

Open-book accounting in the relationship between the cooperative and cooperative members in the coffee sector

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Resumo

Objective: To analyze how Open-Book Accounting (OBA) is practiced, considering its dimensions, in the relationship between a coffee cooperative and its members from the perspective of Transaction Cost Economics.

Method: Case study of the relationship between a cooperative and its members. For data collection, semi-structured interviews, document analysis and direct non-participant observation were used. For the analysis, Content Analysis was used.

Results/Discussion: It was verified that the OBA is applied bilaterally, with a high level of detail of information in the cooperative-cooperative sense and low level, in the opposite direction. The application conditions are based on cooperation and trust, contemplating incentives and the prediction of mutual benefits. It was noticed that the transaction costs of the analyzed relationship are reduced, because, a priori, both the cooperative and the members do not perceive opportunism in the use of shared information. It is concluded that the relationship studied favors the application of OBA, since it is based on cooperation, one of the main pillars for its effective application and generation of potential benefits.

Contributions: The study expands knowledge in the areas of Administration and Accounting by researching the application of OBA in cooperatives. It contributes to practice by making it possible to understand the application of the OBA and its strengths and weaknesses in cooperativism. It generates social contribution, since the proper management of costs, based on the sharing of information, enables superior performance in the cooperatives' businesses and income generation for the families involved.

Keywords: *Open-Book Accounting*; Transaction Cost Economics; Interorganizational Relationships; Cooperatives; Coffee Sector.

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Introduction

Coffee plays an economically significant role, especially in Brazil, which is the world's largest producer (Farrers, 2019). Cooperatives are an essential part of the coffee segment in the country (OCB, 2021a), since agricultural cooperatives, which include coffee trees, represent the largest segment of cooperativism, according to the Yearbook of Brazilian Cooperativism (OCB, 2021b). However, coffee cooperatives face difficulties in adjusting to the fierce competition between organizations (Duarte, 2017).

The economic scenario's outstanding characteristics are uncertainty and high competition, leading companies and cooperatives to develop mechanisms that can preserve their competitiveness. Firms and cooperatives are always looking for determining factors for success and the achievement of strategic objectives. To ensure this competitiveness, it is necessary to continually seek to improve internal processes and improve relationships with the members of its value chain (Aguiar et al., 2008).

Interorganizational relationships are important in today's connected economy (Posthuma et al., 2018), as they improve chain efficiency and inter and intraorganizational coordination (Cooper & Yoshikawa, 1994). This close relationship between companies influences, for example, the adoption of cost management techniques that go beyond the limits of a firm (Cooper & Slagmulder, 2004).

Interorganizational cost management (ICM) is an artifact that enables this relationship with the other members of the chain and, for its implementation, the exchange of information between its members is necessary (Aguiar et al., 2008). This exchange of information is called Open-Book Accounting (OBA).

For Fehr and Duarte (2018, p. 9), OBA is a "process of sharing non-public information, related to costs, processes and/or activities, between parties in a relationship, with the objective of optimizing cost management". Such sharing is necessary so that the parties can identify opportunities for improvement and prioritize them (Kulmala et al., 2002).

Despite its benefits, problems can appear in the relationship between firms and, thus, OBA can have negative impacts, the main one being the opportunistic use of information by those who receive it (Romano & Formentini, 2012). In addition to opportunistic behavior, there are other important aspects to consider in the relationship between companies, such as the limited rationality of the agents and the attributes of the transactions (specificity of the

assets invested in the relationship, uncertainty and frequency).

The possibility of conflicts arising in contractual relationships due to these factors is supported by Transaction Cost Economics (TCE) (Pondé et al., 1997). Thus, this theory was chosen to support the analyses of this study, as it explains the guidelines that make up the environment of interorganizational relationships.

Despite having the potential to increase efficiency in cost management, sharing information can negatively affect the relationship, increasing the opportunism of those who receive the shared information, which increases the risks and the costs of the relationship due to expenses with monitoring (Windolph & Moeller, 2012).

More recent research has sought to investigate: the explanatory variables of OBA and their influence on financial and non-financial performance (Caglio, 2017); how the differences between dynamic and static prices in OBA influence the customer-supplier relationship (Ellström & Larsson, 2017); the role of OBA and trust in the satisfaction of the buyer-supplier relationship (Fehr & Rocha, 2018); buyer-supplier relationships; and ICM and OBA techniques (DhaifAllah et al., 2020).

In research regarding the interorganizational relationship in cooperatives, it is possible to perceive a predominance of intercooperation (partnership between cooperatives), which, according to Bialoskorki Neto (1998), generates efficiency in reducing transaction costs, but an effective performance depends on factors such as trust, project, leadership, control, compensation, communication, commitment, interdependence and transparency (Lago & Silva, 2012).

Thus, the aspects that support and contextualize the problem of this research are: the coffee sector is economically relevant, mainly in Brazil; cooperatives are relevant in coffee growing; interorganizational relationships and the exchange of information within them is critical to gaining competitive advantage; tendency of cooperatives to be more conducive to these interorganizational relationships; and the existence of uncertainties about how the exchange of information takes place within this sector.

Given the scenario presented and considering the relevance of studies on the exchange of information in

interorganizational relationships in the environment of coffee cooperatives, the objective of this research was to analyze how OBA is practiced, considering its dimensions, in the relationship between a cooperative of coffee growers and their members from the TCE perspective. For this, the OBA dimensions proposed by Fehr and Rocha (2018) were considered.

This research differs from the previous ones, as research in the interorganizational context of cooperatives is related to the partnership between cooperatives, that is, intercooperation. In addition, Duarte (2017) identified that the exchange of information took place in the relationship between cooperative member and cooperative; however, he did not investigate how the process happened, as this was not the focus of Duarte's (2017) research.

This research is justified, therefore, because it is not known in what dimensions and depth the process of exchanging information between a cooperative and its members takes place. In this sense, it also differs from the research by Cardoso et al. (2020), because that one, despite identifying how OBA was practiced in an interorganizational relationship, considering its dimensions, was analyzed in the agroindustry. Therefore, the gap that this research intends to investigate is how, considering the dimensions of OBA, the process of exchanging information between cooperative and cooperative members in the coffee sector takes place.

This research contributes by expanding knowledge regarding the literature on OBA and its dimensions, helping in future research on its practice in the cooperative sector. It contributes to practice by providing greater understanding of cost management among members and cooperatives, improving their processes and competitiveness.

It is considered that, with the findings of this research, other organizations and cooperative members involved in interorganizational relationships will be able to increase and improve the level of their relationships, to obtain advantages to better compete in the current business environment together.

Finally, research on cost management practices is essential for their advancement and dissemination in the corporate world.

2. Theoretical Foundation

2.1 *Interorganizational relationships in cooperatives*

An interorganizational relationship takes place from the union of organizations with the objective of solving common problems (Camacho, 2010). This enables entities to be able to combine their activities and relate strategically with the members of the chain, seeking greater efficiency in their products, services, processes and cost management possibilities (Kajüter & Kulmala, 2005).

The interorganizational relationship is based on a cooperation-oriented or transaction-oriented dyad link, and the relationships can be transactional or collaborative. Transactional relationships present limited communication, low level of interdependence and of commitment, as well as focus on own benefits (Nyaga et al., 2010).

In collaborative relationships, entities are able to obtain valuable benefits, such as efficiency, flexibility and sustainable competitive advantage (Nyaga et al., 2010). In this research, the focus is on collaborative relationships, with a more lasting character, between cooperative and cooperative members.

According to Zylbersztajn (2002, p.1), "cooperatives are institutional arrangements widely disseminated by different sectors of the economy, whose common characteristic is to share the fundamental principles of cooperativism". Zylbersztajn (1994) presents agricultural cooperatives as forms of vertical integration of producers towards commercialization, industrialization and production of inputs. As a result, tensions may arise in relation to the form of remuneration of the cooperative member, since their income is mainly based on the payment received for the delivery of their product to the cooperative.

The coffee cooperatives keep in their stocks the coffee of the member that can be sold to it or withdrawn by him. When analyzing the relationship between coffee cooperative and cooperative member, Duarte (2017) found that, when the cooperative offers inputs to producers, the relationship becomes broader and maintains a dependence of the cooperative members on the cooperative through sales, via the future coffee market, and for the credit offered in exchange for the supply of inputs for bags of coffee. It was observed that cooperatives offer more cooperation, benefits, incentives and means to train producers than other organizational configurations.

Duarte (2017) identified that producers and cooperatives unconsciously practiced ICM by establishing changes in interorganizational processes to minimize the costs

of both and that there was an exchange of information through OBA.

2.2 *Open-Book Accounting and its dimensions*

Kulmala et al. (2002) state that, in the competitive economic world, costs need to be managed intelligently, as they are essential for management at a strategic and operational level. If it cannot compete with its competitors in terms of cost optimization, the firm may experience a drop in its performance and see its existence threatened. Fehr and Rocha (2018) attest to the need for cost management beyond the company's boundaries.

ICM fits into this context because, as pointed out by Fayard et al. (2012), it is a Strategic Cost Management mechanism that aims to identify ways to optimize costs and increase profits through teamwork. Duarte (2017) defines ICM as an artifact that seeks better management of processes and cost determinants through a cooperative relationship between entities, aiming to increase profit, leftovers or surpluses of the parties involved.

The objective of ICM is to seek to increase the return on the value chain through joint actions, which would not be possible if companies tried independently (Souza, 2008).

The OBA is one of the instruments that enables the application of ICM as it is a managerial artifact that brings companies together and facilitates the exchange of information between organizations in a chain (Kajüter & Kulmala, 2005).

Fehr and Rocha (2018) define OBA as a process of sharing information, at first, confidential, related to costs, processes

and/or activities, between parties in a relationship with the objective of optimizing cost management.

Its objective is to make viable the collaboration between the purchasing company and the supplier (in the case of this study, cooperative and cooperative) so that they can come together in order to eliminate waste and obtain value for both (Agndal & Nilsson, 2008), in addition to improving the relationship between entities in a supply chain (Romano & Formentini, 2012).

Fehr and Rocha (2018) developed a proposal for structuring and systematizing the different dimensions of the OBA, highlighting the types of information that are shared in the use of this artifact, presented in Table 1 with adaptations by these authors. As these dimensions are fundamental for the development of the present study, a reduced nomenclature was established by these authors.

This research advances in relation to the proposal by Fehr and Rocha (2018) by separating the information in each dimension into groups and by proposing for the "level of detail" dimension, based on the literature, the separation of information into levels: high (Axelsson et al., 2002; Fehr & Rocha, 2018; Kumra et al., 2012; Windolph & Moeller, 2012); medium (Fehr & Rocha, 2018; Romano & Formentini, 2012) and low (Fehr & Rocha, 2018; Kumra et al., 2012; Romano & Formentini, 2012).

In this research, as well as in Fehr and Rocha (2018), it is considered that the dimension "detail level" is related to the type and nature of the information shared and its aggregation or not.

These dimensions form the construct that will serve as the basis for the analysis carried out in the practical part of the research.

Table 1: OBA dimensions

| OBA dimensions regarding | Short nomenclatures | Descriptions |
|--|---------------------|--|
| Nature of information | Nature | Physical-operational: in quantity, percentages, rates, productivity, resource consumption, time per unit, lead time, driving and delivery times, defective parts, among others. |
| | | Monetary: costs of material, labor, development, research, quality, production overheads, among others. |
| Information type | Type | Sales and prices: forecast sales and prices charged. |
| | | Costs: material, raw material, labor, production and administrative overhead, packaging, components, transport; for quality control; scrap and by-products; of waste; logistics; cost structures (examples: product components and operations involved); target cost and standard cost of the product. |
| | | Profitability and profitability: profit margins; profitability of the product or product families. |
| | | Production and products: capacity saturation, set-ups, cycle times, movement times; productivity and production efficiency; plans for investments and product development; quality of materials, products and components; defects in materials, products and components; R&D skills. |
| Sharing frequency | Frequency | Annual, semi-annual, quarterly, monthly, weekly or daily; Instantly (online transfer); Undetermined. |
| Detail level | Detail level | High: All types of cost information, available through an integrated accounting system. Information on costs of materials, labor, indirect costs, freight, packaging, losses, taxes, profit margins, made available by process, by product, by product component, by product unit and/or by resource consumption. |
| | | Medium: Information on costs of materials, raw materials, labor, indirect costs, profit margins, available only by product (and not by process or resource consumption). |
| | | Low: Information on product cost structures (raw materials, labor, inventory); grouped only on direct and/or indirect costs; consolidated on direct materials, direct labor and indirect costs (grouped in relation to the different models of the product or component). |
| Sharing direction | Direction | Unilateral from supplier to buyer: only the supplier shares information with the buyer. |
| | | Unilateral from buyer to supplier: only the buyer shares information with the supplier. |
| | | Bilateral: both the supplier and the buyer share their information. |
| | | Multilateral: both the buyer and the suppliers (tier 1, tier 2, etc.) disclose their cost information. |
| Purposes of use - buyer's perspective | Buyer's purpose | Relationship management: controlling joint activities; improve operational policies regarding the buyer-supplier relationship (for example: delivery fee); demonstrate mutual commitments; communicate objectives and targets to the supplier; ensure trust between the parties; know the supplier's production process; qualify suppliers; evaluate post-purchase. |
| | | Supplier selection and evaluation: evaluate suppliers; select suppliers; identify production costs; identify profit margins; pressure the supplier to reduce prices; negotiate and renegotiate with suppliers. |
| | | Cost management and efficiency increase: apply cost management techniques: simultaneous cost management, interorganizational cost investigation, Kaizen system or value analysis; increase efficiency in the chain; secure margins; develop joint projects to overcome inefficiencies; identify cost optimization opportunities; eliminate waste in the supply chain; enable the optimization of goods and services and administrative processes; coordinate the supply chain. |
| | | Supplier support: assist the supplier in the decision-making process, in identifying lack of competence and in identifying inefficiencies; facilitate the development of goods and services; identify hidden costs. |
| Purposes of use - supplier's perspective | Supplier's purpose | Relationship management: demonstrate mutual commitments; ensure trust between the parties; eliminate waste in the supply chain; develop joint projects to overcome inefficiencies. |
| | | Buyer selection and evaluation: identify lack of competence; identify inefficiencies; know the buyer's production process; enter the buyer's field of activity; press for margin increase. |
| | | Cost management and efficiency increase: apply cost management techniques: simultaneous cost management, interorganizational cost investigation, Kaizen system or value analysis; identify cost optimization opportunities; facilitate the development of goods and services; enable the optimization of goods and services and administrative processes; facilitate continuous improvement. |
| | | Buyer support: help the buyer to identify inefficiencies; assist the buyer in identifying opportunities to optimize costs. |
| Processes covered | Processes | Project of the good or service; pre-production; ongoing production; commercialization; logistics; administrative. |
| Communication way | Communication way | Oral; printed; via systems; others. |
| Cost determinants covered | Cost determinants | Management model; scale; capacity utilization; scope; experience; technology; diversity (products and services, suppliers, customers, machinery and equipment); commitment; quality (of the product or service, total quality management); physical arrangement; product or service design; relationships in the value chain; capital structure; timeliness; location; institutional factors. |
| Conditions under which sharing takes place | Conditions | Conflicting and lacking trust; based on cooperation and trust; coercive through the use of power asymmetries; based on balance of power between the parties. |
| Incentives for sharing | Incentives | Financial: establishment of mutual benefits ("win-win"); compensation system; increase in the mutual turnover of firms; guarantee of a certain profit margin by the buyer. |
| | | Non-financial: demonstration that the shared information will not be abused; technical support offered by the entity receiving the information with a consequent increase in efficiency and/or productivity; marketing support offered by the organization receiving the information with consequent increase in sales; benefit of being chosen as a supplier; support in price negotiations with other firms; joint problem solving; future contract guarantee; establishment of longer contracts; contractual protection of supplier and buyer interests; referral to other customers. |

Source: Adapted from Fehr and Rocha (2018).

For the OBA and the ICM to be developed, mutual trust between the members is necessary through joint and continuous work, allowing the exchange of information. The success of these processes depends on non-opportunistic behavior by the leading company, which may destroy any possibility of joint action (Aguiar et al., 2008).

Although the literature shows several benefits that can be the result of sharing information, it also shows that this greater transparency of information can generate a risk for the supplier in relation to the opportunistic behavior of the buyer (Fehr & Duarte, 2018). This opportunistic behavior is explained by TCE.

2.3 Transaction cost economics

TCE studies the origins, incidences and ramifications of transaction costs, that is, the costs of collecting information, negotiating contracts, and how agents protect themselves if the contract is breached (Williamson, 1979).

Gonzaga et al. (2015, p.13) indicated the existence of a "relationship between the disciplining mechanisms of the ICM and the governance mechanisms addressed in the TCE". According to the authors, this indicates that ICM is influenced by TCE when it comes to mechanisms to safeguard partnership relationships in the value chain. Thus, the use of this theory in the present study is justified by this relationship and by the influence of TCE on ICM, since OBA is a capacitor mechanism of ICM.

TCE does not consider the possibility of information symmetry in contractual relationships and, therefore, structures factors that will determine the presence of transaction costs: bounded rationality, opportunism, frequency, uncertainty and asset specificities (Nuintin et al., 2012), the first two being called behavioral assumptions and the others transaction attributes (Williamson, 1979 and 1996).

In bounded rationality, it is considered that the economic agent seeks optimization and rational behavior, but that

he fails, because his cognitive capacity to receive, store, retrieve and process information is limited, which means that he is not fully rational in his decisions (Williamson, 1995). Opportunism is a concept resulting from the action of individuals in pursuit of their self-interest, manifested avidly and in a non-cooperative manner (Williamson, 1996).

Frequency is linked to the recurrence of a transaction (Rocha Junior et al., 2008). Uncertainty deals with the confidence of individuals in relation to unexpected effects, which must be provided for in the contract. In addition, uncertainty can cause the breach of contract and, consequently, an increase in transaction costs: the greater the uncertainty, the greater the cost (Nuintin et al., 2012). Asset specificity refers to the degree to which an asset can be redistributed to alternative uses without sacrificing productive value (Williamson, 1996).

TCE's main object of analysis is the transactions between economic agents in a given environment, both external and internal. It seeks to explain and try to predict the dynamics of these transactions, considering that agents seek to minimize transaction costs in search of greater economic efficiency (Zylbersztajn, 1995). It has contracts as governance mechanisms designed to reduce transaction costs and are related to its preparation, relationship management and losses arising from opportunistic behavior and lack of adaptation by agents (Schepker et al., 2014).

The use of this theory in this study is justified since its main objective is the analysis of transactions between economic agents (here cooperative and cooperative members), that is, to analyze the dimensions of OBA practice in the relationship between these parties.

2.4 Previous research

Table 2 summarizes some studies in different contexts and countries, presenting the objectives, methodology and main results, having chosen those that came closest to the subject discussed here.

Table 2: Previous studies on OBA

| Authors/Years | Objectives | Methods | Findings |
|-----------------------------|---|--|---|
| Kajüter and Kulmala (2005) | Investigate the reasons why OBA succeeds in some cases and often fails in others. | Case study in a German automobile manufacturing chain and multiple case study of three Finnish manufacturing chains. | The practice of OBA in chains depends on a series of environmental factors and specific contexts of the company. Four chain-specific factors seem to be relevant: the type of chain and of product, the chain infrastructure, and the social nature of chain relationships. |
| Möller et al. (2011) | Examine the main factors that influence the implementation of OBA and ICM. | Structural equation modeling based on research data from 147 automotive suppliers. | They identified the relevance of relational factors for the implementation of OBA and ICM. They found that supplier commitment facilitates the disclosure of confidential cost information and that buyer commitment does not affect OBA, but has a significant positive effect on supplier trust. |
| Windolph and Moeller (2012) | Explain the relationship between OBA, ICM, and supplier relationship satisfaction and assess whether the effect of OBA on satisfaction depends on the relational context. | Questionnaire carried out with 733 automotive suppliers in Germany. | OBA can negatively affect supplier relationship satisfaction and therefore poses a potential risk to cooperation. However, ICM is positively related to satisfaction with the supplier relationship. |
| Alenius et al. (2015) | Investigate the role of OBA in creating and managing interdependencies in supplier relationships. | Case study in the retail sector in Sweden. | The company uses OBA to create and manage interorganizational relationships in different situations. OBA not only influences direct relationships, but also indirect ones in the constant combination of resources to identify and solve problems, define technical and organizational interfaces and also the boundaries of the chain. |
| Fehr and Rocha (2018) | Identify how OBA and trust influence supplier-buyer relationship satisfaction in the automotive supply chain. | Multiple case study, with a vehicle assembler and three of its direct suppliers. | The OBA is unilateral, forced by the factory and used mainly for price adjustments. OBA can both build and destroy trust in the relationship. Vendors see little benefit in applying OBA. The maker's satisfaction with the OBA is related to economic satisfaction. |
| DhaifAllah et al. (2020) | To investigate the effect of product complexity and communication quality on ICM and OBA on buyer-supplier relationships in Malaysian manufacturing companies. | Questionnaire applied to Malaysian supplier accounting managers. | Both product complexity and communication quality have a positive effect on ICM and OBA in buyer-supplier relationships. However, the results suggest that ICM does not influence OBA practice. |
| Cardoso et al. (2020) | Identify how OBA is practiced in the relationship between an agroindustry and one of its suppliers. | Single case study, with a dyad approach, with an agroindustrial company and one of its suppliers. | The consensual sharing of information and the forecast of mutual benefits increases the willingness to use OBA. OBA is not used for its primary purpose of cost management in the supply chain. |

Source: Made by the authors

In the studies presented in Table 2, some aspects of the OBA context were analyzed: its implementation; the factors that influence it and the obstacles; agents' satisfaction with its use; and its relationship with the ICM. In addition to these, other studies that are closer to what is researched in the present investigation are presented and detailed below.

Duarte (2017) verified that there was OBA practice in the cooperatives and other companies studied, but as this was not the focus of the research, he observed it only superficially. He identified that producers unilaterally shared information on crop forecast, production, quality, information necessary for the certification process, among others. However, he did not investigate all dimensions of OBA.

Fehr and Rocha (2018) analyzed how OBA was practiced based on its dimensions, as well as in the present study, but the study was carried out in the automotive sector. They analyzed how OBA and trust influence relationship satisfaction.

Cardoso et al. (2020) also analyzed how OBA is practiced in the relationship, but in an agroindustry, without addressing the cooperative-member relationship.

Thus, this research evolves by analyzing how OBA is

practiced, considering its dimensions, in the cooperative sector. According to Presno (2001), cooperatives have particular characteristics, since they are private organizations of collective management, in which the users themselves are the owners and responsible for the management, giving this organization unique characteristics, both in terms of its functioning as of its internal regulation. Therefore, this study may bring different results.

3. Methodological Procedures

This case study aimed to investigate the relationship between a cooperative and its members. In order to maintain confidentiality, the cooperative was codenamed Cooperative X and the interviewees received the following: EX1, EX2, and EX3, for employees of the cooperative; and EY1, EY2, EY3 and EY4, for members.

Data collection used three sources: semi-structured interview, document analysis and non-participant direct observation. The interview script presents different questions addressed to cooperative employees and cooperative members and was adapted from Fehr and Rocha (2018) and Duarte (2017), which underwent pre-tests carried out with a cooperative rural producer and a manager of an agribusiness cooperative to verify its

applicability and the need for adjustments.

After analyzing the pre-tests, there was a change in the order of the questions and some questions were included in the rural producer's script so that it was possible to better understand the characteristics of his business and capture some more information about the farm. Some questions were removed from the cooperative and member script because they were not related to the purpose of the study. All interviews were carried out in December 2021, with three employees of the cooperative and four cooperative members being interviewed. In some cases, the interviews needed complements, which occurred through the WhatsApp application audio feature.

The cooperative's interviewees were an administrative supervisor (EX1), (responsible for the analyzed business unit), an employee of the technical team (EX2) (agricultural technician) and a trader (EX3), the last two being those who have more direct contact with the members.

With the due authorization of the interviewees, all interviews were recorded, transcribed and sent to them for validation or recommendation of changes in content. They lasted from 26 to 42 minutes.

The analyzed documents were, in part, made available by the cooperative members and, others, available on the cooperative's website, with Cooperative X not having made any documents available. The following were analyzed: contracts (for the future sale of coffee and for the purchase of inputs and agricultural machinery in the cooperative), agronomic recipes (document with the prescription for the use of agricultural defensives), information available on the cooperative's websites and its statute.

The observation was carried out in two stages. The first was a visit to the cooperative that took place in December 2021, accompanied by the administrative supervisor with whom an interview was also conducted. It was possible to get to know their warehouses and understand their internal processes as well as with the cooperative members. The second observation consisted of attending the Ordinary General Assembly (OGA), to understand the relationship between cooperative and cooperative members, in addition to knowing how the results of the cooperative are informed to the cooperative members and their participation in the entity's decisions.

The OGA took place in March 2022 at the cooperative's headquarters, with all members invited to participate. In the other stages of data collection, only one of the cores

(business units) of the cooperative was considered, but, in the OGA, all the cores were observed, which allowed an in-depth investigation of the core and also the understanding of the whole of the cooperative. Researchers were not allowed to be present at the assembly, and it was possible to follow remotely from a live broadcast on YouTube. The information collected on both observation days was recorded from notes taken at the time of observation. Subsequently, all notes were organized and typed.

This research was approved by Research Ethics Committee of the Federal University of Uberlândia under number 50925521.3.0000.5152.

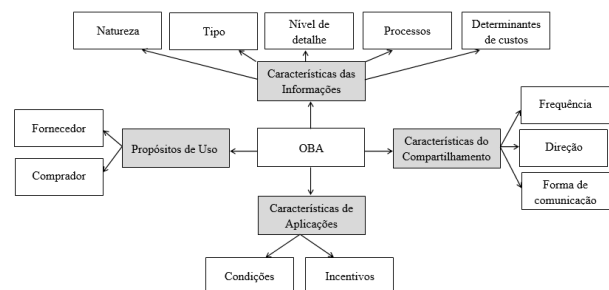
To analyze the interview data, documents and observation, Content Analysis (CA) was used, specifically analysis by category (Bardin, 2016). The categories of this study are the twelve OBA dimensions presented in the Theoretical Foundation (Table 1) and the analyzed constructs were: the OBA dimensions, the interorganizational relationship and the TCE. To help with data processing, the IRAMUTEQ software was used.

4. Presentation, analysis and discussion of the results

4.1 OBA Figure

To systematize the dimensions of the OBA into categories and facilitate its understanding, given that this set of dimensions is the main construct of the research, an OBA figure with its dimensions was developed.

Figure 1: OBA and its Dimensions.



In Figure 1, the dimensions were divided into four categories, according to the authors' understanding of the content of each of the dimensions.

4.2 Description of the cooperative and members

Cooperative X is a cooperative of coffee growers located

in Minas Gerais, having started its activities in 1937, which has 16,000 members, most of whom are small producers who make a living from family farming, located in Minas Gerais (South of Minas, Cerrado Mineiro, Matas de Minas) and São Paulo (Rio Pardo Valley). It has more than 37 business units (headquarters, centers, branches, advanced units, service stations, export office, warehouses and industrial complex).

The analyzed nucleus has been active for more than 20 years and has 580 members, of which 500 sell coffee with Cooperative X. The others are coffee producers who trade with the market, or are milk producers who, in rare exceptions, are accepted as cooperative members, since cattle feed is also sold.

In addition to marketing coffee (storage and purchase), Cooperative X sells inputs to members, finances the purchase of agricultural machinery, provides specialized technical assistance and assesses the quality of the members' coffee.

Table 3 presents the characteristics of the cooperative members interviewed.

Table 3: Characteristics of members.

| Members | Planted areas (hectares) | Annual production (coffee bags) | Other activities carried out on the farm | % of coffee production sold with Cooperative X |
|---------|--------------------------|---------------------------------|--|--|
| EY1 | 105 | 2,000 | None | 100%* |
| EY2 | 42 | 1,500 | Livestock | 100% |
| EY3 | 10 | 250 | None | 80% |
| EY4 | 35 | 1,000 | Livestock | 100%* |

* With the exception of choice coffee (inferior coffee, with residues and impurities), which is sold directly to the market.

Source: Made by the authors

All respondents are rural producers on farms located in the same municipality where the researched core of Cooperative X is installed.

4.3 Case analysis

The cooperative members send the harvested coffee to be stored at Cooperative X and, when desired, they can sell it to it or pick it up to sell it in the market. For the coffee to be stored, a fee is charged per bag, referring to costs and insurance, which, according to the interviewees, is the same for all cooperative members, who can store all the coffee harvested.

Even after the coffee is stored, the cooperative member can withdraw it for sale in the market, being charged an extra fee for its withdrawal, which can be a way of putting pressure on the cooperative member to sell to it and not to the market, being able to configure opportunism of the Cooperative, according to the TCE.

The decision on when to sell is up to the cooperative member and is independent of the volume he wants to sell. There is no negotiation of the sale price between the parties, since, as it is a commodity product, the amount paid by Cooperative X follows the quotation of the day on the New York Stock Exchange. In this case, the bag with an increase in coffee quality is used as a parameter; the cooperative member will receive the payment in seven days.

We identified, in the analysis of the contracts, that the product can also be sold to Cooperative X to be delivered later, via the coffee futures market. The price is locked in on the day of sale and delivered at harvest. This contract takes place on any day the producer wishes and also at the price of the New York Stock Exchange.

Despite the coffee future contract being signed at the wish of the cooperative members, there is uncertainty in this transaction, as TCE points out, due to market fluctuations. The cooperative members interviewed reported, for example, that in 2021 the price of coffee had increased significantly in the period and, therefore, whoever entered into a future sale contract earlier for coffee to be delivered that year was losing money. This uncertainty happens due to the bounded rationality of agents.

The presence of rationality is verified because the economic agent (cooperative member) seeks optimization and rational behavior; however, he is conditioned to a limited set of information to make his decision.

The relationship between Cooperative X and its members is also governed by other contracts. For example, to become a cooperative member, the producer needs to sign the Code of Ethics and the Code of Integrity of Cooperative X, in addition to paying its capital quota.

For TCE, contracts are governance mechanisms designed to reduce transaction costs related to contract elaboration, relationship management and losses (arising from opportunistic behavior and lack of adaptation by agents) (Schepker et al., 2014).

The most common contracts in this relationship, according to document analysis, refer to the future sale of coffee and

the purchase of inputs and machinery at Cooperative X.

The establishment of safeguards is pointed out by TCE as a way to mitigate risks of opportunistic behavior (Williamson, 1996). It was observed that the analyzed contracts have some guarantees that safeguard, mainly, Cooperative X, such as the obligation to deliver the coffee to be harvested by the cooperative member in case of non-payment of the debt, as well as the requirement for the signature of a guarantor. Even if they have guarantees that favor Cooperative X more, the members are satisfied and consider them fair, since everything is agreed beforehand by the parties.

And, within the contract, what we agreed at the time of purchase here is everything the same in the contract, payment method, interest, everything (EY1).

Everything you do there you are not obliged to do anything, you are free (EY4).

The relationship with cooperative members proved to be important for Cooperative X, as its activity is the sale of coffee, which can only be achieved through them. This portrays the Cooperative's dependence on its members.

The cooperative member is the one who maintains the cooperative. So, without his coffee, we don't have any activity (EX1).

The company is dedicated to the cooperative. It needs members to survive in the market [...] The cooperative does not buy coffee from anyone, it from its members. So, if a member disconnects from it or stops selling to her and sells on the market, it will carry out fewer operations, sell less and, thus, have a lower performance (EX3, December 2021).

On the other hand, the member does not depend on Cooperative X to sell its coffee. However, they find in the relationship several other benefits, which make them dependent on the Cooperative in these aspects, such as: safe place for storage; sale at any time or withdrawal for sale on the market; coffee classification; purchase of inputs and agricultural machinery with easy payment conditions, with the possibility of paying later with coffee (which may cause uncertainty due to market fluctuations).

For all interviewed producers, Cooperative X is the main, almost exclusive source of inputs. Duarte (2017) states that when the cooperative supplies inputs to the cooperative

members, the relationship becomes broader, maintaining a dependence of the cooperative members in relation to the cooperative, either through sale, via the coffee futures market, or through the credit offered in the exchange of inputs per sack of coffee.

The cooperative members have technical assistance provided by agricultural technicians or agronomists, who monitor coffee production and indicate what needs to be improved to increase the crop's performance, as well as determine the credit limit they will have for their purchases in the Cooperative X.

Technical assistance is offered to those who trade with the Cooperative, buying inputs from it and selling coffee. Thus, according to the TCE, it may be that the Cooperative has an opportunistic behavior, because it forces the members to trade with it. However, members may not perceive this situation as opportunistic due to their limited rationality and/or the benefits generated (win-win) in the relationship.

It can be noted, therefore, that the parts are dependent on each other. Duarte (2017, p. 186) states that "bilateral interdependence may occur, in order to extinguish opportunism and the benefits to be more advantageous to both partners". Thus, this dependence on the cooperative for the coffee of the cooperative member and the dependence on the members, mainly for warehouses and technical support, can minimize the risk of opportunism and increase the perception of benefits.

It is possible to perceive, therefore, that the relationship constitutes a collaborative action, as it presents characteristics such as those pointed out by Nyaga et al. (2010): it is a long-term relationship in which participants generally cooperate, share information and work together to plan and modify their business practices to improve joint performance.

The producer is [sic] there in the field, taking care of his crop, and suddenly the price of coffee is there for him. So, there is an easier, closer relationship and also with the agronomist going to the farm, giving all assistance to the producer. Cooperative X also has its products, that everything the producer needs in the field today the company has to supply him (EX3).

4.3.1 Analysis of OBA dimensions

The results showed that the sharing of information in the analyzed case is bilateral (Direction), as it occurs both in the

direction of the Cooperative for the cooperative members, and in the opposite direction. The cooperative member is constantly sharing information about his crop, because, for technical support, the team needs to know the crop and have access to information about the production processes.

As technicians and as agronomists, we visit the cooperative members' properties, see what needs to be done in the field, soil analysis, fertilization, foliar application, application to control pests and diseases (EX2).

At the Cooperative, the observation of the OGA pointed out that the annual report is presented, initially, only to the cooperative members for analysis and approval, later becoming available on the Cooperative website for consultation by the general public.

In addition to the information contained in the annual report, members have the right to obtain information about costs, processes and activities of the Cooperative (Nature), but the interviews showed that they have no interest, which may indicate that they do not perceive opportunism on the part of the Cooperative, demonstrating confidence.

Cooperative X belongs to the cooperative members, so everything that goes on here is their right to know (EX1). [The information] is open for us to research, you can go there and inform, but I myself was never interested in knowing these things (EY4).

As for the types of information shared (Type), when the producer becomes a cooperative member, the Cooperative obtains information about the size of the property and the planted area. Throughout the relationship, the cooperative member shares information on input costs, productivity, coffee quality, crop forecast, inputs used in crops, among others.

When the member joins, he enters with a capital quota, this value is calculated according to the size of his property and the coffee area he has (EX1).

[He shares] all the information regarding the maintenance of the crop, the production and maintenance of the crop [...] The assistance is inside [...] most of the things that happen inside the property, we have to know (EX2).

[He shares about] the quality of the coffee [...] the harvest forecast, they [Cooperative] always go there first. They [Cooperative] even go there and do it

themselves and they do it on their own [...]. Total production (EY4).

These results corroborate the findings of Duarte (2017), in which producers shared information about crop forecast, production, quality, information necessary for the certification process, among others.

The cooperative members interviewed have control of their costs, however they do not present them to the Cooperative, due to its lack of interest, as a result of knowing the approximate value of the costs.

Regarding the nature of the shared information (Nature), monetary information was identified (input costs, accounting reports) and, mainly, physical-operational information (property size, planted area, productivity, coffee quality, crop forecast, types and quantity of inputs used).

For the Dimension Detail level (related to the type and nature of the information and its aggregation or not), the findings showed that the level of detail of the information shared in the cooperative-member sense can be considered high and, in the opposite sense, a low level was verified, which is due to the trust of the cooperative members in the Cooperative and also the lack of interest of the cooperative members in seeking information. As a result, the Cooperative manages to receive better quality coffee, and even if it plans better, because it knows in advance how much coffee it will receive to sell in the next harvest.

We monitor the production [...]. We follow up, we have a technical assistance team, so they are on the farm all the time, visiting the cooperative members, not only to prescribe the product, to treat the pest, to treat the crop, but also to actually monitor what they will produce (EX1).

[The information] is open for us to research, you can go there and inform, but I myself was never interested in knowing these things. But they are always counting what will be divided in profit, what is left over, what is not. But I myself was never interested (EY4).

From the cooperative members to the Cooperative, it was possible to perceive that the shared information contemplates the pre-production processes, production in progress and commercialization (Processes), since the agronomists visit the crops to collect information and help the cooperative members before, during and after production – when the coffee is sold.

[We monitor the crops] during flowering, pre-harvest, then harvest, post-harvest, fertilizer application, foliar application. So, all year round, we monitor their life in the field during their production (EX1).

From the Cooperative to the cooperative members, only information on administrative processes is shared, at first, due to the lack of interest of the cooperative members. The annual report, the distribution of leftovers, the fiscal council and the value of the attendance ballots for the members of the board of directors and the fiscal council are presented at the OGA.

A possible consequence of the cooperative members' lack of interest in the Cooperative's information is the failure to effectively take advantage of the potential benefits of OBA in this relationship. As mentioned, both parties perceive mutual benefits in the relationship and information sharing; however, it may be that, if the cooperative members were also interested in the Cooperative's information, the application of the OBA would present additional benefits for the parties.

A possible benefit could be for the cooperative members to pressure the Cooperative for better cost management in order to improve surpluses and, therefore, increase the distribution of leftovers. For that, the cooperative members would need to show more interest in the available accounting and financial reports, which was not evidenced.

Alenius et al. (2015) verified, in their research, that OBA influences both direct and indirect relationships in the constant combination of resources to identify and solve problems, define technical and organizational interfaces, as well as the limits of the network. These are some other examples of benefits that could be explored in the case analyzed here.

Regarding the Cost Determinants Dimension, the best input and the moment to use it are discussed, as well as the correct amount to be applied in order to optimize costs and increase the quality of the coffee produced. In this way, it could be seen that the shared information includes the following cost determinants: management model, capacity utilization, commitment, product quality, product design, relationships in the value chain and timeliness.

The sharing of information in the member-cooperative direction happens, mainly, once a month when the technical team visits the farm (Frequency). However, sharing also happens at other times, since the member and the technical team are always in contact. As for the sharing of information,

in the Cooperative-members direction, it occurs, above all, in the OGA that takes place once a year, but it can also happen at any time, if the members are interested. Thus, the frequency of sharing in the relationship is monthly, in the case of cooperative members, and at least annually, regarding the Cooperative.

Perhaps there is a point of improvement in the relationship here: in order to further increase the possible satisfaction of members, Cooperative X could provide some kind of quarterly report to members, showing their specific performance, as well as the performance of the group of members as a whole.

One of the transaction attributes dealt with in the TCE is frequency. It can be noticed, in the analyzed case, that the contact between the parties is constant, showing high recurrence of transactions, and, thus, greater possibility of diluting the transaction costs in several transactions, limiting opportunistic behaviors (Williamson, 1979). This higher frequency of negotiation also impacts the trust between the parties in the relationship.

Communication for sharing information (Communication way) takes place in person (during visits to cooperative members' properties, at Cooperative X or at the OGA) or by telephone, above all, through the WhatsApp messaging application.

Given the nature of the business and the type of relationship (cooperative), the answers to the interviews suggest that this form of communication is satisfactory for both parties. However, in view of the identification of the existence of an application with relevant information about the market, the question remains whether information about the relationship itself and other types of information could not also be inserted in the application and whether this could not strengthen even more the presence of OBA in this relationship.

As for the purpose of using the information (Purposes), Cooperative X uses the information received from the members, mainly, to prepare for its processes. It is important to know, for example, the amount of coffee, on average, that it will receive from the cooperative members and how much credit it can offer them for the purchase of inputs, in order to support them in the production of coffee so that they can obtain a good performance and, consequently, promote the activity of the Cooperative.

The main purpose is to support the member. It is a service that the cooperative offers to support him

in the production of coffee to make him produce, to make him grow and, as a result, he will bring coffee to Cooperative X, which will encourage our activity (EX1).

The purpose would be like this: [...] a forecast of what the cooperative will receive in terms of coffee to carry out its future business together with the cooperative member, together with the producer (EX3).

It was possible to identify the following purposes of information use by Cooperative X: to control the activities of the cooperative members; improve operational policies regarding the cooperative-member relationship; demonstrate mutual commitments; apply cost management techniques; assist the member in the decision-making process; help the member to identify lack of competence; help the member to identify inefficiencies; improve the quality of the products you will receive; ensure trust between the parties; facilitate the development of products and services; enable the optimization of administrative processes; know the cooperative's production process, as well as the production process as a whole.

The purpose of using the information received by the cooperative members, which refers to the annual report, is mainly to find out if they will receive part of the leftovers in cash and, to observe the Cooperative's commitment to demonstrating its results, even if they do not pay special attention to this. Therefore, the purposes were: to identify mutual commitments by the Cooperative; ensure trust between the parties; recognize the value of the leftovers to which it will be entitled annually.

In the light of Table 1 (section 2.2), it can be stated that the purposes earned by the cooperative member are limited.

It was possible to identify, through the interviews, the existence of benefits for the cooperative members to share their information (Incentives). Among those cited in the literature, the following were perceived: establishment of mutual benefits; demonstration that the shared information will not be abused; increased efficiency and/or productivity through technical support offered by the company receiving the information; joint problem solving; future contract guarantee; contractual protection of the interests of members and the Cooperative. In the case studied, it was possible to identify that the main incentive for members is technical assistance in coffee production.

anything, you are free, I was never asked [to pass on information] (EY4).

[The cooperative] is safe... I think the way of working is fair (EY4).

[The exchange of information] offers [benefits] because, when in doubt, they have an agronomist and specialists. In any area you want, they have people there (EY3).

According to the cooperative members interviewed, information sharing takes place under conditions of cooperation and trust (Conditions). According to Kajüter and Kulmala (2005), one of the factors that interfere with the practice of OBA is the social nature of relationships, with OBA being more likely to function in relationships based on trust. The main attributes of Cooperative X reported by the members were: trust, security, transparency, credibility, advantageous prices and the fact of being able to count on the Cooperative whenever they need it.

You have confidence in Cooperative X [...] It is a company that you can count on at any time, whatever you need (EY1).

Security and transparency, very safe, cooperative with tradition (EY2).

Security in storage, credibility in the company (EY4).

The results of the interviews showed that the relationship between the Cooperative and the members is one of trust. Member Y2, for example, said that, when he became a cooperative member, he signed something, but he doesn't remember what it was and he doesn't even have that document anymore. Member Y4 mentioned sharing his information with Cooperative X even without knowing the reason.

A priori, this relationship of trust may be the result of two factors pointed out by the TCE: the frequency of transactions (due to recurrence and frequent contact between agents) and the lack of perception of opportunism between the parties. However, the results showed that in certain matters (extra fee when the coffee is removed from the warehouse for sale in the market and technical assistance for those who trade with the cooperative) the Cooperative can act opportunistically, and the fact that the member does not realize this may be due to its limited rationality.

Everything you do there you are not obliged to do Table 4 presents the synthesis of the dimensions found.

Table 4: Summary of OBA dimensions present in the analyzed case.

| Categories | Dimensions | Details |
|-----------------------------|------------------------|---|
| Information characteristics | Nature | Physical-operational and monetary. |
| | Type | Property size, planted area, cost of inputs, productivity, quality, harvest forecast, types of inputs used, annual leftovers. |
| | Detail level | High, from members to Cooperative, and low, from Cooperative to members |
| | Processes | Pre-production, production in progress, commercialization and administrative. |
| | Cost determinants | Management model, capacity utilization, commitment, product quality, product design, value chain relationships and timing. |
| Sharing characteristics | Frequency | Monthly, from members to Cooperative, and at least annually, from Cooperative to members |
| | Direction | Bilateral |
| | Communication way | In person, by phone and via messaging app (WhatsApp). |
| Application characteristics | Conditions | Based on cooperation and trust. |
| | Incentives | Mutual benefits; absence of abusive use; increased efficiency and/or productivity; joint problem solving; future contract; contractual protection of interests. |
| Use purposes | Purposes – cooperative | Control activities; improve operational policies; mutual commitments; apply cost management techniques; assist the cooperative member in the decision-making process, to identify lack of competence and inefficiencies; improve product quality; ensure trust; facilitate the development of products and services; enable the optimization of administrative processes; know the production process of the cooperative member and as a whole. |
| | Purposes – members | Identify mutual commitments by the cooperative; ensure trust between the parties; identify the value of the leftovers to which you will be entitled annually. |

Source: Made by the authors

4.4 Results discussion

It can be seen that both parties are pursuing their own interests. The relationship is based on cooperation and trust, in which mutual interests are met, as the benefit of one interests the other. By showing better performance, the cooperative member is able to supply better quality coffee, which is good for the Cooperative and, consequently, if it has a better annual performance, the leftovers will be shared with all the cooperative members.

Research by Fehr and Rocha (2018) in the automotive sector showed that the OBA was forced by the manufacturer, so that, in order to become one of its suppliers, they would have to share their information. The conditions in the relationship were conflicting and based more on pressure to reduce prices than on joint strategies, with trust being partial. In the present case, the cooperative members make their information available spontaneously, as they perceive the benefits of this practice, with a relationship based on trust.

Another difference is that, in the automobile sector, OBA was mainly used for price adjustments, which does not occur in the studied Cooperative, since there is no negotiation because prices are defined by the market, being used by the Cooperative for other purposes.

In the study by Cardoso et al. (2020) the results showed that OBA did not happen in small companies, since they did not have the opportunity to apply OBA in their relations with a private company, as well as they did not have the benefits of sharing information, such as obtaining technical assistance. Differently, in the present research, it was verified that the sharing of information happens with all the cooperative producers, including those of smaller size, either by the recurrent technical assistance, or through the OGA.

Therefore, based on these studies, it is possible to notice the difference between the practice of OBA in cooperatives and in other types of entities. In terms of the analyzed relationship, all members mentioned that sharing information is not a requirement of the Cooperative, but, as they realize the benefits and advantages arising from the relationship, they share their information spontaneously.

These results corroborate the study by Duarte (2017) who observed that cooperatives actually cooperate and generate more benefits for producers than other types of organizations. Furthermore, cooperatives offer more incentives to producers and means to train them than other companies.

However, a result is similar to that found by Cardoso et al. (2020) in which the consensual sharing of information, which provides for mutual benefits, increases the chances of using OBA and identifying cost optimization opportunities.

The confidence of the cooperative members in Cooperative X is perceived when they say that “they feel calm” in sharing their information and that the Cooperative establishes fair contracts and always fulfills the agreements. This impacts on transaction costs, since, through TCE, trust has the power to reduce the risk of opportunistic behavior.

Therefore, the transaction costs of this relationship are not zero, but are reduced, since the cooperative member does not perceive opportunism in the use of his information by the Cooperative (although the results have shown that in some aspects it may have opportunistic behaviors) and it also does not perceive opportunism on the part of the cooperative members, because, even if it passes them on, the cooperative members do not show interest in this

information.

In the cooperative's view, the Cooperative does not use information opportunistically and prints safeguards in its contracts to ensure compliance. Furthermore, there are no specific assets in this relationship, which may influence members not to perceive opportunism, since the greater the level of specificity of the asset, the greater the possibility of losses due to opportunistic behavior, generating higher transaction costs.

5. Final Considerations

This research sought to provide additional understanding about OBA and its dimensions, considering its application in the relationship between a cooperative and its members.

We found that, in the studied relationship, OBA is practiced bilaterally. It was possible to notice that both the Cooperative and the members are in search of their own interests, but the benefit of one interests the other and, thus, the relationship is based on cooperation and trust. Regarding the base theory, TCE, the transaction costs of this relationship are not null, but they are reduced, since, a priori, both the Cooperative and the cooperative members do not perceive opportunism in the use of shared information.

As for the implications at the managerial level, the findings showed that the type of relationship influences the application of OBA. So that OBA can present all the benefits it proposes and generate benefits for both parties, cooperation and close relationships are necessary, which can limit its application.

We found, in this case, that there is a high level of confidence in the Cooperative by the cooperative members, causing them to voluntarily share their information on costs, processes and activities. The conclusion is that the consensual sharing of information with expected benefits and based on trust and cooperation increases the willingness to use OBA and enhances the generation of benefits, as predicted in the literature. Another relevant finding is that the systematization of the dimensions is feasible. The research showed that it is possible to understand how OBA works from its dimensions.

Considering the academic implications, it was possible to evaluate the application of OBA in another market segment, the cooperative. Applying the OBA in this sector was more acceptable and easier, probably due to the fact that there is a cooperative relationship, in addition to the perception of mutual benefits. This finding corroborates the literature

that addresses that OBA generates several benefits to the parties involved, helping in the best performance and integration between them.

We conclude that the relationship between cooperative and cooperative members favors the application of OBA, since it is based on cooperation, one of the main pillars for its effective application and consequent generation of potential benefits. This relationship is different when compared to other types of organizations, since, on the one hand, it can be a customer-supplier relationship, if the cooperative member sells his coffee to the cooperative, however, on the other hand, the cooperative member can withdraw his coffee of the cooperative and sell it in the market, if it is more advantageous for him.

At first, although there may be tensions, we did not notice "opposite poles" in this type of relationship, since the purpose of creating a cooperative and voluntary membership of its cooperative members is to help them manage their businesses and sell their products. your products.

This study contributes to the literature by advancing in relation to Fehr and Rocha's (2018) proposal for systematizing the dimensions of the OBA by separating information by groups in each dimension and by proposing the levels of detail of the information.

The study contributes to practice by enabling the understanding of the application of OBA and its strengths and weaknesses in the cooperative segment. It also generates a social contribution, since, by having adequate cost management based on the interorganizational sharing of information, the businesses of these cooperative members tend to present superior performance, reflecting on the maintenance of the activity and the consequent generation of income for the families involved.

A limitation of this study was not having accompanied the visit of the technical team to the farms of the cooperative members in order to observe the main moment of the exchange of information. Still, considering the characteristics of the case studies, the conclusions are limited to the moment in which the research was carried out and to the peculiarities of the analyzed relationship, and reflects the position only of those who were interviewed.

For future works, we suggest a case study with cooperatives and members from other branches. We also suggest carrying out research through a survey with several agribusiness cooperatives in Brazil and with their members

so that the research has breadth and it is possible to generalize the findings, aiming to test the structure of the dimensions. Still, it is suggested to investigate which factors hinder/limit and which favor the application of OBA in the cooperative sector and the differences and similarities of the application of OBA between cooperatives and other types of organizations.

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