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Determining factors of loyalty in Brazilian agricultural cooperatives

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Working Paper

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Determining Factors of Loyalty in Brazilian Agricultural Cooperatives

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Abstract

An extensive literature review, content analysis of interviews and a survey with cooperative members allowed to identify factors that affect loyalty: culture, price, profit, transparency, relationship and leadership. Among the main findings, the research found that members' perception of "trust" is more supported on a calculative logic of relationship based on exchanges, prices and payment than on shared meanings with long-term perspectives guided by cooperative principles. The extensive bibliographical reference and emerging factors found can help other researchers to develop deeper understandings on loyalty of members to agricultural coops.

Keywords: Loyalty, Incentives for cooperation, Cooperativism, Agricultural Cooperatives

JEL Codes: J54 - Producer Cooperatives • Labor Managed Firms • Employee Ownership

1. Introduction

In cooperatives there is a need for members to be integrated into the cooperative's activities, especially in the agricultural sector, where reducing the distance between the parties involved is essential for the business to expand. This expansion mainly depends on the loyalty of the members, whose behavior needs to be framed within a mutual commitment, with everyone accepting duties and responsibilities. To Fulton (1999), one of the critically important issues facing cooperatives as they undergo this transformation is the commitment of their members. This commitment is mandatory, as it gauges the extent to which a cooperative is capable of differentiating from a trading company.

The problem of loyalty is a reality in cooperatives, as many members only negotiate with the cooperative under more favorable commercial conditions. Normally the relationship is supported by a calculative logic, since they neglect their initial investment and forget their role as owners of the business. This attitude could be viewed as opportunistic, as they pursue the benefits offered by the cooperative and eschew the costs that might be passed on, resulting in a search for the most advantageous offer as defined by Barraud-Didier and Henninger (2009).

In this context, the challenge of cooperatives is to compete with trading companies and still live up to the expectations of its members. As they have several owners, cooperatives operate in a unique environment. According to Giarola (2011), the disloyalty of cooperative members is one of the main problems that these organizations face and may be related to the dual role that the members play. Members are simultaneously workers and owners of the production resources, which leads them to seek to maximize the profits of their own units, even if it is to the detriment of the enterprise as a whole. These problems directly influence the future commitments of the cooperative, as committing to new projects depends on the commitment of members. Zylbersztajn (2002) claims that it is not rare for cooperatives to make investments whose success depends heavily on members keeping the promises they made when the cooperative jointly decided to make the investment.

The objective of this study is to identify the determining factors that influence the loyalty of agricultural cooperative members.

1.1. Loyalty in cooperatives

Social benefits are produced by actions of participants, but if many of them decide to hitch a ride on actions of other participants, there will be no social

benefits (Ostrom, 2009). This is what happens when some members do not deliver their production to their cooperative. The benefits of cooperation are then few or non-existent. In other words, disloyalty affects the whole group. To this author, there are seven main variables that influence cooperation between people in social groups: the number of participants involved; whether benefits are subtractive or fully shared; the heterogeneity of participants; face-to-face communication; information about past actions; how individuals are linked; and whether individuals can enter or exit voluntarily.

Some characteristics are capable of directly affecting cooperative members' commitment in the search for common benefits. The conditions that prevent the group from achieving a collective benefit have several variables, including (Olson, 1999): the non-existence of tools for coercion and monitoring; size of the group, since the larger the group, the more heterogeneous the individual goals will be; initial costs of achieving collective benefits being greater than individual financial returns, generating disproportionality; promotion of personal interests.

Larger groups are more likely to suffer from disloyal members, as they are affected by a wide range of mismatched and diverging positions. The monitoring of individuals is also affected, because a high level of investment is necessary to reduce the distance between cooperative and member. This has an impact on the possibility of applying coercion, generating a chain problem.

In a study on motivation for cooperation, Dülfer and Laurinkari (1994) presented a typology of affliction behaviors proposed by Ilmonen (1981), which are relative to the nature of the relationship and degree of activity maintained by cooperative members at the cooperative, as shown in Table 1.

Table 1 – Typology of affliction behaviors

		Activity	
		Instrumental	Expressive
Relationship	Economic	Pragmatic	Ethical
	Ideal - Political	Political	Passive Sympathetic

Note. Source: Dülfer, E., & Laurinkari, J. (1994). *International handbook of cooperative organizations. Germany: Vandenhoeck & Ruprecht in Göttingen*, 620-622.

A cooperative member whose behavior is pragmatic is rational, calculating and prioritizes gaining economic advantages from the cooperative with every cooperative act. Meanwhile, members with ethical behavior have a high degree

of commitment and loyalty to the cooperative itself, irrespective of gaining short-term advantages from every cooperative act.

Cooperative members whose behavior is political seek to form coalitions, exercising their influence and participating in internal bargaining to gain power within the organization. Finally, cooperative members with passive sympathetic behavior do not actively participate in the decision-making process of the cooperative but support its progress without many conditions.

Chaddad (2007) reported that a tool often used by cooperatives to strengthen members' loyalty is communication. To this end, they count on a specialized structure in their relationship with members. This is a cost center that is directly responsible for communication efforts and member loyalty. Communication efforts strengthen a member's loyalty because it has a voice and can influence the cooperative's decisions. Torgerson et al. (1998) emphasize that communication problems are evident in situations in which cooperation features economic advantages but does not succeed in attracting farmers.

1.2. Incentives and loyalty

Incentives are stimuli offered to members to make cooperation more attractive. Fulton (1999) concluded cooperatives have to offer something valuable to their members that trade companies do not offer, resulting in members being committed.

Ringle (1994) argued that a self-determined individual decides to join an organization or maintain a relationship with it if the number of incentives offered by the organization exceeds or at least matches the contributions that are expected from this individual. Thus, the two most important kinds of incentives characteristic of cooperatives are:

- (i) Incentives related to the economic relationship between cooperatives and their members: guaranteed access to markets for members; chances to enjoy services provided exclusively by the cooperative; meeting the need for economic security; chances to acquire services that are better adapted to members' needs and wishes; financial benefits, such as favorable prices and forms of payments, sponsored reimbursements, interest on social capital; practical advantages (proximity, easy parking, opening hours), customer-oriented services and "humanity" of the cooperative business (friendly staff, relaxed atmosphere) and; readily available information and advice from the cooperative that help them make their own decisions.

- (ii) Incentives related to the cooperative as an organization: concrete incentives to members or voluntary services (payments or compensation for expenses, better access to information, acquired experience); meeting social needs (contact with other people, feeling of belonging to the cooperative group, social contacts, friendships, mutual aid); meeting the needs of the ego (recognition and praise from others, rewards, prestige, opportunities to exercise influence and personal power, respect for oneself and pride due to altruistic dedication); meeting the need of self-fulfillment (welcome changes, use of personal freedom at the cooperative, personal growth, achievement, extension of the potential for creativity).

To Cook, Chaddad and Iliopoulos (2004), cooperatives should provide incentives for the most efficient farmers, otherwise they will only attract the less efficient. In this respect, Serigati (2008) claimed that the element that brings this stability to the cooperative is the members' commitment. To earn that commitment, the cooperative needs to create tools to differentiate its members from non-members, i.e., it is necessary to gain their loyalty. Furthermore, the author notes that policies that lead to greater commitment generate advantages for cooperatives by giving them more stable capitalization, enabling better long-term strategies.

According to the studies of Birchall and Simmons (2004), there are two kinds of approaches: individualist and collectivist. The former defends the idea that people are motivated by individual rewards and punishments, supported by instrumental logic. In the collectivist approach, participation is motivated by three factors: shared goals (people express needs that are translated into shared goals), shared values (people feel bound to participate as an expression of their common values), sense of community (people identify with and care about the others). These people live in the same region or are similar to them in some respect. To the authors, the stronger these variables are, the more likely people will participate.

To Serigati and Azevedo (2013), the survival of the group depends on its ability to generate net benefits for its members, to encourage them to remain in the group and act in its common interest. However, to Bortoleto and Costa (2012), one of the greatest challenges facing a cooperative is to provide incentives for members to commit to it, either delivering all of their production or acquiring the inputs used in the cooperative's production system. Cechin et al. (2013) understand that if someone wishes to strengthen the members' commitment, it is necessary to look at the mechanisms that are used by the cooperative to align members' interests and actions.

Many determiners can result in closer interaction between cooperatives and their members. In the literature there are some influencers and characteristics that are directly related to loyalty, such as those in the Table 2.

Table 2 – Loyalty influencers in agricultural cooperatives

Loyalty influencers	References
The relationship between cooperatives and their members	(Österberg & Nilsson, 2009; Chaddad, 2007)
The member remaining in the cooperative	(Nilsson, Hansson, & Lagerkvist, 2017; Cechin et al., 2013)
The cooperative's area of operations	(Ostrom, 2009; Österberg & Nilsson, 2009)
Size of the member's productive area	(Olson, 1999; Barraud-Didier & Henninger, 2009)
Heterogeneity and immigration culture	(Ostrom, 2009; Barreiros, 2012; Serigati & Azevedo, 2013)
Member's gender	(Österberg & Nilsson, 2009)
Formal contracts	(Zylbersztajn, 2002; Zylbersztajn, 2005; Ferreira, 2016)
Member's age	(Österberg & Nilsson, 2009)
Technical support	(Barraud-Didier & Henninger, 2009; Simioni et al., 2009; Barreiros, 2012; Rossés et al., 2015; Ferreira, 2016)
Distribution of residuals	(Barraud-Didier et al., 2014; Serigati & Azevedo, 2013; Ferreira, 2016)
Storage, prompt payment, exchange contracts	(Rossés et al., 2015; Barreiros, 2012; Ferreira, 2016)
Number of members per technician, easy access of cooperative members to the managers	(Barraud-Didier et al., 2014)
Loyalty bonus	(Barraud-Didier et al., 2014; Rossés et al., 2015)
Trust	(Barraud-Didier & Henninger, 2009; Österberg & Nilsson, 2009; Simioni et al., 2009; Barraud-Didier, Henninger, & Akremi, 2012; Rossés et al., 2015)
Funding for cooperative members, affinity of the member with the cooperative, agility to deliver production	(Mógia et al., 2004; Rossés et al., 2015)
Prices paid for production	(Zylberztajn, 2002; Österberg & Nilsson, 2009; Simioni et al., 2009; Mógia et al., 2004)

Each of these factors and incentives offered by the cooperative can be adapted as influencers of loyalty. They were used as a basis for the interviews with specialists in cooperativism.

1.3. Relationship between loyalty and organizational commitment

The issues of commitment present many options to be analyzed from different perspectives, especially considering the construction of short and long-term relationships in which individuals intent to remain through affective, normative and calculative relations (Meyer & Allen, 1991; 1997). These relations may occur through internalization of organizational values and perception of exchange reciprocity (Bastos, Brandão & Pinho, 1997), or by the moral obligation of remain in the organization. In this study we opted to use the multidimensional model proposed by Meyer & Allen (1991; 1997) which classifies the commitment in 3 dimensions: affective, normative and calculative (or instrumentative).

Although this model can be considered one of the precursors on the subject, its transversality allowed the continuity and building of knowledge including longitudinal approaches with the aim of verifying the sustainability of the long-term commitment (Gao-Urhahn, Biemann & Jaros, 2016), the role of organizations as a positive influence on perceived support in the employee performance and affective commitment (Nazir & Islam, 2017), leadership (Maciel & Reinart, 2009), balance between organizational and individual interests (Ashforth & Mael, 1989), among others.

Regarding cooperatives, one of the possible assumptions is that the organizational links are more driven to affective commitment than based on exchanges (calculative), which are most likely to be related to short-term aspects. In other words, considering universal cooperative principles, loyalty in cooperatives are linked to a standard expected behavior with the aim of maintaining and conquering the loyalty of its employees (Buchanan, 1974), which in this case can be extended to members. Table 3 presents the 3 components of commitment based on the studies by Meyer & Allen (1991, 1997).

Table 3 – Components of organizational commitment

Components	Characteristics of the team member	Feeling	Psychological status
Affective	Feels emotionally connected, identified and involved	Want to continue	Wish
Normative	Has a moral duty to remain in the organization	Have to continue	Obligation
Calculative	Remains in the organization because of the high costs to quit due to the lack of job alternatives or personal issues	Need to continue	Need

Note. Source: Meyer & Allen (1991; 1997).

It is possible to evaluate the relationships among the theoretical assumptions on commitment and loyalty by suggesting the propositions: (1) members with high affective commitment are loyal to their cooperative due to the feeling of belonging; (2) members with high normative commitment are loyal because they feel the moral obligation of honoring the commitment assumed with the cooperative; (3) members with high calculative commitment remain loyal because they are driven by an exchange relationship.

2. Methodology

The research strategy is the case study, as it presents the singularity of the phenomenon of loyalty to agricultural cooperative organizations. Data triangulation was used with quantitative and qualitative techniques, which were analyzed concomitantly. The analysis categories were identified based on the specialized literature and elements obtained from the primary data, using a constructivist approach.

Firstly, a qualitative, analytical and descriptive approach was used, with the premise of the natural environment as a source of data. Furthermore, with in-depth study farther on, the descriptive analysis of the data was integrated as a means of research, as the data from the questionnaire forwarded to the cooperative members required this step.

The study included researching the literature to identify influencers of loyalty. These influencers subsequently formed the basis for questions intended for specialists in cooperatives in Paraná State. Eight specialists with practical experience were chosen. They are all graduates and hold or used to hold important positions in cooperatives or organizations that represent them, such as the Organization of Cooperatives in Paraná State (OCEPAR) and the National Learning Service of Cooperatives (SESCOOP/PR).

After the initial interview stage, the responses of the specialists were analyzed. In this phase, the content analysis was performed with 12 analysis categories, namely: Leadership, Sustainability, Contracts, Cooperative Culture, Transparency, Area of Operation, Immigration Culture, Price, Relationship, Profit, Size of Farm and Remaining. Of these 12 categories, 5 emerged in accordance with the analysis of the specialists' responses. For a better understanding, the emerging categories are presented vertically in Table 4.

Table 4 – Analysis Categories

Questions for the specialists	Identified analysis categories				
In your opinion, which factors are involved in a good relationship between cooperatives and their members?	Relationship	Culture of cooperativism	Leadership	Sustainability	Profit
Which factors encourage members to remain with the cooperative?	Remaining				
How does the size of the farm influence whether the members remain in the cooperative?	Size of Farm				
How can the size of the area of operation of the cooperative affect members' loyalty?	Area of Operations of the Cooperative				
How effective are formal contract with regard to members' loyalty?	Contracts				
How does the price of production influence members' loyalty?	Price				
How does the culture contribute to members' loyalty?	Immigration Culture				Transparency

The following stages were the content analysis of the interviews with the specialists, the preparation of the questionnaire for the cooperative members, distribution of these questionnaires by Cooperative X and, finally, an analysis of the responses of the respondents/cooperative members.

Cooperative X was founded following the immigration of Dutch people, who chose the region of Campos Gerais in Paraná State to begin a new life after World War II. These Dutch immigrants founded the cooperative in the 1950s. In 2018, the cooperative had 877 members, 3,153 employees and revenues of approximately R\$ 2.91 billion, with business units divided into agricultural and industrial operations. The agricultural side of the operation included 468 cooperative members. They deliver grains to the cooperative, such as wheat, beans, corn, soy and barley.

To prepare the questionnaire for the cooperative members, the findings in the literature on motivators of loyalty were combined with the responses of the specialists following the content analysis. This questionnaire contained 21 questions using a Likert scale and an open-ended question, with a total of 22 questions, and was sent to the 468 cooperative's members in the agricultural operational side. The questionnaire was answered by 40 farmers (cooperative's members) representing 8,5% of the members. It is important to highlight that when using a case study as a research strategy, qualitative and quantitative

techniques can be employed without depriving it of the nature of the qualitative analysis, which is the case of the present study. Due to this, the low response rate of the questionnaire does not invalidate the study, although it cannot be used to inferences, which is common in case studies.

3. Findings and results

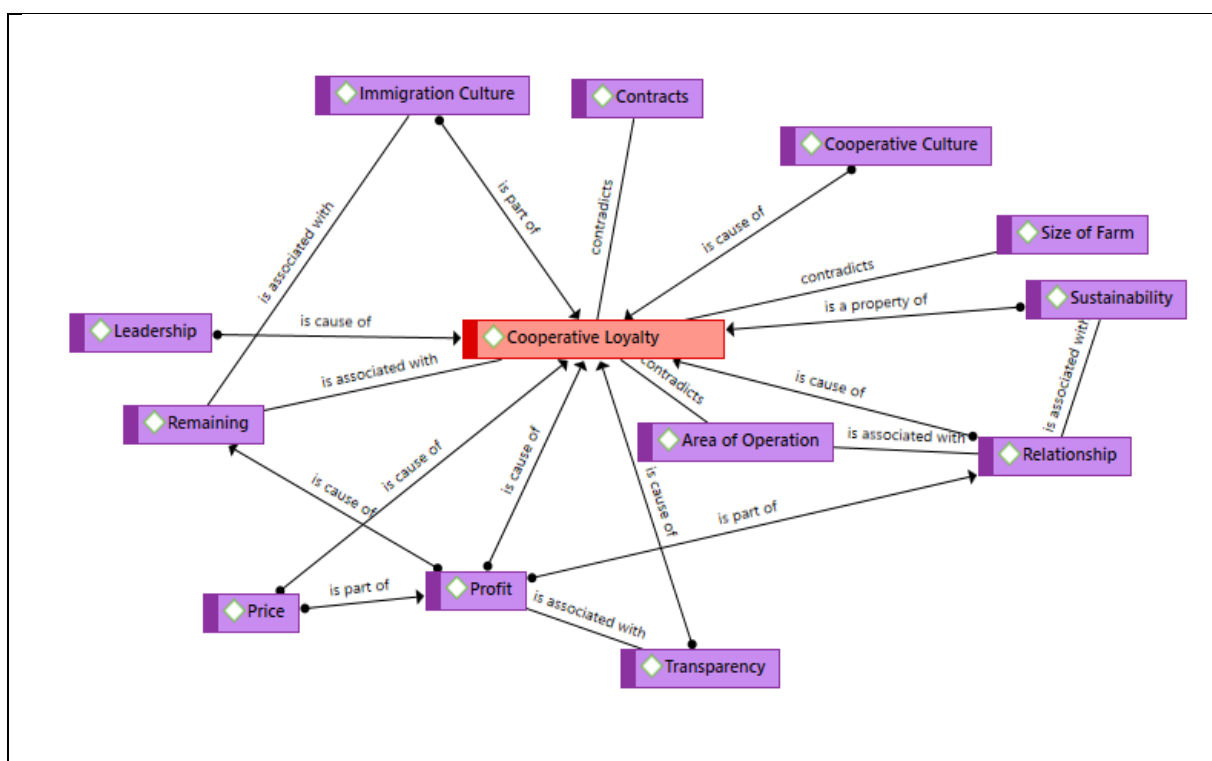
This section presents the findings of the qualitative analysis that defined factors and influencers of loyalty and, the results of the analysis of the relation among control variables and the questions of the questionnaire.

3.1. Factors of loyalty (Qualitative Analysis)

During the interviews, the specialists were presented with some factors considered as influencers of loyalty. As mentioned in the methodology, some categories emerged from the specialized literature (*a priori*) and others during the content analysis (*a posteriori*).

The content analysis enabled the gathering and analysis of influencers of loyalty combined with cooperative loyalty, as all 12 categories can explain loyalty through the relationships between the influencers and loyalty. These relationships are shown in Figure 1.

Figure 1 – Co-occurrences that explain cooperative loyalty



The cooperative culture is a cause of loyalty because learning and experiencing the fundamentals of cooperatives can strengthen the system, motivating participation and, consequently, members' loyalty. The relationship is viewed as a cause of loyalty, as it acts as a stimulus for cooperation, encouraged by subjective factors such as trust, satisfaction and the feeling of ownership, and objective factors, such as price and profit. The relationship is also associated with the sustainability category, as a sustainable system depends on a strengthened relationship. The area of operation is also linked to the relationship because the larger the area of operation of the cooperative, the greater the heterogeneity of the group and distance from the management will be, hindering the relationship between all the parties involved.

The profit category is a cause of loyalty, given that cooperatives are a venture, despite all their unique features. Through this relationship, it could be argued that without a profit, cooperative members would not remain with the cooperative. For this reason, profit is a cause of remaining. According to Figure 1, profit is associated with transparency due to dependency. In other words, to gain a profit for those involved, it is first necessary to have transparency.

The price category is a cause of loyalty. Here, the argument is the same as the one used for profit, as cooperatives are a business and have to generate economic development for members and cooperative alike. The price category is part of the profit, as it influences it.

In the contracts category, there is a contradiction with regard to loyalty, as the specialists understand that it is not a cause of loyalty or that it acts in this respect. To them, a contract is no more than a tool that is used in the market.

There are two possibilities with regard to the size of the cooperative. According to the specialists, it can be a cause of both loyalty and disloyalty. Therefore, this category contradicts cooperative loyalty. The specialists understand that the larger the area, the less need there will be for the members to have a relationship with the cooperative. Consequently, members will be more harassed. In this sense, this could lead to unfaithful behavior. On the other hand, the smaller cooperative member needs the cooperative more, and the individual's loyalty will depend on this need.

The sustainability category is a property of cooperative loyalty because a sustainable system depends on active cooperative members who trade with the cooperative and participate in its management, in other words, act in favor of loyalty.

The transparency category is a cause of loyalty, as it is not possible to remain loyal to something that is not transparent. Trust is part of this context. Therefore, transparency and trust go hand in hand.

The category of remaining is associated with cooperative loyalty, as some factors influence whether members will remain in the cooperative and, together, they all contribute to the loyalty of members. These factors include efficiency, the feeling of ownership and quality, and help to influence loyalty.

The leadership category is a cause of cooperative loyalty, as it creates empathy, trust and harmony, pacifying relationships and encouraging member loyalty. An active cooperative leader can increase cooperative loyalty.

The immigration culture category is part of cooperative loyalty, as it acts as a kind of synonym. In cooperatives with the immigrant factor as a differential, loyalty levels are high.

The area of operations category can contradict loyalty, in other words, act against loyalty. This is because the larger the territorial area of the cooperative, the farther the member will be from it. To the members, distance hinders the relationship and feeling of belonging, and the cooperative merely comes to be viewed as an instrument for trade.

3.2. Importance of the Influencers – Perceptions of Specialists

When the specialists were interviewed, in addition to the open questions, they were presented with a questionnaire for them to evaluate according to their knowledge the degree of importance of each item listed in the literature as an influencer of loyalty using a Likert scale (extremely important, very important, important, of little importance and of no importance).

After this first stage, a value was assigned to each degree of importance (zero for of no importance; one for of little importance; two for important; three for very important and four for extremely important) in order to get averages degrees that explained the specialists' opinion on the cooperative loyalty influencers found in the literature. A summary of this information is shown in Table 5.

Table 5 – Averages of the Loyalty Influencers

Loyalty influencers	Averages
Trust	3.63
Technical Support	3.5
Prompt Payment	3.5
Affinity with the Cooperative	3.38
Prompt Delivery of Production	3.38
Price Paid for Production	3.38
Loyalty Bonus	3.25
Ease of Access to Managers	3
Financing of the Cooperative Member	3
Time as a member	2.88
Storage	2.88
Distribution of Residuals	2.88
Cooperate members per Technician	2.88
Age of the Member	2.5
Exchange Contracts	2.25
Member's Level of Schooling	1.5
Gender of the Cooperative Member	1.13

A comparison of the information gathered during the interviews and the loyalty influencers showed a connection between the information presented by the specialists and the influencers listed in the literature. An example of this connection is trust and its importance, as the specialists on several occasions mentioned that the relationship between a cooperative and its members is built on mutual trust. Another point is efficiency, in other words, there is a need for the cooperative to perform its role efficiently, doing what it intends to do and doing it well. Efficiency could be considered a synonym of technical support, prompt payment and prompt delivery of production. These influencers were considered very important by the specialists and characteristics of an efficient cooperative.

Regarding the factors that influence loyalty, trust is related to several factors, as it is linked to the relationship, price and profit. In other words, the entire structure of the cooperative is based on trust.

3.3. Members' perception of the loyalty influencers

The cooperative members were asked 21 objective questions and 1 open question. The intention was for them to answer according to their relationship with the cooperative. This questionnaire was only given to the cooperative members who worked with grains at Cooperative X. First, the questionnaire asked control questions (what grains the member delivers to the cooperative, gender, time of operation with the cooperative, size of property and European ancestry).

The loyalty influencers shown to the specialists were later shown to the cooperative members. The responses led to the conclusion that technical support was viewed as being of little importance. Storage was identified as being of average importance. The distribution of residuals was classified as important. Ease of access to the managers was deemed, on average, as being of little importance. Financing for the members was considered important. Cooperative members per technician was classified as being of little importance. Prompt payment was considered very important. Affinity with the cooperative was classified as important. Trust was very important. Exchange contracts were important. Prompt delivery of production was important. Loyalty bonus was important. Prices paid for production were, on average, considered important. Knowing other members was graded as being of little importance.

Table 6 shows the indicators represented by the questions, averages and degree of importance of the responses to questions Q7, Q8, Q9, Q10, Q11, Q12, Q20 and Q21, as they have the same scale of response.

Table 6 – Averages of variables' importance that explain loyalty of cooperative members

Variables	Averages	Importance
Q7 – In your opinion, how important is it to attend meetings?	3	Important
Q8 – In your opinion, how important is it to attend courses offered by the cooperative?	3	Important
Q9 – In your opinion, how important is your proximity to the cooperative management?	3	Important
Q10 – In your opinion, how important is the service at the cooperative?	3.6	Very Important

Q11 – In your opinion, how important is it to feel like an owner of the cooperative?	3.3	Important
Q12 – To what extent does the immigration culture influence loyalty to the cooperative?	2.2	Of Little Importance
Q20 – How important is communication with the cooperative in your opinion?	4	Very Important
Q21 – How important do you think is it to be happy as a cooperative member?	4	Very Important

Table 7 shows the accordance averages for the responses to Q13, Q14, Q15, Q16, Q18 and Q19 questions.

Table 7 – Accordance averages of the variables that explain loyalty of cooperative members

Variables	Averages	Accordance
Q13 – Do you agree that the price paid for production influences the loyalty of cooperative members?	2.8	Agree
Q14 - Do you agree that the price offered when purchasing inputs influences members' loyalty?	3.2	Agree
Q15 – Is your cooperative innovative?	2.6	Agree
Q16 – Does your cooperative offer an attractive diversity of business for you as a member?	2.6	Agree
Q18 – Is the cooperative service of good quality?	2.8	Agree
Q19 – Do you trust the administration by the managers?	2.5	Agree

Table 8 shows the main motives (in order of importance) that lead the cooperative members to deliver their production to the cooperative. The responses were given on a scale of 1 to 5 for the listed influencers of loyalty (leadership, price, relationship, residuals and service). For 21 of the 40 respondents, price was the main motive. Service came second place according to 11 cooperative members. Third place was taken by relationship, for 14 members, with residuals in fifth place.

Table 8 – Motives for delivering production

Variables	1 st Place	2 nd Place	3 rd Place	4 th Place	5 th Place
Price	21	8	3	3	5
Service	7	11	11	5	6
Leadership	5	2	13	9	11
Relationship	5	10	7	14	4
Residuals	2	9	6	9	14

3.4. Analysis of independence between the questions and control variables

This test gauged whether there is a relationship between the control variables and questions with degrees of agreement and importance, both taken from the cooperative members' responses to the questionnaire that was made available to them. In other words, the test gauged whether there was a relationship between the characteristics of the members (gender, size of property, European ancestry and time of relationship with the cooperative) and the responses of the variables that were measured in degrees of agreement and importance. For this purpose, a non-parametric chi-square test of independence was performed, and the significance values are shown in Table 9.

Table 9 – Values of significance (p-value) of the test of association between the variables

Variables	Property size	European ancestry	Gender	Time of relationship
Q6.1 – Technical support	0.676	0.371	0.666	0.179
Q6.2 – Storage	0.859	0.274	0.870	0.521
Q6.3 – Distribution of Residuals	0.396	0.389	0.784	0.075
Q6.4 – Ease of Access to Managers	0.933	0.161	0.489	0.621
Q6.5 – Financing of Cooperative Member	0.613	0.808	0.520	0.575
Q6.6 – Cooperative Members per Technician	0.950	0.782	0.346	0.801
Q6.7 – Prompt Payment	0.004	0.509	0.715	0.497
Q6.8 – Affinity with the Cooperative	0.884	0.600	0.916	0.175
Q6.9 – Trust	0.635	0.637	0.760	0.487
Q6.10 – Exchange Contracts	0.428	0.564	0.701	0.726
Q6.11 – Prompt Delivery of Production	0.951	0.688	0.936	0.692
Q6.12 – Loyalty Bonus	0.828	0.770	0.749	0.137
Q6.13 – Prices Paid for Production	0.496	0.741	0.833	0.402
Q6.14 – Knowing Other Cooperative Members	0.631	0.656	0.261	0.844
Q7 – How important is it for you to attend meetings?	0.582	0.764	0.318	0.767

Q8 – How important is it for you to attend courses offered by the cooperative?	0.631	0.703	0.209	0.495
Q9 – How important is your proximity to the cooperative management?	0.716	0.109	0.027*	0.502
Q10 – In your opinion, how important is the service at the cooperative?	0.256	0.315	0.035*	0.075
Q11 – In your opinion, how important is it to feel like an owner of the cooperative?	0.293	0.667	0.364	0.962
Q12 – How much does the immigration culture influence the loyalty of cooperative members?	0.965	0.299	0.520	0.089
Q13 – Do you agree that the price paid for production influences the loyalty of cooperative members?	0.127	0.662	0.525	0.424
Q14 – Do you agree that the price offered when purchasing inputs influences members' loyalty?	0.573	0.792	0.751	0.657
Q15 – Is your cooperative innovative?	0.849	0.020*	0.029*	0.220
Q16 – Does your cooperative offer an attractive diversity of business for you as a member?	0.604	0.648	0.245	0.213
Q18 – Is the cooperative service of good quality?	0.843	0.580	0.875	0.054
Q19 – Do you trust the administration by the managers?	0.496	0.418	0.605	0.847
Q20 – How important do you think communication with the cooperative is?	0.073	0.334	0.344	0.248
Q21 – How important do you think it is to be happy as a cooperative member?	0.672	0.841	0.344	0.863

Note: * significant at 5%.

In the test, only four significant relationships were found, indicating dependency between the variables. Thus, the level of importance that the members attributed to attending courses offered by the cooperative depended on their gender⁵. The control variable of gender was also dependent when the members responded to questions on the level of importance they attributed to proximity to the management.

It was also verified that the control variables of gender and European ancestry had a relationship (depended) regarding the level of agreement that the members attributed to Question 16 (whether the cooperative is innovative). The control variable of gender was dependent in four of the four measurements made in the tested units. This shows that men and women view the cooperative differently, despite the low number of women that completed the questionnaire (only 5 women and 35 men).

3.5. Open-ended question in the Questionnaire for the Cooperative Members

Question 22 of the questionnaire distributed to the cooperative members was an open question, and answering it was optional. Consequently, few members did so (13 members out of 40). The question asked about the factors that

⁵ In the 40 questionnaires, 5 women and 35 men replied.

influenced members to deliver their production to the cooperative. Although the number of responses seems small, for the purposes of qualitative analysis, it is important to identify the redundancy and saturation of the responses, as can be viewed in some excerpts of the members' declarations.

Loyalty, logistics, reliability and security; Cost and promptness; I would like the cooperative to be more transparent in its decisions regarding all its members; Trust; Selling soy in larger lots generates higher prices; Secure payments; Trust and quality processes; Promptness, practicality and operational capacity; The warehouse in Angatuba is in an awful location, it is obsolete, expensive, small and totally off the beaten track, meaning reverse freight and reluctance of new cooperative members; Secure operations of receipt, drying, storage and commercialization, sales in larger lots, secure receipt, legality of transactions. I have always been loyal to the cooperative because I think I feel comfortable when buying my inputs, and it is only right that I should deliver all my production to make our cooperative even stronger. I think it is just wrong to use it and not pay back with the fruits of the harvest; Trust; Trust in the administration of the cooperative and members should be loyal to the cooperative.

Although an analysis of the responses shows that trust dominates the members' discourse, it should be highlighted that the meaning of trust is based much more on a calculative logic than on a relationship sustained by cooperative principles. The second point addressed by the members is security, in terms of payment or operations. Others reported that the factors that stimulate the delivery of production are promptness, practicality, cost and quality of the cooperative. However, some members used the space to offer their opinions or thoughts on some aspects of dissatisfaction with the cooperative. These points of dissatisfaction are not the theme of this study but provide knowledge of how the respondents think.

4. Conclusions

The aim of this study was to identify the determining factors that influence members' loyalty to agricultural cooperatives. It was concluded that trust is one of these determinant factors and it is closer to calculative kind of commitment, corroborating the proposition 3 of this study. This is an important finding since the affective commitment is more expected by cooperatives due to their characteristics being more aligned to cooperative principles, according do proposition 1 of the theoretical framework - which suggests members with high affective commitment are loyal due to their feeling of belonging. Yet, it does not mean that affective and normative commitment are not present. It was possible

to notice that there are connections among identity, ethics, coherence between individual and cooperative values, among others. Thus, the members' perception of trust is more oriented towards an instrumental (calculative) logic based on exchanges, prices and fair payments for sold products to the cooperative. Then, a lasting loyalty based on cooperative principles also depends on fluctuations in supply and demand.

Other relevant factors are the bases that consolidate the pyramidal aspect of the factor. In other words, for the factor to be affected it is necessary for the manager to invest in aspects that aid the materialization of this influencing agent. For a relationship that aids loyalty, for example, it is necessary for the cooperative to have a transparent relationship with its members and make efforts to satisfy them. Cooperatives also have to find ways to improve communication and invest in efficient services, receipt of production, storage structure and perceive that trust is gained over time.

Another point that the study revealed was that the cooperative culture is a cause of members' loyalty, portraying that this type of culture can be acquired, unlike immigration culture. Thus, for cooperatives that need to increase their levels of member loyalty (in terms of the delivery of production), it is necessary to invest in cooperative education to inculcate members with cooperative principles so that they understand the importance of cooperation and mutual help. Although many think that such matters are irrelevant, these issues actually have a positive effect on commitment. This is because when they view the cooperative through the eyes of owners, they cease to see it only as a tool for trading their production and begin to feel a sense of belonging to the institution.

The immigration culture, despite being hailed as a factor of loyalty, is not a cause of cooperative members' loyalty. The quantitative data contributed to this conclusion by showing that the respondents understand that the immigration culture is of little importance to loyalty. Therefore, the immigration culture is part of loyalty, but is not a cause of it.

The role of leadership in cooperatives proved to be important with regard to members' loyalty. A cooperative leader can contribute to members' participation and commitment. The tools of governance and management are shifting to the operational side of the cooperative, forgetting the particular details of the model. Therefore, leaders need to respect the needs of members and maintain a friendly attitude towards them. This is the true nature of cooperatives, maintaining the ideals that spur cooperation.

Finally, price was a factor that caused loyalty. During the interviews with the specialists, it was regarded as the number one factor concerning trade between

cooperative and members. Nevertheless, conditioning factors such as service, communication and being happy as a cooperative member were considered to be of the greatest importance. This explains why the cooperative model remains based on subjective matters. In other words, to strengthen the sector, it is necessary to combine subjective and objective criteria.

Price was also considered the main factor by the members when it comes to delivering their production to the cooperative. Service was in second place. Therefore, service is considered a characteristic of efficiency, doing what is proposed with competence, as service is connected to various areas of the cooperative.

According to the results of this study, the determining factors of loyalty are relationship, cooperative culture, price, profit, transparency and leadership. The influencers of loyalty that were assigned the highest degree of importance were trust, prompt payment and prices paid for production. These influencers are constituents of the factors. It should be highlighted that the cooperative members do not consider technical support, the relationship between cooperatives and technicians, and knowing other members as influencers of loyalty. This perspective shows that the cooperative may not have educated its members regarding the importance of these aspects in the success of the venture, because quality technical support and an adequate number of members per technician can help to increase production and improve the grains and seeds that are produced. Meanwhile, knowing other members boosts the relationship and heightens the feeling of belonging, which aids loyalty.

Finally, trust was identified in the literature, reported by the specialists and viewed by the members as important. Everyone understood that it helps to consolidate cooperatives over time, and that their roots are only solid because they are based on trust. It should be remembered that here “trust” was interpreted within a calculative logic. Thus, all the factors are protected by the corollary of this influencer. Trust keeps the fundamentals and principles of cooperatives alive. Therefore, the factors of loyalty share loyalty as a common pyramidal base.

Given the importance and complexity of the theme, the contribution of this study is that it serves as a starting point and source of reflection for cooperatives with regard to the determining factors of trust in agricultural cooperatives. As a suggestion for further research to advance the construction of knowledge on the theme, new studies are recommended to understand trust from a lasting perspective, supported by cooperative principles, in other words, the need to

resignify these principles rather than depend on trust from a calculative perspective and, consequently, with short-term durability.

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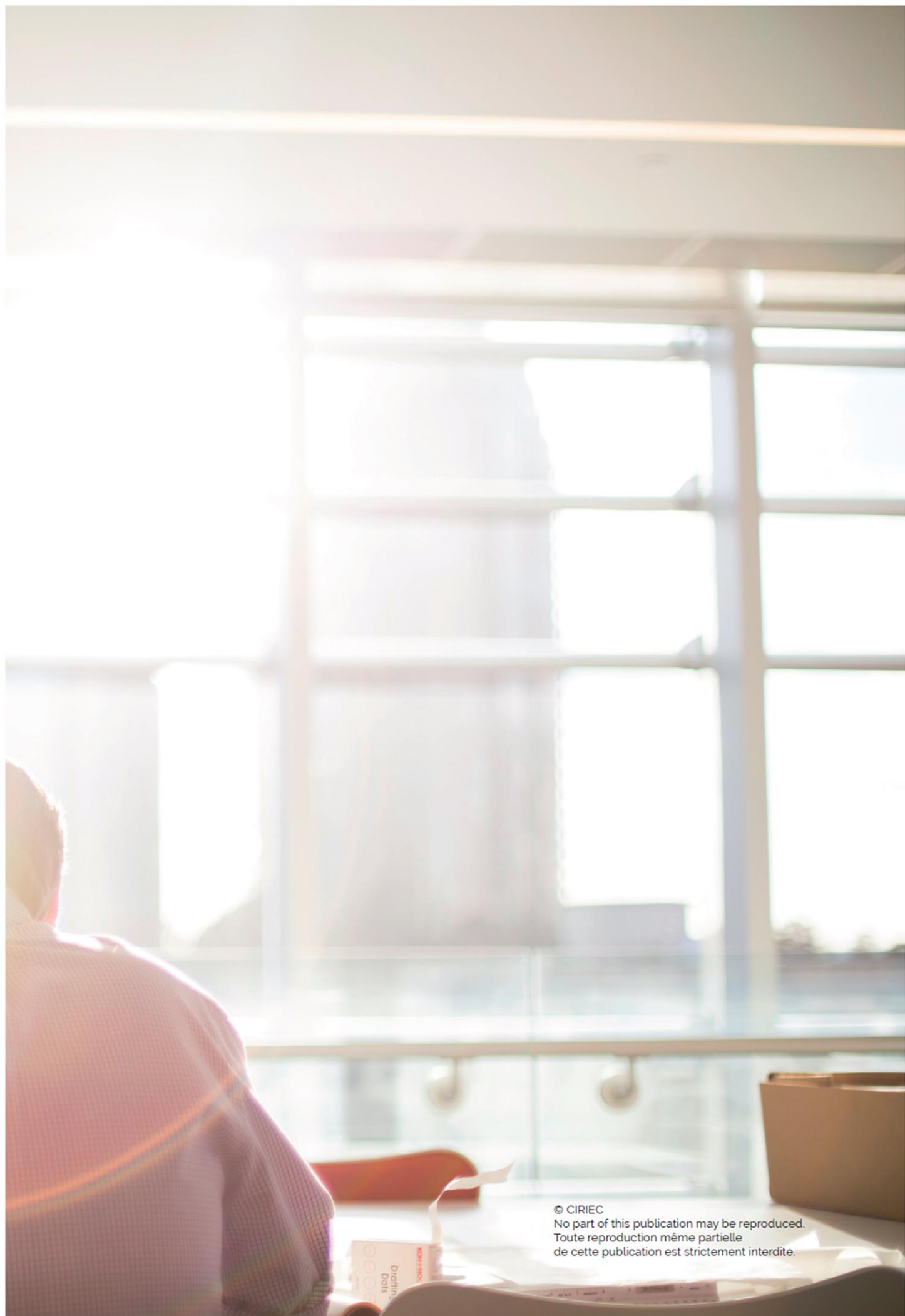
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