




Do Corporate Governance Mechanisms Contribute to Organizational Resilience? Evidence From Agricultural Cooperatives

Mecanismos de Governança Corporativa Contribui para a Resiliência Organizacional? Evidências de Cooperativas Agropecuárias

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ABSTRACT | Objective: The objective of this study was to analyze the corporate governance mechanisms of agricultural cooperatives in continuing and discontinued conditions and their relationship with organizational resilience. **Method:** A multiple case study was conducted with four agricultural cooperatives, two in operation and two in liquidation. Content analysis was performed based on secondary data and interviews with members of the board of directors. The study assumes that a cooperative in liquidation (or liquidated) is not resilient. **Results:** The results highlight that governance mechanisms, such as member participation in assemblies, existence of management reports, cooperative education, separation of ownership and control, and qualification of the Fiscal Council, are the main aspects that help to explain the organizational resilience of agricultural cooperatives. **Originality/Relevance:** This study contributes to the advancement of the field by investigating how the adoption of corporate governance mechanisms can increase organizational resilience in agricultural cooperatives. By emphasizing the fundamental role of governance in promoting resilience, this study sheds light on the factors that contribute to organizational failures in cooperatives, encouraging a deeper understanding of the subject. **Theoretical/methodological contributions:** The adoption of governance mechanisms can help cooperatives achieve organizational resilience. **Social/management contributions:** Governance practices, such as active participation, transparency, cooperative education, and the separation of ownership and control, strengthen resilience.

Keywords | Corporate Governance, Organizational Resilience, Liquidation, Agricultural Cooperatives


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RESUMO | Objetivo: O objetivo deste estudo foi analisar os mecanismos de governança corporativa de cooperativas agropecuárias na condição de continuadas e descontinuadas e sua relação com a resiliência organizacional. **Método:** Foi realizado um estudo de casos múltiplos com quatro cooperativas agropecuárias, sendo duas continuadas e duas descontinuadas. A análise de conteúdo foi realizada com base em dados secundários e entrevistas com membros do conselho de administração. O estudo assume que uma cooperativa em liquidação (ou liquidada) não é resiliente. **Resultados:** Os resultados destacam que mecanismos de governança, como participação dos membros nas assembleias, existência de relatórios gerenciais, educação cooperativa, separação entre propriedade e controle e qualificação do Conselho Fiscal, são os principais aspectos que ajudam a explicar a resiliência organizacional das cooperativas. **Originalidade/Relevância:** Este estudo contribui para o avanço na área ao investigar como a adoção de mecanismos de governança corporativa pode aumentar a resiliência organizacional em cooperativas agropecuárias. Ao enfatizar o papel fundamental da governança na promoção da resiliência, este estudo lança luz sobre os fatores que contribuem para as falhas organizacionais nas cooperativas, incentivando uma compreensão mais profunda do assunto. **Contribuições teóricas/metodológicas:** A adoção de mecanismos de governança pode ajudar as cooperativas a alcançarem resiliência organizacional. **Contribuições Sociais/para a gestão:** As práticas de governança, como participação ativa, transparência, educação cooperativa e separação entre propriedade e controle, fortalecem a resiliência.

Palavras-chave | Governança Corporativa, Resiliência Organizacional, Liquidação, Cooperativas Agropecuárias

1 INTRODUCTION

Unexpected events of different natures affect organizations' survival around the world, including those related to agribusiness. The 2008 crisis in the United States, the Russia/Ukraine war and the Covid-19 pandemic are great examples of unexpected events that hit global economies, certainly impacting countless organizations. As Gaudenzi et al. (2023) highlight, the COVID-19 pandemic and recent disruptive events are affecting companies operations and supply chain networks, leading to challenges in supply, demand, production and logistics activities.

To either reduce or cope with uncertainties, organizations need to build resilience. In the management field, the concept of resilience focuses on organizational responses to crises (Fowler et al., 2007). Organizational resilience can help companies return to their normality (Akgün and Keskin, 2014) or even improve their performance (Annarelli and Nonino, 2016).

The adoption of corporate governance (CG) practices can foster organizational resilience (Lampel et al., 2014), as resilience and corporate governance are closely intertwined. It is known that poor CG practices can contribute to organizational crises (Hilton et al., 2021; Kowalewski, 2016; Süsi and Lukason, 2019). Therefore, we argue that effective CG practices can help promote resilience likewise they contribute to improving firm's reputation (Bravo et al., 2015).

When compared to other companies, cooperative organizations appear to be more resistant in times of crisis and uncertainty (Borda-Rodriguez and Vicari, 2013; Franken and Cook, 2019) because of conservative decisions in management, members' roles, and the existence of social ties (Birchall and Ketilson, 2009). However, despite their apparent resilience of cooperatives, Grashuis and Cook (2018) state that the survival of cooperatives is not guaranteed as this organizational model is flawed and complex, with ambiguous objectives. Moreover, cooperatives are managed by their own members (collective ownership), and most do not have expertise in corporate management (Carvalho et al., 2015). They face challenges such as asymmetric information, conflicts of interest, horizon problems, and diffused allocation of ownership rights (Franken and Cook, 2019; Grashuis and Cook, 2018; Grashuis and Franken, 2020), which turns them a fruitful field to discuss the role of governance in achieving resilience.



In this context, a research gap exists concerning how the adoption of corporate governance practices in agricultural cooperatives are related to cooperative resilience. Many studies have examined the adoption of “good CG practices” and their effects on firm performance (Maranho and Leal, 2018) and continuity (Al-Masawa et al., 2022; Hilton et al., 2021). However, few authors have made efforts to analyze the relationship between governance and resilience, and even less focusing on agricultural cooperatives as the subject of investigation (Tarrant, 2010).

This argument is strengthened by a literature review, which highlights the absence of scientific studies that simultaneously address the themes of corporate governance, organizational resilience, and agricultural cooperatives. Lampel et al. (2014), Borda-Rodriguez and Vicari (2013), and Franken and Cook (2019) recognized this gap. This also brings to light an unexplored aspect that deserves attention given the significant impact of agricultural cooperatives from both social and economic perspectives (Grashuis and Franken, 2020).

The aim of this study is to analyze the corporate governance mechanisms of agricultural cooperatives in their continued and discontinued condition and their relationship with organizational resilience. For this, we consider that cooperatives that are liquidated or in liquidation are those that have not been resilient (non-active cooperatives), whether in the face of external turbulence or failures in their internal management or governance processes.

In this study, we conducted four case studies in two grain and two dairy cooperatives from Mato Grosso do Sul/ Brazil, a state located in the Midwest of the country, known for grain and livestock production and exports. The cases involve two cooperatives in operation and two are liquidated.

This study makes both theoretical and practical contributions and is threefold: Empirical results show that member participation in assemblies, the existence of managerial reports, cooperative education, separation between ownership and control, and qualification of members of the Supervisory Board are the main aspects related to organizational resilience of agricultural cooperatives; From a theoretical perspective, this study highlights the importance of connecting CG to resilience to achieve the survival of agricultural cooperatives and addressed seven assumptions; Encouraging members’ participation, investing in training courses focused on cooperative education, better communication by publishing management reports, promoting members’ qualifications to attend the Supervisory Board, and a clear separation between ownership and control are recommended; Finally, institutional improvement is proposed like private regulation of the functioning of the Board of Director and Supervisory Board and the adoption of independent auditing.

The remainder of this paper is organized as follows. Section 2 provides a theoretical background, including the concepts of resilience, CG, and particularities related to agricultural cooperatives. Section 3 explains the methodology of this study. Section 4 presents the results followed by a discussion in Section 5 and a conclusion.

2 THEORETICAL BACKGROUND

2.1 Organizational Resilience in the context of agricultural cooperatives

Organizational resilience can be understood as the capacity to respond productively to significant changes. Although cooperatives are considered resilient organizations because of their characteristics and *raison d’être* (Billiet et al., 2021), they are not always able to bypass unexpected situations and remain resilient (Grashuis, 2018).



Studying resilience in the context of agricultural cooperatives is important for several reasons. First, agriculture is inherently vulnerable to a range of shocks and stressors such as extreme weather events, disease outbreaks, and fluctuations in commodity prices. Second, agricultural cooperatives can help farmers mitigate these risks by providing support and resources to help them withstand and recover from adverse events. According to Dalcero et al. (2023), the resilience of cooperatives plays a key role in overcoming adversities and strengthening the development of local communities, especially in contexts marked by shocks and instability.

Grashuis and Franken (2020) observed that agricultural cooperatives in the United States generally survive longer compared to other types of business organizations. Because of its inherently characteristics, cooperatives in various sectors and typologies seem to exhibit greater resilience (Roelants et al., 2012). Conservative decisions in management and investments, members' commitment and loyalty, and the existence of social ties seem to explain why cooperatives are more resilient than capitalist companies in times of crisis (Birchall and Ketilson, 2009). However, Birchall and Simmons (2004) and Grashuis and Cook (2018) state that there is still a lively debate both about the ability of cooperatives to meet their goals, and the extent to which they can be considered resilient forms of organization.

According to Salifu et al. (2010), cooperatives are not immune to economic crises. A case in point is Cooperativa Agrícola de Cotia (CAC), a sizable agricultural cooperative situated in São Paulo, Brazil, which encountered a range of obstacles, encompassing financial struggles and managerial issues. In 2005, the cooperative underwent liquidation. Agricultural cooperative failures can stem from diverse factors. One common cause is inadequate governance (Grashuis, 2018). When cooperatives lack effective governance structures and processes, they may encounter challenges in making decisions or efficiently managing resources (Franken and Cook, 2019). Consequently, this can result in financial difficulties and harm members' trust and involvement (Bialoskorski Neto, 2007). Additionally, insufficient financial management coupled with limited member participation and engagement can contribute to cooperative failures. Thus, the survival of cooperatives is not guaranteed, as this organizational model can be flawed is complex (Grashuis, 2018).

Indeed, cooperatives face several challenges stemming from the vaguely defined property rights, such as the free rider, horizon, portfolio, control, and influence costs problems (Cook, 2018). According to Cook (2018), the presence of these issues hinders the ability of cooperatives to be resilient. Following Borda-Rodriguez and Vicari (2013) assumptions, this study argues that to address these challenges it is important to adopt effective corporate governance mechanisms. According to Cecchin and Mascena (2016), corporate governance practices can be pillars for building and maintaining a resilient company. In their research, Korbi et al. (2021) discovered that establishing effective governance mechanisms aids in cultivating organizational resilience to navigate institutional crises. The following section introduces the theme corporate governance in cooperative organizations.

2.2 Corporate Governance in Cooperatives

Factors such as the growth of cooperatives, increased organizational complexity, and the process of internationalization have increased interest in corporate governance among cooperatives (Franken and Cook, 2019). The theoretical basis of most works on corporate governance comes from agency theory (Klein, 1983), highlighting the principal-agent problem within the corporation (Berle and Means, 1932). There is a belief that managers (agents) and shareholders (principals) generally have misaligned interests, and management tends to behave opportunistically, taking advantage of information asymmetry between agents (Almici, 2023)



In this sense, corporate governance constitutes one of the possible forms of alignment of interests between parties (agent/principal), minimizing agency conflicts (Berle and Means, 1984; Maranhão and Leal, 2018). In other words, corporate governance emerges as a set of incentive, control, and monitoring mechanisms, that can increase the reliability of the relationship between managers and entrepreneurs (Leal et al., 2002).

According to Cardoso and Camilo (2023), cooperative governance practices are grounded in five fundamental principles: self-management, equity, transparency, education, and sustainability. These principles constitute the normative foundation that guides the organizational structure and the conduct of actors within cooperatives, promoting legitimacy, efficiency, and alignment with cooperative values. However, little is known about cooperative governance practices beyond those determined by legislation (Siqueira and Bialoskorski Neto, 2014).

Costa et al. (2012) found that most agricultural cooperatives have a basic level of governance and argued that adapting cooperative governance and its functioning is essential for controlling and reducing conflicts of interest. In the Brazilian context, Law 5.764/71 establishes some governance mechanisms for cooperatives (Brasil, 1971), such as General Assembly with the participation of members and the establishment of a Board of Directors and a Supervisory Board.

The participation of members in General Assemblies is crucial for transparency in corporate governance (Bialoskorski Neto, 2007), and fosters commitment and loyalty among members (Birchall and Ketilson, 2009). According to Birchall and Simmons (2004), member participation is a critical driver of resilience. Roelants et al. (2012) mentioned that cooperative resilience is generally linked to the active involvement of members.

Canassa, Costa, and Pagliarussi (2025) argue that although voting rights in cooperatives are dispersed among a broad and decentralized ownership structure, they remain a significant tool of corporate governance through which members can exert influence and drive change when necessary.

Democracy in cooperatives can become challenging because of the increasing volume of activities and the complexity they face as they grow (Fulton and Giannakas, 2001). Cooperative growth implies an increase in the number of members, which may negatively impact members' participation in general meetings. In this context, Bialoskorski Neto (2007) recommends creating a means of communication with cooperative members and intensifying their participation.

Larger cooperatives with many members may face a greater division of decision-making rights in their assemblies (Antonialli, 2000). The higher the number of members, the greater the opportunity costs of participation, leading to less monitoring among members and a weaker relational commitment between the cooperative and its members. To alleviate this issue, larger cooperatives can organize pre-assemblies and preparatory meetings before the General Assembly (Bialoskorski Neto, 2007). These initiatives foster greater interaction among members, leaders, and organizations, ultimately enhancing cooperative member participation.

While many studies focus on proposing administrative and managerial measures for cooperatives, Schneider (2003) posits that without education and active participation of cooperative members, no solution will be viable. Education plays a vital role in the development of cooperatives and cooperativism (Münkner, 2012) and is a fundamental aspect of corporate governance. Another critical component of corporate governance with legal support is the Board of Directors. Board members ensure the integrity of the cooperative by reducing managers' freedom of action (Basterretxea et al., 2022).

The legal and doctrinal framework governing cooperatives dictates that ownership control is separate from capital share and the amount of economic transactions conducted with the cooperative. Costa et al.



(2012) argue that cooperative organizations are more likely to succeed when the Board of Directors retains control decisions and formally delegates management decisions to a designated executive.

Costa et al. (2012), building on Fama and Jensen (1983), proposed a model to verify the separation of ownership from management, focusing on two elements: i) the delegation of formal control rights, meaning that owners delegate formal control rights to the Board of Directors, granting them formal authority over the organization's control; and ii) the allocation of the decision-making process, determining whether control and management decisions are separated.

The authors suggest that the Board of Directors is responsible for ensuring that agents do not exploit owners, and that the manifestation of this right culminates in the formal authority of the Board to hire and dismiss the individual responsible for managing the company. Thus, observing who has the formal right to define the occupant of the main executive position reveals whether the formal right of control is delegated to the Board of Directors (BoD).

In the case of cooperatives in which BoD members are elected and directly involved in management decisions, the non-separation of ownership from management is evident, which may not be suitable for complex cooperatives (Hendrikse, 2005). Given the complexity of cooperatives, their greater probability of success arises from the Board of Directors retaining control decisions (ratification and monitoring), while formally delegating management decisions (initiation and implementation) to the designated executive.

Another essential component of corporate governance is a Supervisory Board. According to Fama (1980), a set of low-cost monitoring mechanisms tends to survive in a competitive environment. By fulfilling its role, the Supervisory Board contributes to the continuity of organizations (Becht et al., 2003).

When forming the Supervisory Board (SB), Siqueira and Bialoskorski Neto (2014) suggested that technical capacity should prevail among members to achieve the desired diversity of professional experiences relevant to the body's functions and the cooperative's field of action. The function of the Supervisory Board, according to Siqueira and Bialoskorski Neto (2014), is to monitor the actions of the management, provide opinions on specific issues, and take a position regarding members. These attributes contribute to the control and monitoring of the cooperative, fostering transparency, minimizing potential conflicts of interest, and promoting organizational resilience (Siqueira and Bialoskorski Neto, 2014).

In collectively owned organizations, such as cooperatives, the need for monitoring and providing management information to prevent opportunistic behavior by agents is accentuated (Jensen and Meckling, 1976). Imhoff Jr. (2003) stated that auditing is a monitoring governance mechanism that reduces agency problems inherent in the conflicting relationship between "agent" and "principal". In a context of dispersed ownership and complex structure, differences in preferences between members and managers may be more significant, along with the limitations of members in monitoring agents' actions (Hendriksen and Van Breda, 1999).

In this context, employing audit services within the cooperative is a fundamental mechanism of corporate governance, as it inhibits opportunistic behavior by cooperative managers (Hendriksen and Van Breda, 1999), becoming a crucial resource for organizational resilience.

3 METHODOLOGY

To verify the relationship between agricultural cooperatives resilience and adoption of CG mechanisms, the multiple case study methodology was adopted. Multiple cases are the best choice when the researcher needs to understand the differences and the similarities between the cases (Baxter and Jack, 2008). One



more advantage of this method is that it allows to analyze data both within each situation and across situations (Yin, 2003).

Based on exploratory research, we analyzed the organizational resilience of agricultural cooperatives located in the State of Mato Grosso do Sul/Brazil (MS). Located in the Midwest of the country, MS is renowned for its significant role in agribusiness. In 2020, the agricultural GDP of MS reached an impressive US\$24.52 billion. The state's agribusiness is primarily centered around the production of key agricultural commodities, with a strong emphasis on soy, corn, and cattle. As a robust foreign exchange generator, this sector accounts for 95% of MS total exports. (Secex, 2023.)

This study considered the status of agricultural cooperatives – active (in operation) and in liquidation (non-active), as a requisite to select the cooperatives. The criteria for “non-activity” are used as a synonym for resilience, though we are aware that many other factors may determine a cooperative resilience, for example, vaguely defined property rights and the “people” factor (Cook, 2018; Hakelius et al., 2012). Case study selection was made based on a list of 56 agricultural cooperatives in operation (active) that the State's representation of cooperatives, called OCBMS, provided. According to OCBMS, there are 25 agricultural cooperatives in MS that are discontinued: 7 are in liquidation, 1 is liquidated and 17 are out of operation. Given that agricultural cooperatives from MS predominantly operate in the grain (33%) and dairy (29%) sectors, and similar numbers are presented for the inactive cooperatives, we specifically aimed to have at least one active and one inactive cooperative from each sector. Due to the difficulties in contacting cooperatives that are no longer active, the disruptions caused by the Covid-19 pandemic, we opted to include a minimum of two active and two inactive cooperatives in our study. The final sample of cooperatives for the study consisted of the cooperatives that agreed to participate after e-mail and phone call invitations. With that in mind, the multiple case study comprises 4 cooperatives: Copasul (an active cooperative in the grain sector), Coopavil (an active cooperative in the dairy sector), Cooagri (an inactive cooperative in the grain sector), and Coomleite (an inactive cooperative in the dairy sector).

For our data collection, we gathered secondary data from three sources: i) General assembly's records; ii) The bylaws; and iii) Management reports from each case study. This process involved a total of 70 documents and took four months to complete. All cooperatives' historical secondary data, dating back to their establishment, were accessible to us through the Board of Trade of Mato Grosso do Sul – JUCEMS, which provided the necessary official documents. This comprehensive access enabled us to gain insights into the complete historical trajectory and evolution of each cooperative. Additionally, in the case of Cooagri, we were able to obtain access to the judicial process of liquidation.

Subsequently, we proceeded to the next phase of data collection, which involved conducting face-to-face in-depth interviews with i. Two board members at Copasul; ii. Two board members at Coopavil; iii. One former executive manager at Cooagri; and iv. Two former members of the Supervisory Board at Coomleite.

Data were first organized based on the characteristics of each cooperative such as: “year of foundation”; “main activity”; “current cooperative condition (active/non-active)” and “number of members”. Subsequently, we proceeded to analyze the dimensions and variables associated with Corporate Governance (CG). The study investigated four dimensions related to CG: i) General Assembly (GA); ii) Board of Directors (BoD); iii) Supervisory Board (SB); and iv) Audit Committee (AUD).

Table I shows the governance mechanisms, the research variables and the type of questions asked to the interviewees.



Table I. Governance mechanisms, research variables, and the type of questions asked to the interviewees

Governance Mechanisms	Governance in Coops (Variables)	Questions
General Assembly	• 1. Participation in assembly	On average, what is the percentage of member participation at the GA?
	✓ 1a. Existence of management reports	Does the cooperative usually disclose (publish) any material containing the activities developed by the cooperative in a given period, such as an annual management report?
	✓ 1b. Conducting Pre-Assemblies	Does the cooperative hold pre-assemblies or meetings before the GA to discuss the agenda and the matters to be voted on during the assembly?
	✓ 1c. Cooperative education	Does the cooperative conduct activities, such as courses or training, for their members and managers to promote cooperative education?
Board of Directors	• 2. Separation of ownership and management	Is the main managerial position of the cooperative held by the chairperson of the Board of Directors?
	✓ 2a. Hiring and dismissing the manager	Who is (are) responsible for hiring or firing the main manager of the cooperative?
	✓ 2b. Project proposal and implementation by the manager	Who is (are) responsible for authorizing (ratifying) the realization of the cooperative's investment projects?
	✓ 2c. Ratification and monitoring of investment projects by BoD	Who is (are) responsible for proposing and implementing cooperative projects?
Supervisory Board	• 3. Supervisory Board Qualification	Do members of the supervisory board receive any training to act as a member of the supervisory board?
	• 4. Existence of internal regulations	Is there any material that regulates the attributions of the supervisory board, such as the internal regulations?
Audit	• 5. Hiring independent audit services	Does the cooperative usually hire independent audit services?

Notes: This table comprises all questions posed to participants during the interviews.

The data analysis was carried out in two stages. Initially, individual cases were described. Subsequently, a comparative content analysis was performed to identify patterns, similarities, and differences among the cases. The data were categorized as follows:

1. General Assembly dimension: Information related to “participation of members in meetings”, “the existence of management reports”, “the existence of pre-assemblies”, “the existence of activities for cooperative education” was investigated.
2. Board of Directors (BoD) dimension: Involved questions concerning to “separation of ownership and control”, “responsibility for hiring and dismissing the manager”, “responsibility for proposing cooperative investment projects” and “who ratifies, implements and monitors the manager’s performance” were addressed, among others.
3. Supervisory Board (SB) dimension: It was examined information related to “qualification of members of the supervisory board” and “the existence of internal regulations”.
4. Audit Committee (AUD) dimension: it was investigated the “hiring of an independent auditing service”, and other relevant aspects.



4 FINDINGS

4.1 Cooagri (in liquidation)

Cooagri was a grain storage and commercialization cooperative which was considered the 12th largest cooperative in Brazil. It was founded in the early 1990s, after the disentanglement of a large agriculture cooperative located in the South of Brazil.

According to Cooagri's bylaws, the cooperative's management was formed by i) a general assembly (GA); ii) a board of directors (BoD); iii) a council of representatives (CoR); iv) a supervisory board (SB); and v) an audit committee (AUD). The general assembly (GA) had powers to take any and all decisions in the cooperative's social interest, as a higher-level governance mechanism.

Cooagri's members were represented at the GA by the CoR. Members of the CoR were chosen at every three years, at the rate of one member and one substitute for each group of 150 members. Besides promoting cooperative education, the CoR was the main means of communication between members and the cooperative. CoR members should meet in pre-assemblies with members before the GA takes place. Members that were not in the CoR were exempt from participating in GA, with their participation being optional since the person elected as representative was the one with vote right. According to the GA reports, only in 1995, 100% of the members of CoR participated in the GA. In other years, there was always one missing member in the GA.

Cooagri's main administrative body was the BoD which was supposed to plan and set standards for the cooperative's operations/services and control the results. Thus, Cooagri's members delegated the right of formal control to the BoD, transferring them the formal authority over the monitoring and control of the cooperative. The BoD chairman, along with the vice-president, was the main executive manager of the cooperative. Both were responsible for proposing and approving new investment projects. The cooperative's administration was supervised by the SB, made up of three effective members and three substitutes. For that, the SB could hire an independent audit and make use of the reports and information of the external audit, with the expenses covered by the cooperative.

The AUD also supervised the BoD actions. This committee received annual training from OCBMS and could also hire advice from specialized technicians and use reports and information from external audits. The AUD did not have internal regulations. What dictated their actions was the cooperative's bylaws.

Cooagri designed and implemented some changes in their bylaws and operating procedures to achieve greater efficiency or avoid disagreement among members with conflicting interests. In 1994, Cooagri went through the first bylaws reform. Among main changes, the representatives started the organization of elections for the BoD and the AUD members. From this point, the BoD was composed of 12 members, including the CEO, while the AUD started to inspect the performance of each business unit within the cooperative.

In 1995, Cooagri had financial problems of debt and lack of working capital. In order to solve this, the BoD requested, in a GA, permission to sell part of the cooperative's assets. However, the debt from the dismemberment of the original cooperative (Cotrijuí) and the indebtedness of the cooperative and its members made it hard to the development of Cooagri's business. The cooperative was unable to pay the commitments made within the agreed terms, and in 1996 it was concluded that Cooagri would start the liquidation process.

However, in 1998, the Brazilian Government launched a program called "Recoop". This program aimed to restructure and capitalize cooperatives that were going through difficult times. With the help of this program, Cooagri was able to promote the lifting of the extrajudicial self-liquidation and retake activities.



From this point, Coogri's main activity became the supply of grain and seed storage. Nevertheless, past financial crises of Coogri never allowed them to be free of the need to take out credit to make its operations possible and viable.

The established conjuncture led to more than 400 lawsuits charged against Coogri until September 2008. The situation made it impossible to maintain the cooperative's activities, which was exacerbated by the 2008 global financial crisis, all of which culminated in the shutdown of all Coogri establishments in 2009. In this year, there were 27 members at CoR representing, approximately, a total of 4,050 members.

4.2 Copasul (in operation)

Copasul's primary operations are related to the grain sector, encompassing technical assistance, input sales, storage, and marketing of the members' production. Established in 1978 by 27 Japanese cotton-grower immigrants, the cooperative's aim was to enhance production, processing and marketing conditions for lint cotton, pursuing fair prices through direct commercialization with the spinning industry, and fostering the growth and empowerment of its members.

According to Copasul's bylaws, the cooperative's governance structure was formed by i) a general assembly (GA); ii) a board of directors (BoD); and iii) a supervisory board (SB). The GA approves all management reports and accountability. On average, 30% of members participate in GAs. The BoD manage the cooperative and has total competence and designation to plan and outline norms for operations and services and control the results. Thus, the GA delegated the right of formal control to the BoD, transferring them the formal authority over the cooperative's control. Once the members of the BoD were elected, they would choose among themselves those who would perform the Executive manager functions, which were delegated in the hands of the president, vice president, and secretary.

In relation to the AUD, the cooperative has the support of the Brazilian cooperative organizations to provide courses and training to this committee. However, the committee does not have internal regulations, only the bylaws specified the duties of the members. In addition to the legal aspects imposed on the cooperative's governing bodies, the bylaws include the role played by a hired manager.

Over the time, Copasul designed and implemented several changes in their bylaws and operating procedures. The first change in the governance structure of Copasul was in 1990. This bylaws reform regulated the rules and established the attributions for new positions: Executive Director, General Management, and technical divisions. In 2018, another reform took place in Copasul's bylaws. Among various changes, the BoD undertook the responsibility of supervising the cooperative, delegating the management authority to a specialized executive body, with one executive serving as the operations director and the other as the business director.

In the long term, Copasul made many investments. For instance, in 1986, a storehouse was created to receive grains with pre-cleaning, drying and storage silos equipment. The executive board was authorized to arrange the installation of the warehouse, including leasing or acquiring property for this purpose. In pursuit of expanding its operations, Copasul incorporated Agrocoop, an agricultural cooperative in a nearby city, in 2010. Additionally, the establishment of a storehouse in the region facilitated the expansion of cotton farming areas under Copasul's domain.

Currently, Copasul is in full activity. In 2021, the cooperative's revenue was US\$ 634,61 million, with net surpluses of US\$ 24,2 million. The cooperative boasts a storage capacity of 9.41 million seed bags; however,



it received a remarkable 22.92 million seed bags from its members, out of which 6.59 million bags were exported. The cooperative has 1.608 members.

4.3 Coomleite (in liquidation)

Coomleite, formerly a cooperative in the dairy sector, is currently undergoing extrajudicial liquidation. It was established on May 10th, 1980, by a group of 25 farmers with the aim of fostering the development and safeguarding the economic activities of its members. Notably, the cooperative aimed to collectively market the production of its members, either in fresh or industrialized forms.

According to Coomleite's bylaws, the cooperative's management and supervisory bodies were formed by i) a general assembly (GA); ii) a board of directors (BoD); iii) special committees; and iv) a supervisory board (SB). The General Assembly (GA) served as the higher-level governance mechanism, possessing the authority, in accordance with Coomleite's law and bylaws, to make decisions of shareholders interest. As evident from the GA reports, the average member participation in Coomleite's GA from 1985 to 1998 stood at 13%. During this period, there were no documented instances of pre-meetings.

Regarding the BoD, the elected members select the president, vice-president, and secretary, from among themselves. Notably, the chairman of the BoD and the cooperative's executive director were the same individuals, characterizing the dual role played by the executive management. The management of the cooperative relied on the support of the SB. It was not common for the cooperative to provide training for the SB, neither existed any material that regulated their attributions.

Since the foundation of the cooperative, the independent audit has always been carried out through OCBMS agents, who only provided a technical opinion regarding the accounts of the BoD and there was no disclosure of an audit report. The cooperative did not formally have an independent audit structure and presented many problems related to decision making.

In 1984, Coomleite made amendments to its bylaws, which were decided by the BoD, within the boundaries and conditions set by the law. Consequently, the cooperative began engaging in transactions with non-members, acquiring products to use the idle capacity of its facilities and offering goods and services, ensuring that members had priority and more benefits than non-members.

In 1986, Coomleite acquired the industrial unit of the Central Milk Cooperative in the state of MS resulting in the processing of 35,000 liters of milk per day into mozzarella cheese in 1987. Coomleite faced many problems in maintaining BoD members. In different occasions, the president and vice-president resigned, generating instability in the top management level. To solve the cooperative's problems, generally related to low prices and dissatisfaction of members, the BoD gave broad decision powers to the president and vice-president elected in 1998 in order to establish prices that could avoid damages to the cooperative. The cooperative began the process of liquidation in 2000. So far, the cooperative is still in liquidation, unable to honor its obligations. At this time, Coomleite had 643 members.

4.4 Coopavil (in operation)

Coopavil is a dairy cooperative established in 1981 by a group of 41 farmers. Their aim was to promote the development and protection of their economic activities by eliminating intermediaries from the milk processing and marketing phases, as well from the marketing of grains and distribution of inputs.



Coopavil designed and implemented some changes to its bylaws and operating procedures. Initially, the members decided to lease a dairy industry, which received great acceptance among members. Faced with good business prospects, the cooperative invested in building its own dairy industry in 1982. During its early years, Coopavil's dairy industry had a processing capacity of 35,000 liters of milk per day, most of it directed to the production of mozzarella cheese, the cooperative's main product.

To offer a differentiated service to its members, the cooperative created the Coopavil's grocery store, offering a variety of products at more affordable prices. To meet the needs of its members through products, inputs and services with higher quality, a veterinary store was also implemented next to the market, as well as a feed factory, facilitating access to raw materials necessary for the milk production process. Among the activities, there is the purchase and sale of inputs for dairy production, and especially the purchase and industrialization of milk. Currently, the cooperative has an annual production capacity of 10,800 million liters of milk, demonstrating the importance of Coopavil in the regional context.

According Coopavil's bylaws, the cooperative's management and supervisory bodies are formed by i) a general assembly; ii) a board of directors; iii) special committees; and iv) a Supervisory Board. The GA is the main social body of the cooperative. On average, 30% of members participate in GAs meetings. The BoD is responsible for planning and drawing up rules for the cooperative's operations, services, and controlling the results. In other words, Coopavil's members delegated the right of formal control to the BoD, transferring formal authority over the control and management of the cooperative.

The chairman of BoD is the main manager of the cooperative. Since the attributions of hiring or firing managers, proposing investment projects and implementing them is under the scope of the president of the cooperative, it characterizes a situation of non-separation between ownership and control.

The cooperative has the support of OCBMS to provide training courses to the BoD. The bylaws govern the attributions of the board, as there are no internal regulations. According to the bylaws, the special committees are auxiliary bodies of the cooperative management. Temporarily or permanently, the BoD can create them. Copasul's membership in 2019 was made up of 119 members, 86 employees and 187 producers who only deliver raw materials. Table II shows a comparison between each CG mechanism adopted in the agricultural cooperatives studied.

Table II. CG mechanisms adopted by the agricultural cooperatives.

	Literature Review	Coagri	Copasul	Coomleite	Coopavil
Sector		Grains	Grains	Dairy	Dairy
Status		Judicial liquidation	In operation	Extrajudicial liquidation	In operation
Participation in GAs	Bialoskorski Neto (2007), Birchall and Simmons (2004), Antonialli (2000)	Only in 1995 100% of the representatives attended the GA	30% of members participate in GAs	13% of members participated in GAs	30% of members participate in GAs
Reports	Bialoskorski Neto (2007)	No publication of management reports, only a newsletter.	Publication of annual management reports for members	No publication	It presents its activities in a leaflet printed at ordinary meetings.
Pre-assemblies		Carried out only after the first liquidation in 1998	Inexistent	Inexistent	Inexistent



	Literature Review	Coogri	Copasul	Coomleite	Coopavil
Cooperative education	Schneider (2007), Munkner (2012)	Inexistent. The BoD was the only aware of everything in the cooperative	Typically, it arranges courses and training sessions for all members on cooperative education, with a particular focus on those provided by OCB/MS	There were some courses, but not often	Courses and lectures provided by OCB/MS
Separation of ownership and control	Basterretxea et al. (2020), Hendrikse (2005)	The chairman was always responsible for cooperative management	BoD chairman draws the master line with the directors, and contracted managers to implement actions	The chairman was always responsible for cooperative management	The chairman is responsible for cooperative management
Management hiring and dismissing	Costa et al. (2012), Fama and Jensen (1983), Hendrikse (2005)	BoD chairman	BoD	BoD chairman	BoD chairman
Projects proposition		BoD chairman	BoD and executive management	BoD chairman	BoD chairman
Projects Approval		GA	BoD	BoD	GA
Projects implementation		BoD chairman	Executive management	Executive management	BoD chairman
Management monitoring		BoD	BoD	BoD	BoD chairman
AUD qualification	Fama (1980), Becht et al. (2005), Siqueira and Bialoskorski Neto (2014)	OCB/MS partnership	OCB/MS partnership	Not usually provided	OCB/MS partnership
AUD regulation	Hendriksen and Van Breda (1999), Imhoff Jr. (2003)	The bylaws. The internal regiment existed, but its usage was limited	Only the bylaws	No regulation	Only the bylaws
Independent audit	Imhoff Jr. (2003)	OCB/MS auditing services	Annually hire an independent auditing company	OCB/MS auditing services	OCB/MS auditing services

Notes: This table compares the governance mechanisms adopted by the agricultural cooperatives. The governance mechanisms analyzed were members (or representatives) participation in general assemblies, information dissemination and cooperative education, separation of ownership and control, and training and qualification of the audit committee (AUD).

5 DISCUSSION

This study was motivated by the call for more comprehensive research regarding the relationship between governance and resilience in agricultural cooperatives (Cecchin and Mascena, 2016; Lampel et al., 2014). Thus far, this study provides valuable insights into how governance mechanisms in cooperatives contribute to resilience. Drawing from the primary findings and the literature review, various assumptions have emerged, which could be investigated further in future research.



This study highlights that when cooperatives face challenges such as financial, structural and decision-making problems, they need to think in a solution in the form of realigning members incentives for participating and monitoring the management, cooperative education and trainings investments and transparency practices to be resilient (Cook, 2018; Hakelius et al., 2012). The study also aligns with Jasper's (2018) assertion that merely adopting the organizational structure of a cooperative does not inherently ensure resilience. If so, cooperatives would not be facing liquidation, which highlights the need for adopting better governance practices to survive.

5.1 Main findings and Assumptions

The case study showed that the cooperatives were created for defensive reasons, with the aim of protecting the activities carried out by their members as farmers, especially in the grain and milk sector. This purpose is aligned to the need of enhancing market power to farmers, also known as “double monopoly mark-up”, “countervailing power” and “competitive yardstick” (Feng and Hendrikse, 2013).

In the context of the resilience of cooperatives, the participation of members in the GA, is a fundamental governance variable to bring resilience to cooperatives (Roelants et al., 2012). Based on that, even in face of a low percentage of participation in GA, the cooperatives in operation (Copasul and Coopavil) have a higher participation margin when compared to the cooperatives in liquidation. In the case of Coogri, members' participation took place through the council of representatives. However, as identified in the GAs' reports, not all the representatives always attended the meetings. Based on that, we could say that there is evidence that the participation of members in assemblies could help to address resilience to agriculture cooperatives.

- A1: Participation of members in GA is positively related to organizational resilience.
Cooperatives in operation also prepare and publish technical and management reports to be more transparent by providing members with more monitoring tools. According to Busemeyer and Trampusch (2012), this governance practice could promote resilience, since the cooperative's means of communication tend to intensify members participation, as they will be more informed about the organization actions and matters. The case study shows that those cooperatives in operation (Copasul and Copavil) communicate their activities and decisions in reports, what didn't happen with non-active cooperatives (Coogri and Coomleite). Based on that, we identified that the existence of management reports is an important issue to be considered when analyzing the resilience of agriculture cooperatives.
- A2: Preparation and publication of technical and management reports, as a governance practice, is positively related to organizational resilience.
We observed that holding pre-assemblies meetings is not a usual procedure, except for Coogri (non-active cooperative). According to Coogri's bylaws, the representatives should meet with the members they represent in a pre-assembly. However, according to a member of the board of representatives, these meetings were only pro forma, and in many cases, they were not even held due to lack of members' presence. On the other hand, in Copasul (active cooperative), the chairperson stated that he did not formally hold pre-assemblies. The board use periodic technical meetings, such as field days and lectures with cooperative members, to briefly discuss the subjects



to be discussed in the GA. Based on this, there isn't evidence that the existence of pre-assemblies is a source of resilience.

One important evidence to build resilience in cooperatives is the existence of activities for cooperative education. Schneider (2003) argues that cooperative education should promote reflection, discussion and action among members, continuously awaken their interest in participating in the cooperative. We observed that the cooperatives in operation are more concerned with members' cooperative education. Specifically, the presidents of Copasul and Coopavil informed that they always seek to offer their members courses and training about the nature, principles and importance of the cooperativism movement. In accordance with that, we assume that there is evidence of the importance of offering cooperative education to members in order to build resilience in agricultural cooperatives.

- A3: Cooperative education, as a governance practice, is positively related to organizational resilience. Another relevant point of governance is the separation between ownership and control, a factor advocated by Costa et al. (2012) as a reason to achieve success in cooperatives. It was possible to observe that at the beginning, in all cooperatives, the chairperson of the cooperatives, the president of the BoD and the executive manager are the same person. This configures, as discussed in the literature, the non-separation between ownership and control. Nowadays, the only exception is Copasul (in operation) that in 2018 began to assign the role of control to the chairman and vice president of the BoD and hired a body of specialized executives to carry out executive management, general executive, operation, and financial executives. Copasul appears to be approaching the separation of ownership and control. This partial finding is in line with Costa et al. (2012) who defend the idea that cooperative organizations are more likely to succeed if the BoD maintains control decisions and formally delegates management decisions to a hired executive manager.
- A4: Separation between ownership and management decision is positively related to organizational resilience. Delegation of the right of formal control to define the person for the position of chief executive of the cooperative belongs to the BoD, except in the case of Coogagri, which was the role of the chairman of the BoD. Decisions to ratify and monitor the actions and projects developed by the cooperatives were allocated to the BoD and, in one case, to the GA. The allocation of monitoring is addressed to the BoD and the chairman. Considering the attribution of proposing projects in the cooperatives, it was found that, in general, it is allocated to the BoD and the chairman. The attribution of project implementation is allocated to the position of the chairperson along with the managers and the BoD, with the exception of Copasul, whose attribution is allocated to the executive board. In sum, it is found that the governance model proposed by Fama and Jensen (1983) to minimize agency costs and enhance better performance to organizations was not completely adopted by agricultural cooperatives, except Copasul.
- A5: The delegation of the right of formal control to BoD, as a governance practice, is positively related to organizational resilience.
- A6: The allocation of ratification and monitoring decisions to BoD, as a governance practice, is positively related to organizational resilience.



The Brazilian Cooperative Law establishes the Supervisory Board (SB) as a mechanism of governance. The qualification of the members of this council, beyond those that are already legally required, as argued by Siqueira and Bialoskorski Neto (2014), was found to be present with cooperatives in operation (Copasul and Copavil). This initiative is undergone by training, generally provided by OCBMS. In the case of Copasul, in addition to the training carried out by OCBMS, the cooperative has sought other training projects for SB members. This finding, regarding the resilience of cooperatives, is in line with Becht et al. (2003). The existence of internal regulations, another metric based on literature review, was not identified as differences among the cooperatives. None of them showed a specific regulation to the SB.

- A7: The qualification of members of the Supervisory Board is positively related to organizational resilience.

All cooperatives in the study appear to use auditing services provided by OCBMS. Copasul is the only one which has also an independent audit report and published it in the BoD accountability report. As much as the existence of independent audit services plays an important role in reducing information asymmetry and minimizing agency problems, as defended by Al-ajmi (2009), in this study, it did not appear to be a key factor contributing to the resilience of cooperatives. Considering that the Brazilian Cooperative Law is mandatory about audit service as a mechanism of governance, this practice does not account as a differentiate practice to build resilience. However, it is important to mention that Copasul is adopting as independent audit service, and this is corroborated by literature review (Al-ajmi, 2009).

6 CONCLUSION

This study has explored the relationship between CG mechanisms and organizational resilience in agricultural cooperatives. The strategy of case study research, conducted with four agricultural cooperatives (two in operation and two in liquidation or liquidated) from the State of Mato Grosso do Sul, Brazil, characterizes an exploratory research with a qualitative approach. The main limitation of this research is related to the sample size. Nevertheless, despite this, it was possible to address evidence related to agriculture cooperative resilience and the adoption of corporate governance practices, such as: i) member participation in assemblies; ii) the existence of managerial reports; iii) cooperative education; iv) separation between ownership and control; and v) qualification of members of the Supervisory Board, are the main aspects related to organizational resilience of agricultural cooperatives. The results presented here are in accordance with those studies that found a positive relationship between CG and surpassing crisis in stock listed companies (Kowalewski, 2016) and in small and medium enterprises (Süsi and Lukason, 2019).

Based on the evidence, seven assumptions were addressed: i) encouraging member's participation; ii) investing in training courses focused on cooperative education; iii) better communication by publishing managing reports; iv) promoting members qualification to attend the Supervisory Board; and v) a clear separation between ownership and control are the main recommendations. Finally, institutional improvement is need like private regulation of the functioning of the Board of Director and Supervisory Board and the adoption of independent auditing.

Despite the research focus being governance mechanisms, one should not neglect sociological aspects related to historical and cultural issues. Coogri is the result of the shutdown of a large cooperative located



in another region of the country, which, in the beginning, represented the assumption of debt of the original company. On the other hand, Copasul is strongly rooted in cultural aspects, originating within a Japanese community. Despite the relevance of these aspects, which were beyond the scope of our analysis, it is unquestionable that other aspects, rooted on sociological aspects deserve a deeper investigation.

Other limitations are present. First, the pandemic was a challenge to data collection. Even document analysis was not easy as most of the documents were not digitized at the time, requiring a personal visit to the state Board of Trade responsible for the custody of these documents. Secondly, the bylaws, internal regulations and meeting reports are, in most cases, standardized, following the legal requirement, incomplete and superficial, not providing much detailed information. From another perspective, the standardization and incompleteness observed in the official documents show the problem of asymmetric information and low transparency that increases monitoring costs. This last observation is valid for the cooperatives in operation and for the ones in liquidation.

In addition, issues related to the methodological approach must be highlighted. The cooperatives categorized as “in liquidation” or “liquidated” are considered as non-resilient. This could be contested. It is a fact that resilience is a complex phenomenon, much more than survival. Nevertheless, it is also undoubtedly that on-going cooperatives are daily overcoming different nature of failures. Certainly, this conceptualization deserves a deeper discussion. Still, another limitation is related to the difficulty to dialogue with leaders and cooperative members of non-active cooperatives. This is real matter when investigating organizational failures. It is also worth commenting the need to incorporate the organization history and members profile as a reason for the non-resilience, but this was beyond the scope of this research, even though over time, the real reason that led to the discontinuation of cooperatives may have become biased and /or erased from documentary records.

The study does have certain methodological limitations, with the most significant one being the sample size. Because of its exploratory and qualitative nature, the study adopted a multi-case approach with only four cooperatives. Consequently, the findings cannot be generalized to a larger population. Nevertheless, the results can be considered as valuable evidence in these cooperatives’ context and by comparing them. Some initial assumptions were inferred, and further in-depth studies can refine them to be tested in quantitative studies.

Despite this limitation, the present study makes a substantial contribution by shedding light on the issue of cooperative resilience in relation to governance mechanisms and failure perspectives. Moving forward, broader research efforts, whether qualitative or quantitative, that delve into governance mechanisms and resilience are highly recommended for future research agendas. Additionally, exploring sociological theories related to resilience can further enrich our understanding in this field.

The contribution of this study is threefold. First, the theoretical discussion helped to fulfill a literature gap, namely, the relationship between governance and resilience in agricultural cooperatives. The cases studied confirmed previous literature knowledge that CG practices promote organizational resilience in the context of agricultural cooperatives (Hilton et al., 2021; Kowalewski, 2016; Süsi and Lukason, 2019). For that, a set of assumptions is addressed that may be of interest for future studies. Secondly, this study presents managerial implications related to structuring better governance practices. There is evidence that initiatives like encouraging members participating in GAs and meetings; preparing and publishing management reports; improving cooperative education to members and managers; better qualification of members to attend the supervisory board; and promoting a clear separation and ownership and control could help to build resilience. Finally, there is room for institutional improvements that go beyond those required by law.



Hiring an independent audit, expanding management reporting and thinking of private regulation to rule BoD and SB could be of great help.

As suggestions for future work, we recommend investigating the relationship between the cooperatives life cycle stage and its resilience. Furthermore, incorporating sociological dimensions and enriching the analysis with relational governance theories would be valuable additions to future research. However, the most crucial aspect for a future research agenda is to significantly increase the sample size. By doing so, it would be possible to identify the determining factors of agricultural cooperatives' resilience more clearly based on their governance mechanisms.

The current study has provided valuable insights as contributions to this research area. Nevertheless, the goal now is to transform these pieces of evidence into validated findings, thereby ensuring the possibility of generalizing the results to a broader context. This emphasis on increasing the sample size and validating the findings will enhance the credibility and applicability of future studies on cooperative resilience and governance mechanisms.

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