative	7.60	2.654	0	10
2. When the cooperative makes important decisions, it takes into account its members' interests	7.88	1.978	0	10

In Table 3 we present the different items employed to measure the variables, once the items that do not meet the selection criteria had been removed. In Table 3 we present, together with the mean of each item, the figures for the Cronbach's alpha (α), the KMO index for the factor analysis (with principal component extraction and varimax rotation) and the weight factors of each item on the variable on which it loads most strongly. The results indicate the quality of the scales employed.

Table 3. Variable Measures

Variable	Item	α	F ₁	F ₂	F ₃	F ₄	F ₄	KMO
Continuity (Ping 1993; Biong 1994; Selnes 1998)								
1.	Your relation with the cooperative is a long-term partnership	0.82	0.89					
2.	You wish to continue as a cooperative member		0.85					
Satisfaction (Kumar et al. 1992; Hansen et al. 2002; Nilsson et al. 2009)								
1.	You are very satisfied with your overall relationship with the cooperative	0.88		0.80				0.88
2.	You are very happy with the price paid by the cooperative for the products delivered			0.89				
3.	The services that the cooperative provide you help you achieve your business goals			0.73				
4.	You are very pleased with the running of the cooperative as a firm			0.80				
Information (Heide and John 1992; Mohr and Sohi, 1995)								
1.	The cooperative always explains decisions that may affect its members	0.77			0.82			
2.	You are well informed about the results of the cooperative				0.61			
Control								
1.	You attend all meetings of the General Assembly	0.88					0.74	
2.	You frequently intervene in the General Assembly						0.88	
3.	Your interventions in the General Assembly are taken into account						0.83	
Trust (Ganesan 1994; Kumar et al. 1995)								
1.	When facing adverse situations, members have the help of the cooperative	0.71						0.91
2.	When the cooperative makes important decisions, it takes into account its members' interests							0.67

F1 = Factor loadings for continuity. F2 = Factor loadings for satisfaction. F3 = Factor loadings for information. F4 = Factor loadings for control. F5 = Factor loadings for trust.

Results

$$(1) \text{ CONTINUITY} = a_0 + a_1 \text{ SATISFACTION} + e,$$

where CONTINUITY measures the intention of a member to continue in the cooperative and SATISFACTION measures the satisfaction of a member with the cooperative.

$$(2) \text{ SATISFACTION} = b_0 + b_1 \text{ INFORMATION} + b_2 \text{ CONTROL} + b_3 \text{ TRUST} + e,$$

where INFORMATION measures the degree to which the member have information about the cooperative, CONTROL measures the degree to which the member exercises control over the cooperative, and TRUST measures the degree to which the member trusts the cooperative.

In the regression, the score for continuity and satisfaction multi-item scales were computed as the average of the scores of the items used to measure these concepts. The computed factor

scores obtained from the factor analysis (to determine the goodness of the measurement scales) were used in the regression analysis to reduce the potential for multicollinearity among the predictor variables (INFORMATION, CONTROL, TRUST).

The results of the regressions are shown in Tables 4 and 5. Hypothesis 1 is supported. This follows from the positive and significant regression coefficient ($\beta = 0.550$, $p < 0.001$) between continuity as dependent variable and satisfaction as independent variable (Table 4). Therefore, it is confirmed that the more satisfied partners are with their cooperative, the more they want to continue as cooperative members.

Table 4. Ordinary Least Squares regressions on the influence of satisfaction on continuity

Variable	Coefficient β	t statistic
Constant	4.193	8.821***
Satisfaction	0.550	9.522***
Adjusted R ²	0.264	
F	90.677***	

Note. *** denotes statistical significance $p < 1\%$.

Hypotheses 2 to 4 are also supported, as shown by the positive and significant signs of the regression coefficients between satisfaction as dependent variable and information ($\beta = 0.329$, $p < 0.01$), control ($\beta = 0.214$, $p < 0.05$) and trust ($\beta = 0.202$, $p < 0.05$) as independent variables (Table 5). Therefore, it is confirmed that the members' satisfaction with their cooperative increases as they have more information about it, control over it, and there is a climate of trust.

Table 5. Ordinary Least Squares regressions on the influence of information, control and trust on satisfaction

Variable	Coefficient β	t statistic
Constant	8.074	81.212***
Information	0.329	3.299***
Control	0.214	2.152**
Trust	0.202	2.024**
Adjusted R ²	0.062	
F	6.536***	

Note. ***, ** and * denote statistical significance $p < 1\%$, 5% and 10% , respectively.

Conclusions and Implications

Cooperative members may play different roles simultaneously. On the one hand they are owners and thus they provide capital. However, depending on the characteristics of the cooperative, they may also be buyers, sellers, controllers and so on. As a consequence the members of a cooperative may have various reasons for belonging to the cooperative, as well as different objectives from each other, and not all of these objectives may be compatible.

However, conflicts in the cooperative arise not only from the relationships between cooperative members, but also from the relationships between members and the management. Managers of IOFs usually have great discretion, due to the private information they have. But in a cooperative, due to the conflict of interests among members, their discretion is even greater.

Previous studies on agricultural cooperatives have shown the importance of the participation of members in the life of the cooperative and as well as the importance of members' trust in the managers of the cooperative (James and Sykuta 2005; Barraud-Didier et al. 2012). In addition, information and control are two key factors that may help reducing conflicts in any firm, and thus in a cooperative. This makes agency theory a good framework for the study of the relationships between agricultural cooperatives and their members, and that is the approach employed in this manuscript.

The results show that the members' satisfaction from belonging to a cooperative is an appropriate measure of the success of the member-cooperative relationship, as it supports the desire of members to continue in the cooperative and, thus, the survival of the cooperative. This finding is consistent with previous evidence in both distribution channels (Biong 1993; Ping 1993 and 1994) and agricultural cooperatives (Hernández-Espallardo et al. 2013), that found a positive and significant relationship between satisfaction and the interest in maintaining a relationship.

Furthermore, as suggested by agency theory, it is important that members have mechanisms in order to protect themselves from the opportunist behaviour of management, so that they can reach a higher level of satisfaction with the cooperative. Information, control and trust are shown to be good mechanisms for this purpose. As a consequence of these results, directors of cooperatives should take appropriate decisions to develop these aspects.

In order to satisfy cooperative members, it is important that they have as much as information as possible. In fact, Barraud-Didier et al. (2012) argue that, "If cooperatives communicate more and share information with their members, the latter will be more attached to the cooperative". Sharing information reduces information asymmetry and leads to greater satisfaction of members. Following this argument, it is important to improve all channels of communication with cooperative members to ensure that information flows quickly, especially channels related to information technology and communications, such as the use of web sites. By using these channels conflicts between the management and the members can be reduced.

Most cooperatives are traditionally organized (Nilsson et al. 2012). However, in order to be competitive, cooperatives have been growing in size. This increase in size also leads to obvious challenges. One of them has already been highlighted and it is that it produces greater information asymmetry. In addition, it also makes it more difficult to control managers. In fact Nilsson et al. (2009) and Nilsson et al. (2012) point out that, in general, cooperative members think that cooperatives are too large and complex, and they have difficulty understanding their operation. In addition, they do not believe that the cooperative can be remodeled to strengthen member control. However, some measures could be adopted. For example, in order to exert appropriate control over the management, it is important that the Board and the General Assembly function well. Cooperatives must prioritise the proper operation of the General Assembly, trying to secure high levels of attendance and participation of their members. To help

to reach this goal, it is important to provide members as much as information as possible and meetings should be held at convenient times and in accessible locations, and be managed by a wise and effective chair. In summary, as Russo et al. (2000) highlights, managers' power is inversely correlated to members' participation in the cooperative. Thus, the more active members are in the annual meetings and in the decision making of the cooperative, the less power the managers have, reducing agency conflicts.

The present study also highlights the importance of the trust that the cooperative inspires in its members. Trust is an indicator of social capital: "network resources that are not visible to the eye, but have an economic impact on these enterprises" (Nilsson et al. 2012). Thus, when two persons or groups trust each other it is easy to have more coordination and engage in collaboration. However, trusting is risky. Even when information asymmetry is reduced, if members are dissatisfied and uninvolved, trust could be negatively affected. This situation is difficult to reverse. The impact of opportunism and divergent objectives may be minimized in the presence of trust, as shown in this study by the positive influence of trust on the level of members' satisfaction. This positive relationship between trust and satisfaction is consistent with previous evidence (Anderson and Narus 1990; Andaleeb 1996; Hansen et al. 2002).

In order to build up trust, the cooperative can adopt altruistic or helpful behavior towards members, and show members that it is reliable and competent in its everyday actions, for example, through advice that it gives to members (technical, economic or strategic advice) and capital budgeting or marketing decisions (Barraud-Didier et al. 2012). Testimonials from members about their success within the cooperative and information that highlights the skills, competencies and accomplishments of the cooperative may also help to develop a climate of trust (Hansen et al. 2002). Therefore, it is important that cooperatives have the appropriate human and material resources to provide quality services to their members in order to help them to achieve their goals.

This study is subject to limitations inherent in this type of research. The most important limitation is the fact that the study focuses on a concrete geographical area: the Region of Murcia (Spain). Thus, it would be interesting to make similar analyses in other geographical areas and contexts to examine whether the results can be generalized more widely. However, restricting the study to a very concrete region, as well as to very concrete firms (fresh fruit and vegetable marketing cooperatives) has some advantages as it makes it possible to isolate the phenomena of interest for close examination in a way that would not be possible where there are other influences in more heterogeneous contexts.

Acknowledgements

We acknowledge financial support from Fundación CajaMurcia, Cátedra Cajamar de Cooperativismo Agroalimentario – Universidad Politécnica de Cartagena, Ministerio de Economía y Competitividad and FEDER (Project AGL2010-22335-C03-03).

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