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# Determinant Factors of Satisfaction in the Relationship between First- and Second-Order Agricultural Cooperatives

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**DETERMINANT FACTORS OF SATISFACTION IN THE RELATIONSHIP  
BETWEEN FIRST- AND SECOND-ORDER AGRICULTURAL CO-OPERATIVES**

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# DETERMINANT FACTORS OF SATISFACTION IN THE RELATIONSHIP BETWEEN FIRST- AND SECOND-ORDER AGRICULTURAL CO-OPERATIVES

**Abstract:** The integration in second-order cooperatives allows the first-order agricultural cooperatives to complement their resources and capabilities, achieving a sustainable competitive advantage. The problems associated with the creation, development and long-term maintenance of these partnerships, along with the lack of research into this area, justify the realization of studies aimed at improving our understanding of the processes and outcomes that characterize them. Therefore, the purpose of this study is to discover the factors which lead to the success of these relationships, empirically measured through the satisfaction of first-order co-operatives with the relationship. In order to achieve this, a suitable theoretical framework is established and an empirical study undertaken, with information obtained from a survey of 190 Spanish first-order agricultural co-operatives. The results obtained reveal that the contribution of the partnership to the first-order cooperative's performance, its trust and perception of fairness are critical antecedents of the level of satisfaction of the first-order cooperative satisfaction with the relationship.

**Key words:** Agricultural marketing, first- and second-order agricultural co-operatives, satisfaction, success factors of interorganizational relationships.

## 1.- INTRODUCTION

A general agreement has been reached among researchers about the need for companies to enter into stable business relationships (i.e., alliances, partnerships) in order to be able to compete adequately in the present business world context. These relationships, based on deep interdependency, co-operation and co-ordination of activities rather than on competition and conflict, are intended to achieve competitive advantage, reducing the uncertainty of interchanges and generating value for the market (Shamdasani and Sheth, 1995).

Specifically, in the agricultural environment, this tendency has been accelerated by factors such as: 1) the excess of production in some products; 2) the liberalization and globalization of agricultural markets, caused by the GATT agreements and the CAP Reform; 3) the concentration of the industry and agro-food distribution; and 4) the volatility in consumer demands (Arcas and Munuera, 1998), which raise even further the uncertainty of the interchanges between agents in the agro-alimentary system. These factors have caused businesses in the different sub-sectors –supply of inputs, agricultural, agro-industrial, distribution and consumption– to specialize in specific activities according to their distinctive capabilities, establishing long-term relationships with other companies.

A clear exponent of these relationships are the agricultural co-operatives. It is estimated that more than half the agricultural production in the E.U. is marketed by these firms (Hind, 1999). In Spain there are 4,350 agricultural co-operatives, of which 3,092 (70%), are integrated in one of the 175 existing second order marketing co-operatives (Montero, 1999). Some of these second-order marketing co-operatives are ranked among the top Spanish agro-alimentary firms by turnover, as in the case of ANECOOP with sales of 337 million euros (Alimarket, 2001).

Although the economic importance of these partnerships, these relationships are not free of difficulties, as shown by the fact that more than a sixth (35 co-operatives) of the 210 second-order co-operatives created up to 1997 in Spain have disappeared (Arcas et al., 2000). This situation gives rise to serious problems for the co-operatives concerned because of the high costs associated with the breakup of the relationship and the uncertainty which entails the commencement of new ones. Thus, for those in charge of their administration, it is of interest to know to what extent the relationship is considered as satisfactory by their partners. This will help to adopt those decisions which guarantee their continuity.

The importance and the problems of these relationships contrast with the lack of studies aimed at identifying their success factors, aspects which, in turn, have been widely dealt with in marketing literature, particularly in the specific area of interorganisational relationships. In

this context, the aim of this study is to propose a model that allows us to deepen our knowledge about the factors that antecede the partner's satisfaction with the relationship. In order to achieve this aim, first it is necessary to establish a measurement for success and an explanatory model for the same. Subsequently the proposed model is contrasted by carrying out an empirical study, setting out the methodology used and the results obtained and ending with the conclusions of the study.

## **2.- THE MEASUREMENT OF SUCCESS: SATISFACTION**

In marketing literature, a number of references can be found dealing about the consequences of the relationships between organizations. Some studies are concentrated on concrete aspects, such as performance –i.e., profits, sales, market share- (Bello and Gilliland, 1997), satisfaction (Mohr and Spekman, 1994) or the desire for continuity (Lusch and Brown, 1996).

Satisfaction is one of the most important concepts used to measure the success of relationships, not only in consumer markets, but also in industrial markets, distribution channels and in strategic alliances and networks. Anderson and Narus (1984; 66) define satisfaction as “*a positive emotional state, resulting from the overall assessment of all aspects of the relationship between the businesses*”. Similarly, Molm (1991) states that the satisfaction of one party with the interchange relationship is “*an emotional reply to a cognitive assessment based on how good or bad a relationship is judged to be (477)*”, and Klein and Roth (1993; 39) perceive it as “*an emotional state arising from experiences connected to an aim, action or condition*”.

For Robicheaux and El-Ansary (1975) satisfaction is an essential concept for understanding relationships in the channel, due to the fact that the increased satisfaction of the members entails high productivity since it facilitates the co-ordination of activities (McNeilly and Russ, 1992). Similarly, Shamdasani and Sheth (1995) consider satisfaction to be a fundamental dimension to be assessed in strategic alliances, whereas for Wray et al. (1994) it explains the quality of relationships in interorganisational networks.

The importance of the members' satisfaction with the relationship stems from the fact that it affects their future to the extent that it reduces conflict and reinforces co-operation and the desire to continue (Ganesan, 1994). Its influence in the continuity of relationships is also emphasized by Frazier (1983) and Ramsey and Sohi (1997). The former claims that continuous dissatisfaction with a relationship will lead to its dissolution and the latter state that parties satisfied with a relationship will be more interested in maintaining it than starting another with the uncertainty this involves.

Studies which examine satisfaction in the context of agricultural co-operatives are more recent and few in number. In these studies it is argued that the members' satisfaction is “*the best indicator for the measurement of a co-operative's success*” (Arcas, 1999; 128)” or “*the true measurement of a co-operative's success*” (López et al., 2001). In this context, on one hand, the Co-operatives Act 27/1999 suggests that the aims of co-operatives are to satisfy the economic and social needs of their members. On the other hand, Arcas (2001) analyses the phases which make up the process of formation and development of relationships between first- and second-order co-operatives. Among these is the phase of “relationship assessment” with the conclusion that the final result of this assessment process will be satisfaction or dissatisfaction which will translate respectively into a desire to maintain the relationship or to dissolve it as an expression of its failure.

From the above, the value of the concept of “satisfaction” as a measurement of success of relationships between first- and second-order co-operatives can be deduced, and so the

need to regard it in this context. Thus, for the purposes of this study and according to Anderson and Narus (1984) we can define the satisfaction of first order co-operatives with the relationship they maintain with second order co-operatives as *“an emotional state resulting from the overall assessment made on all aspects of the relationship”*.

### 3.- CAUSAL ANTECEDENTS OF SATISFACTION

Taking into account the above conceptualization of satisfaction of first order co-operatives with the relationship they maintain with second order co-operatives, this will arise from the overall assessment of the same, including both the economic results and the prevailing behavior and feelings. We can find several references in marketing literature, both theoretical and empirical, that demonstrate the effects of these aspects on satisfaction. In this study, the most outstanding of these will be analyzed following Arcas et al. (2000), in particular how satisfaction is influenced by the economic results of the relationship, communication of the second order co-operative and the feelings of trust that the first order co-operative has towards the second order co-operative, and the fairness of the relationship as perceived by the first order co-operative.

#### The effect of economic results on the relationship: performance

In interorganisational relationships, the parties must assess the relationship according to the degree it allows them to reach their goals (Kumar et al., 1992). Thus, according to Gaski and Nevin (1995) performance can be defined from the point of view of the first-order co-operative as *“the extent to which the relationship it maintains with the second-order co-operative contributes towards the achievement of its own goals”*.

Measuring performance has been rather controversial because of the lack of criteria for choosing the most suitable measures (Kumar et al., 1992). This difficulty, due to its specific characteristics, is even higher in the cooperative sector. Compared with capitalist firms, co-operatives have the aim of maximizing their members' profits through the provision of services whose objective goes beyond that of optimizing the profitability of their investments. Thus the performance of co-operatives cannot be assessed solely according to measures based on financial ratios (solvency, efficiency, liquidity and profitability) as these fail to take into account any additional benefits to their members (Pratt, 1998; Hind, 1998).

Taking these considerations as a starting point and for the purposes of determining the dimensions of the “performance” construct in the field of relationships between first- and second-order agricultural co-operatives, we will adopt the proposal made by Arcas et al. (2001). This harmonizes the studies carried out by Quinn and Rohrbaugh (1983) and Kumar et al. (1992) and, from the perspective of first-order co-operatives, who assess the contribution of the second-order co-operative towards the achievement of their aims, proposes as indicators of relationship performance the dimensions appearing in the last column of table 1.

As far as the effect of economic results is concerned, given that the satisfaction of one party with the relationship is an emotional response to a cognitive evaluation of the relationship (Molm, 1991), it is to be expected that the satisfaction of the parties to the interchange relationship will increase as they perceive that the relationship enables them to achieve or improve the desired results. This idea is supported by a number of studies which confirm that the results –performance– achieved in the relationship is one of the most important factors in predicting the levels of satisfaction (Anderson and Narus, 1984, 1990). Thus the relationship between performance and satisfaction can be established as follows:

**H<sub>1</sub>** *The contribution of the second-order co-operative to the performance of the first –order co-operative has a positive influence on the satisfaction of the latter with the relationship.*

**TABLE 1**  
**ASSESSMENT OF THE RESULTS OF A RELATIONSHIP**

<b>Model of results</b>	<b>Objective pursued by the organization</b>	<b>Contribution of other party towards:</b>	<b>Contribution of second-order co-op towards improvement of:</b>
<b>Rational objective</b>	. Productivity . Efficiency	. Sales growth . Profits	. Sales . Profits . Lowest productive costs
<b>Human relations</b>	. Development of human resources	. Aptitude in role performance (competence or performance)	. Learning new processes
<b>Internal process</b>	. Stability . Control	. Loyalty . Conformity	. Members' satisfaction
<b>Open systems</b>	. Growth . Adaptation . External legitimization	. Contribution to growth . Adaptability . Customer satisfaction	. Launch of new products . Image and prestige

Source: Arcas et al. (2001) based on Quinn and Rohrbaugh (1983) and Kumar et al. (1992).

### The effect of communication

Communication consists of a flow of information between two organizations (Bowersox and Morash, 1989). It has been defined by Mohr and Nevin (1990) as the process by which persuasive information is transferred. Similarly for Anderson and Narus (1984, 1990), communication implies the sharing of significant information between the parties.

The exchange of information is considered to be a non-coercive or indirect influence strategy, directed towards altering the partner's perceptions (Frazier and Rody, 1991). This involves personnel from the source (or emitting) company holding discussions on aspects of business and operative procedures so as to alter the general perception of the desired behavior of the target (or receiving) company.

There is a high degree of consensus in marketing literature concerning the fact that information exchange improves the co-ordination of the relationship (Anderson and Weitz, 1992; Mohr and Sohi, 1995), making it a key factor in the development and maintenance of interorganizational relationships, leading Mohr y Nevin (1990) to conclude that communication is *"the glue which keeps the parts together (36)"*.

On the other hand, Mohr and Nevin (1990) examine four dimensions in the communication process: 1) frequency; 2) direction; 3) the mode or method used to transmit the information; and 4) the content of the communication. Frequency refers to the number of contacts between the parties. Direction refers to the direction in which the information flows, either unidirectional or bidirectional. As far as method is concerned, these authors distinguish between formal communication when it is carried out in a structured and regularized manner, and informal communication when this occurs spontaneously. Finally, concerning content, they distinguish between direct communication, this being the case if the focal company tries to change the behavior of the target company by indicating actions to be undertaken, and indirect communication if it tries to change attitudes with regard to the desired behavior, but without directly specifying any actions.

Taking the second-order co-operative as an order-emitting company for the co-ordination of resources, activities and actors involved in the relationship with first-order co-operatives (Arcas, 2001), for the purposes of our study and according to Mohr and Nevin (1990) we define communication as *"the flow of information from the second-order to the first-order co-operative"*. Furthermore, after determining its unidirectional character, we consider that this is characterized by the dimensions of frequency, mode –formal or informal– and content –direct or indirect– as established by Mohr and Nevin (1990).

The existing consensus surrounding the positive influence that communication has on satisfaction emerges from the examination of marketing literature (Mohr et al., 1996; Selnes,

1998). Collaborative communication –frequent, informal and with indirect content– helps the parties to work together, to protect their own interests and to create a climate characterized by positive feelings (Mohr and Nevin, 1996). Furthermore, given that satisfaction arises from the comparison of results with regard to expectations, it will be positively affected by communication to the extent that this facilitates the comprehension of these results and expectations (Selnes, 1998).

As far as the influence of information content on satisfaction is concerned and given the lack of studies which analyze this, we rely on those which deal with the effect of power on satisfaction. Several studies show that satisfaction is positively affected by non-coercive power –rewards– and negatively affected by coercive power –punishment– (Gaski and Nevin, 1985; Keith et al., 1990). This is due to the typical nature of power sources and to the fact that one party will be more satisfied with the relationship if they perceive that they have a certain degree of control over the behavior, which occurs in the case of non-coercive power, but not of coercive power (Keith et al., 1990). Moreover, non-coercive influence strategies –indirect strategies– have a positive effect on attitudes, while coercive strategies –direct- negatively influence them (Frazier and Rody, 1991). Based on these considerations, we set out the following hypothesis:

**H<sub>2</sub>** *The satisfaction of a first-order co-operative with the relationship:*

**H<sub>2a</sub>** *Increases with frequent informal and indirect communication on the part of the second-order co-operative.*

**H<sub>2b</sub>** *Decreases with direct communication from the second-order co-operative.*

#### The effect of trust

In most definitions the idea prevails that the trust that one party –individual or organization– has in the other is a belief, feeling or expectation (Ganesan, 1994) regarding the intentions –attitudes– and abilities (Wilson and Möller, 1995) of the latter to adopt behavior which will produce positive results in the former, or as expressed by Andaleeb (1992; 9) “*act in such a way that provides a reasonable degree of certainty that their objectives can be achieved*”.

Trust is considered to be the most important element that characterizes a good relationship (Han et al., 1993) as it concerns a normative link which steers the relationship and leads to co-coordinated behavior (Gundlach y Murphy, 1993). McAllister (1995) suggests that in conditions of uncertainty and complexity, the necessary adjustments and coordination of the actions are only possible if there is mutual trust.

Following what has been set out above and for the purposes of our study, we take as a definition of trust “the first-order cooperative’s expectatives about its partner’s intentions and capabilities”.

Likewise, and based on examination of the marketing literature (Andaleeb, 1992; Ganesan, 1994; Kumar et al., 1995), we consider that there are three dimensions of trust: 1) reliability is the more cognitive, and can be defined as “*the perception of the first-order co-operative that the second-order co-operative has the necessary capacity to carry out certain activities*”; 2) integrity is “*the perception of the first-order co-operative that the intentions of the second-order co-operative are sincere and will provide positive results*”; and 3) benevolence is “*the perception of the first-order co-operative that the second-order co-operative will help in the future, even in unforeseen circumstances when this brings the second-order cooperative benefit at all –altruism and goodwill*”-



The positive influence that trust has on satisfaction also seems unequivocal, as highlighted by different studies which have analyzed this aspect (Anderson and Narus, 1990; Andaleeb, 1996). The party which has trust in the other perceives that the actions of the latter will provide them with positive results (Andaleeb, 1996), which will translate into a greater sense of security and thus a greater sense of satisfaction with the relationship. Therefore we are in a position to establish that:

**H<sub>3</sub>** *The trust that the second-order co-operative inspires in the first-order co-operative positively affects the level of satisfaction of the latter with the relationship.*

### The effect of fairness

In the sphere of interorganizational relationships, Gassenheimer et al. (1998) point out the importance of fairness. They argue that the economic and social interdependency of the parties will lead them to negotiate exchanges which will guarantee them a fair distribution of the economic and social values in such a way as to make it worth continuing the relationship.

Although fairness has not received such extensive attention in marketing literature as the other concepts already mentioned, several authors highlight its importance for the good development of relationships in distribution channels (Frazier, 1983; Anderson and Weitz, 1992). The study carried out by Kumar et al. (1995) is very interesting and shows that fairness leads to enhancement of the quality of the relationship and to greater desires for its continuation.

From the application of the Theory of Relational Interchange (Macneil, 1980) to the sphere of relationships between businesses, Kaufmann and Stern (1988) have found that the perception of fairness-unfairness with regard to the behavior of the other party has a very important influence on levels of hostility towards the relationship.

Likewise, the relational norms proposed by Macneil (1980), one of which is the fairness of the relationship, can provide a protection mechanism against abuses arising from the transfer of control (Heide y John, 1992). In this context, Takala and Uusitalo (1996) highlight the importance for businesses to consider their relationships from an ethical standpoint, as the compliance with moral standards can lead to an increase in the perception of fair play between the parties and hence the degree of satisfaction perceived.

Some authors concentrate on the results of the relationship to define fairness and to establish its dimensions (Frazier, 1983). They refer to equity as the degree to which the interchange is considered to be fair and impartial from two comparisons. Firstly if a balance does exist between the profits achieved with the relationship and the level of investment in that relationship. Secondly, Anderson and Weitz (1992) concentrate on processes and refer to the “*reputation for fairness*” that the parties acquire based on fair play and which increases trust, commitment and the other’s desire to continue.

Subsequently, Kumar et al. (1995) bring together earlier contributions and identify two dimensions of fairness. On one side is the distributive or results dimension and on the other that of procedure or process. They define the first as “*the perception of one party of the equity of the results achieved in its relationship with the other (55)*” and the second as “*the perception of one party of the equity of the procedures and processes adopted in the relationship (55)*”.

In our case, we understand fairness to be “*the perception or feeling of the first-order co-operative towards the equity of the relationship it maintains with the second-order co-operative and the treatment received from it*”. Likewise, we consider that this feeling of

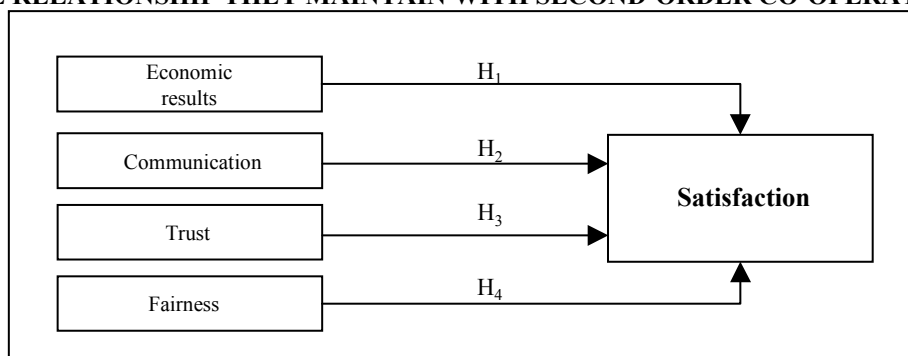
fairness on the part of the first-order co-operative has two dimensions. Firstly, distributive fairness defined as the “*perception of the equity of the results achieved in its relationship with the second-order co-operative*”. Secondly, procedural fairness defined as “*the perception of equity of the procedures and processes used by the second-order co-operative*”.

However, although the influence of fairness on satisfaction has not been empirically contrasted, we think it of interest to explore this aspect. The satisfaction of one party with an interchange relationship arises from the evaluation they make of the results obtained from two complementary processes (Molm, 1991). On one hand, cognitive evaluation which leads the actors to compare current results with expected results, and on the other, normative or moral evaluation through which the actors compare current results with fair results, based on certain normative principles such as equity. This leads us to establish the relationship between fairness and satisfaction in the following way:

**H<sub>4</sub>** *Fairness in the relationship as perceived by the first-order co-operative positively influences its satisfaction with relationship.*

The model for the proposed hypotheses with regard to the factors which explain the satisfaction of first-order co-operatives with the relationship they maintain with second-order co-operatives can be seen in figure 1.

**FIGURE 1**  
**EXPLANATORY MODEL FOR THE SATISFACTION OF FIRST-ORDER CO-OPERATIVES WITH THE RELATIONSHIP THEY MAINTAIN WITH SECOND-ORDER CO-OPERATIVES**



#### 4.- METHODOLOGY OF THE EMPIRICAL STUDY

##### 4.1.- Population, sample and information collection<sup>1</sup>

The target population of this study consists of Spanish agricultural co-operatives having as their main activity the handling of fruit and vegetable products and who also market all or part of those products through a second-order co-operative. Based on information provided by the Confederation of Agricultural Co-operatives of Spain (CCAЕ) and the Federations of Agricultural Co-operatives of the different Autonomous Communities, the population of this study was quantified at 278 first-order fruit and vegetable co-operatives. As the population was not excessive, we requested information from all the co-operatives.

As the population is geographically dispersed, both personal and telephone surveys were used in equal parts for the collection of information. Likewise, in drawing up the questionnaire, a series of preliminary interviews was carried out with key persons – presidents and managers of first- and second-order co-operatives- which gave us better insight into the relationships which form the object of this analysis. Subsequently, a first draft of the

<sup>1</sup> The data collection for this study was financed by ANECOOP, Sdad. Coop.

questionnaire was made and subjected to a pre-test, which formed the basis for the definitive questionnaire.

The persons who responded to the questionnaire were those having a good knowledge of the relationship their co-operative maintains with the second-order co-operative. In most cases this corresponded to the manager –62.1%– followed by the president –10.2%– and the director –4.8%–, except in the case of smaller co-operatives where another person normally responded –21.9%–, often the head of administration. 190 completed questionnaires were obtained, which means a response rate of 68%. From the above data, the technical specifications of the investigation appear in table 2.

**TABLE 2**  
**TECHNICAL SPECIFICATIONS OF THE INVESTIGATION**

<b>Population</b>	278 fruit and vegetable co-operatives marketing their products through a second-order co-operative
<b>Geographical sphere</b>	National
<b>Information collection method</b>	Telephone and personal interview
<b>Sampling procedure</b>	Selection of all the population
<b>Sample size</b>	190 first-order co-operatives
<b>Sample error</b>	± 4%
<b>Date of realization of field work</b>	April to June 1999

The co-operatives in the sample are on average 30 years old and have 448 members. Other relevant aspects which, together with the number of members, allow us to appreciate the size of the first-order co-operatives are those which refer to their sales –5 million euros– and to the number of employees –67–. As far as the product range of the first-order co-operatives is concerned, of the five lines considered (vegetables, fruit, citrus fruit, bananas and others) they produce an average of 1.5.

Among the characteristics of the relationship, outstanding are those which refer to the average distance between the headquarters of the co-operatives –79 km. –, their duration –11 years on average–, the percentage of their sales made through a second-order co-operative –70%– and the services provided to first-order co-operatives by the second-order co-operative. Of the seven services considered (supply, training, information, credit, technical advice, R+D and others) as well as marketing, the first-order co-operatives receive an average of 3.2.

#### **4.2.- Development of measurements**

The scales used to measure the different constructs which form the model are congruent with the conceptualization and the dimensions established in the previous epigraphs. These scales come from existing marketing literature and have been adapted to the special circumstances of the agricultural co-operatives in this study.

In order to measure these concepts and, with the general consensus in mind that perceptions and attitudes cannot be measured directly (Lastovicka and Thamodaran, 1991), we use a multi-item classification scale by categories of ten points, widely accepted by investigators to assess concepts such as those that concern us here.

To determine the value of the scales used, we test to see if these satisfy the criteria of reliability and validity. Within validity we concentrate on convergent and discriminant validity.

In order to test reliability we use two methods as a basis: item-total correlations and Cronbach's Alpha co-efficient. In the first case, we discount those items with a correlation of less than 0,30 (Heide y John, 1988). With regard to Cronbach's Alpha, Churchill (1979) states that the optimum value will depend on the purposes of the investigation. Thus, for the first

stages of any investigation, between 0,5 and 0,6 may be sufficient. However, in applied studies where important decisions have to be taken, a higher co-efficient of 0,9 would be desirable.

In order to approach convergent validity we carry out a factorial analysis of the items of each of the dimensions, eliminating those which do not saturate the factor. Finally discriminant validity is contrasted by carrying out a factorial analysis of all the items which fulfill the rest of the conditions of reliability and validity. Thus we are able to check that the items on different scales do not weigh in the same factor or dimension, as a characteristic of the existence of discriminatory validity. In this way, if they saturate the proposed dimension and the analysis offers adequate value we will be in a position to state that there is discriminant validity.

In Appendix 1 there is a list of the items used to measure the different dimensions of the concepts which make up the model once the scales are refined discounting those items which fail to satisfy the minimum criteria indicated. Included in these, as well as the authors who have used them and their average, are the item/total correlations (C. IT), Cronbach's Alpha value ( $\alpha$ ) and the KMO index for the factorial analysis realized which confirm the validity of the scales finally employed.

## 5.- RESULTS

In order to test the model and the hypotheses arising from it, the following multiple lineal regression has been carried out:

$$Satisfaction = \beta_1 Economic\ results + \beta_2 Communication + \beta_3 Trust + \beta_4 Fairness$$

According to Lastovicka and Thamodaran (1991), for the regressions, instead of using the sum of the scores obtained for the items which measure the different dimensions of a concept, we use the factorial scores obtained from the factorial analyses by main components and varimax rotation which allows us to test the discriminant validity of the scales used. In this way, we are assured of the non-correlation of the dimensions for the same concept. The adoption of this criterion used, among others, by Kumar et al. (1995) to study relationships between members of the distribution channel, offers the advantage of considering the different importance or specific weight of the different dimensions of the same concept. Furthermore, this procedure helps to avoid co-lineality between the independent variables, allowing us to make the correct use of the multiple regression analysis, thus achieving more stable and precise models.

From the results of the regression undertaken which are detailed in table 3 the following is deduced:

**TABLE 3**  
**STANDARDIZED COEFFICIENTS OF THE REGRESSIONS BETWEEN CO-OPERATION AND THE ATMOSPHERE OF THE RELATIONSHIP**

Dependent variable	Independent variable								
	Performance	Communication			Trust			Fairness	
		Fluency	Indirect	Direct	Reliability	Benevolence	Integrity	Results	Procedures
<b>Satisfaction</b>	0,136*	n.s.	n.s.	-0,163***	0,111**	0,108*	0,146***	0,370***	0,432***
<i>Adjusted R<sup>2</sup></i>	0,740								
Signification F	0,000								
<b>Hypothesis support</b>	<b>Support H<sub>1</sub></b>	<b>Partial support H<sub>2</sub> (support H<sub>2a</sub> and non-support H<sub>2a</sub>)</b>			<b>Support H<sub>3</sub></b>			<b>Support H<sub>4</sub></b>	

\*\*\*p<0,01; \*\*p<0,05; \*p<0,1. n.s = non-significant.

1. Hypothesis **H<sub>1</sub>** is supported, as can be deduced from the positive sign of the regression

coefficient between satisfaction as a dependent variable and performance as independent variable. Hence, it is confirmed that the first-order co-operative will be more satisfied with the relationship it maintains with the second-order co-operative whenever the latter contributes to the improvement of its results.

2. Hypothesis **H<sub>2</sub>** is only partially supported. The fact that fluency and the indirect nature of the communication of the second-order co-operative does not positively affect the satisfaction of the first-order co-operative does not allow the acceptance of hypothesis **H<sub>2a</sub>**. This may be because, although not of a coercive nature as is the case of direct communication, the emitting party tries to influence the other, and, as maintained by Anderson and Narus (1990; 46), “*a company could perceive low satisfaction if it perceives that it is being influenced by its partner*”. However, the effects of coercive influence –direct communication– are negative, while those of indirect communication are simply not significant. On the other hand, the negative sign of the standardized coefficient corresponding to direct communication endorses hypothesis **H<sub>2b</sub>**. Thus it is shown that the satisfaction of first-order co-operatives with the relationship decreases when the second-order co-operative bases its communications on negative insinuations –direct content– because of the negative attitude generated in the receiving party.
3. The standardized coefficients of regression corresponding to the dimensions of trust provide a high degree of support for hypothesis **H<sub>3</sub>**. All the dimensions of trust are observed to positively influence satisfaction. Thus, it can be confirmed that the first-order co-operative’s trust in the second-order co-operative is a determining factor of its degree of satisfaction, due to the sense of security this trust inspires.
4. As in the case of trust, the standardized coefficients of regression corresponding to the dimensions of perceived fairness also provide a high degree of support for hypothesis **H<sub>4</sub>**. Given that the satisfaction of the first-order co-operative with the relationship is an emotional state, resulting from the overall assessment of the relation, we can confirm the important positive effect on the relationship of the moral assessment of the results and processes of the relationship based on normative principles such as equity.

Finally, it is worth highlighting the high capacity of the group of independent variables that make up the model for explaining the degree of satisfaction of the first order co-operative with the relationship to the extent that it includes 74% of its variance.

## 6.- CONCLUSIONS

From what has been set out in this study, it can be concluded that the satisfaction of the first-order co-operative with the relationship it maintains with the second-order co-operative forms a suitable measurement for the success of that relationship. Furthermore, the results obtained from the empirical study allow the identification of a series of success factors of these relationships to the extent that they increase the degree of satisfaction. Likewise, some factors which have a negative influence have also been detected. Remarkable among the former are the economic results or contribution of the second-order co-operative to the objectives of the first-order co-operatives, the trust inspired in the first-order co-operative by the second-order co-operative and the level of fairness in the relationship as perceived by the former. However, direct or coercive communication on the part of the second-order co-operative has a negative influence on satisfaction.

We consider the findings of this study to be important from an academic as well as a business perspective. In the first case it is important as it fills an existing gap in the literature of studies which examine the success of relationships and their background in the sphere of agricultural co-operativism. From a managerial point of view the results obtained are of great

value to those charged with administering the relationships between first- and second-order co-operatives. This is due to the interest of both parties in maintaining the relationship owing to the benefits it provides and the costs associated with its dissolution.

In this sense, the management of these co-operatives, especially that of second-order co-operatives should take measures designed to increase the satisfaction of the first-order co-operative in order to guarantee the success of the relationship. In order to do this, the second-order co-operative should, apart from obtaining good economic results for the first-order co-operatives, create a suitable atmosphere in the relationship and should avoid certain types of behavior. The atmosphere should be based on the generation of trust for the first-order co-operative and on the fairness of the relationship. With regard to types of behavior, the second-order co-operative should avoid communication of a coercive nature.

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## APPENDIX 1

**TABLE 1**  
**SATISFACTION MEASUREMENT**

Dime.	Authors	Ítems	Mean	C. I/T	$\alpha$	F <sub>1</sub>	KMO
<i>Score the following statements between 1 (total disagreement) and 10 (total agreement)</i>							
<b>Satisfaction</b>	Gaskin and Nevi (1985)	The relationship of your firm with the second-order co-operative can be described as pleasant	7,35	0,80	0,93	0,88	0,84
	Anderson and Narus (1984)	You are very satisfied with your relationship with the second-order co-operative	7,22	0,87		0,93	
	Kumar et al. (1992)	The second-order co-operative is a good company for doing business	7,31	0,76		0,86	
	Kumar et al. (1992)	You are very satisfied with the overall relationship you have with the second-order co-operative	7,33	0,89		0,94	

F<sub>1</sub>= Factor loadings in satisfaction dimension.



**TABLE 2**  
**PERFORMANCE MEASUREMENT**

Dime.	Authors	Ítems	Mean	C. I/T	$\alpha$	F <sub>1</sub>	KMO
Score between 1 (very low) and 10 (very high) the extent to which the relationship with the second-order co-operative contributes to the achievement of your company's objectives in these areas:							
Performance	Arcas et al. (2001)	Increase in sales	6,83	0,74	0,90	0,84	0,86
		Profits	6,83	0,82		0,89	
		Members' satisfaction	6,52	0,81		0,87	
		Image and prestige	6,84	0,75		0,84	
		Lowest productive costs	6,00	0,54		0,64	
		Success in the launch of new products	6,61	0,71		0,79	

F<sub>1</sub>= Factor loadings in performance dimension.

**TABLE 3**  
**COMMUNICATION MEASUREMENT**

Dime.	Authors	Ítems	Mean	C. I/T	$\alpha$	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	KMO
Score the following statements concerning second-order co-operative between 1 (total disagreement) and 10 (total agreement)									
Fluency communication	Heide and John (1992)	The second-order co-operative provides you with information on a frequent basis	7,25	0,60	0,74	0,89			0,73
	Mohr and Sohi (1995)	The second-order co-operative gives you information in a spontaneous manner	6,71	0,60		0,88			
Indirect communic.	Mohr et al. (1996)	They ask that you follow their instructions without explaining the consequences of your acceptance or rejection	5,15	0,52	0,69		0,76		0,73
	Fisher et al. (1997)	They discuss general operation strategies without stating what they would like you to do	5,53	0,52		0,88			
Direct communi.	Mohr et al. (1996) Fisher et al. (1997)	They offer you rewards if you comply with their suggestions	4,28	0,60	0,81			0,68	0,73
		They insinuate negative consequences if you fail to follow their recommendations	5,60	0,64		0,86			
		They use their power so that you do what they want you to do	4,93	0,73		0,88			

F<sub>1</sub>= Factor loadings in fluency communication dimension. F<sub>2</sub>= Factor loadings in indirect communication dimension. F<sub>3</sub>= Factor loadings in direct communication dimension.

**TABLE 4**  
**TRUST MEASUREMENT**

Dime.	Authors	Ítems	Mean	C. I/T	$\alpha$	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	KMO
Score the following statements concerning second-order co-operative between 1 (total disagreement) and 10 (total agreement)									
Reliability	Ganesan (1994)	The second-order co-operative has a thorough knowledge of the market	8,21	0,63	0,83	0,70			0,92
		The second-order co-operative well aware of the production and marketing problems of your firm	7,48	0,68		0,67			
		The second-order co-operative is able to manage any adverse situations which may arise	7,08	0,71		0,70			
		The second-order co-operative has the staff and resources to offer you a good marketing service	7,70	0,61		0,71			
Benevolence	Ganesan (1994) Kumar et al. (1995)	In adverse situations your firm can count on the second-order co-operative for help	7,00	0,68	0,88		0,76		0,92
		When the second-order co-operative makes important decisions they take into account the interests of your firm	6,89	0,76			0,62		
		When you share your problems with the second-order co-operative you know they will be sympathetic	6,93	0,80			0,75		
		The second-order co-operative is willing to help you even with aspects outside the relationship	6,74	0,70			0,75		
Integrity	Ganesan (1994) Kumar et al. (1995)	The second-order co-operative does whatever it can to fulfill its promises and established agreements	7,43	0,68	0,85			0,72	0,92
		When the second-order co-operative gives you advice, it does so with the best of intentions	8,05	0,67			0,72		
		The second-order co-operative is sincere in its relationship with your firm	7,62	0,74				0,78	
		The second-order co-operative is always truthful	7,16	0,67				0,69	

F<sub>1</sub>= Factor loadings in reliability dimension. F<sub>2</sub>= Factor loadings in benevolence dimension. F<sub>3</sub>= Factor loadings in integrity dimension.

**TABLE 5**  
**FAIRNESS MEASUREMENT**

Dime.	Authors	Items	Mean	C. I/T	$\alpha$	F <sub>1</sub>	F <sub>2</sub>	KMO
<i>Score between 1 (very unfair) and 10 (very fair) your company's results as derived from the relationship with the second-order co-operative in comparison with:</i>								
<b>Results fairness</b>	Kumar et al. (1995)	The effort and investment made by your firm	6,67	0,71	0,86	0,83		
		The responsibilities and functions assigned to you by the second-order co-operative	6,48	0,79		0,86		
		The earnings of other firms belonging to the second-order co-operative	6,44	0,69		0,69		
		The earnings of the second-order co-operative	6,56	0,66		0,66		
<i>Score the following statements between 1 (total disagreement) and 10 (total agreement)</i>								
<b>Procedures fairness</b>	Kumar et al. (1995)	The second-order co-operative promotes communication between both parties	7,17	0,67	0,88		0,66	0,90
		The second-order co-operative does not discriminate against you but treats you in the same way as the other associated co-operatives.	7,42	0,71		0,86		
		The second-order co-operative always explains to you the decisions that may affect you	6,97	0,84		0,81		
		The second-order co-operative makes sure it knows about the particular problems of your firm	6,40	0,73		0,68		

F<sub>1</sub>= Factor loadings in results fairness dimension. F<sub>2</sub>= Factor loadings in procedures fairness dimension.