

Exploring Communication Aspects in Agricultural Cooperatives

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ABSTRACT

This study investigates the existing communication flows in agricultural cooperatives and the means of communication used by these organizations to communicate with their members. The authors conducted a systematic literature review to address the following questions: How does communication occur in agricultural cooperatives? What means of communication have been adopted by agricultural cooperatives? What are the main theories supporting the analysis of communication issues in these organizations? There is evidence in the literature that inadequate communication between management and cooperative members can be one of the reasons for organizational failure. Inconsistent and ineffective communication can create a disconnect between members and organizations. In addition, communication is an important mechanism capable of improving the commitment of members to the cooperative. Despite this, agricultural cooperatives are slow to incorporate more diverse and effective means of communication to reach their varied audiences.

Keywords: *communication flow; means of communication; members; agricultural cooperatives*

1 Introduction

Agricultural cooperatives are companies owned by their users (i.e., rural producers) (Staatz, 1987) in which equity holding is not the basis of voting power (Levay, 1983; Costa, 2010; Pivoto, Waquil, Souza and Spanhol, 2015). The governance structure of agricultural cooperatives is based on the principle of 'one member, one vote' (Staatz, 1997; Nilsson, 2001; Jansen, Maehler and Wegner, 2018). This characteristic seeks to ensure that cooperatives meet the interests of their members (Österberg and Nilsson, 2009). In agricultural cooperatives, members are simultaneously owners, users, and consumers of the cooperative's services and products (Levay, 1983; Cook, 1995; Zylbersztajn, 2002; Pivoto, 2013). The benefits received by each member are not proportional to the capital invested but rather to the commercial transactions that each member makes with the cooperative (Staatz, 1997). As a result, agricultural cooperatives have vaguely defined, diffuse property rights, which open room for organizational problems as the cooperative increases in size and complexity (Cook, 1995; Nilsson, 2001; Costa, 2010).

Over time, a cooperative's business activities can become large and complex because of its adaptation to intensified competition. At the same time, members may grow in number and present greater heterogeneity in their preferences (Feng, Friis and Nilsson, 2016). The combination of these factors can make it difficult to understand cooperative activities, which weakens members' ability to control the cooperative and influence decision-making (Cook, 1995; Bager, 1996; Harte, 1997), thus giving rise to monitoring problems (Hakelius and Hansson, 2016). Furthermore, the lack of information for members makes it more difficult to govern the organization democratically. This makes it difficult for members to participate in the governance of the cooperative and likely affects their satisfaction with the organization and its managers (Arcas, Martín and Minguez, 2014). When the cooperative reaches this point, it can present a context of passive members, that is, members with little interest in the cooperative's affairs (Nilsson, Kihlén and Norell, 2009). If a cooperative facing such problems cannot think of changes to involve members in governance, failure may occur (Nilsson et al., 2009).

Within this panorama, communication is particularly important to keep the cooperative working in the interests of its members (Peng, Hendrikse and Deng, 2018), guard against opportunistic behaviors (Uzzi, 1996), and prevent management from taking full control of the cooperative (Hogeland, 2006). Additionally, communication helps to deal with the heterogeneity of member preferences, mitigating its effects and thereby bringing members closer to the organization (Iliopoulos, Randon, Maryline, Liis and Kaie, 2019) and building a reputation among them (Graça and Arnaldo, 2016). Therefore, this study investigates the existing communication flows in agricultural cooperatives and the means of communication used by these organizations to communicate with their members. We conducted a systematic literature review to address the following questions: *How does communication occur in agricultural cooperatives? What means of communication have been adopted by agricultural cooperatives? What are the main theories that support analysis of communication issues in these organizations?*

The remainder of this paper is organized as follows. First, a brief review of the literature on communication in organizations and the choice of communication means is presented. The methods used to identify relevant studies on communication in agricultural cooperatives are outlined. The second part of this article is rooted in the discussion and analysis of selected papers. The final section presents the implications and remarks.

2 Theoretical Background

Weick (1979) states that communication is a central process in organizations. The changes that organizations face and the consequent changes in their organizational structure make communication increasingly important as a means of effective coordination to achieve organizational objectives (Gardner et al., 2001; Taylor, Flanagan, Cheney and Seibold, 2001; Jones, Watson, Gardner and Gallois, 2006).

The literature on organizational communication refers to it as the "essence" and constituent process of the organization (Putnam, Nicotera and Mcphee, 2009), in the sense that the organization itself can be considered a communication structure (White, 1997). For the purposes of this work, organizational communication comprises the exchange of information between a sender and a receiver and the inference of meaning between one or two parts of the organization (O'Reilly and Pondy, 1979; Daft, 1997). Thus, communication is understood not only as a process of exchanging information but also of building and aligning meanings between the various parts of the organization.

Cheney and Christensen (2001) state that organizational communication involves internal and external audiences. The focus of this research is on internal communication, which encompasses all communication carried out between audiences within an organization's boundaries. Internal communication ensures the

alignment of interests and the connection between various internal members and the organization (Klein and Momo, 2018; Kovaitė, Šūmakaris and Stankevičienė, 2020).

It is possible to observe that the literature on internal communication focus, specifically, on communication with employees (Vercic, Vercic and Sriramesh, 2012). Studies of this type analyze the communication between members who are engaged in a superior position within the hierarchical organizational structure and the members who respond immediately to them within that structure. Internal communication also involves horizontal communication between members at the same organizational level (Bartels et al., 2010). Horizontal communication has a strong influence on the construction of identity and cohesion in small groups and organizations with a less hierarchical structure (Marschan, Welch and Welch, 1996).

The intention behind analyzing internal communication in agricultural cooperatives is to explore the communication of the cooperative with its members, mostly carried out in the governance structure of these organizations. This interest is because of the dual function cooperative members develop. As owners and users, they exercise a democratic control and decision-making over the organization, are the main clients of the cooperative and users of its services.

Communication in governance occurs mainly vertically, that is, between people who occupy different levels within the company's hierarchical structure (Bartels et al., 2010). This type of communication is relevant in order to create a consensus between the different hierarchical levels in the organization, especially between those who propose strategies and make decisions and those who control them (Rapert, Velliquette and Garretson, 2002; Furlotti and Mazza, 2020). Vertical communication can be split in two directions: downward, from higher to lower hierarchical levels, and upward, from the lowest to the highest hierarchical levels (Goldhaber, 1986; Morrison, 2014).

When observing the governance structure of agricultural cooperatives, the cooperative members are those who occupy the highest hierarchical position, that is, the General Assembly. Just below them is the board of directors and the executive management. This study focuses on the analysis of this vertical relationship between members and cooperative management.

Other aspect of communication under analysis in this study is the channels of communication adopted by agricultural cooperatives. Many studies have shown that communication channels play a distinct role in connecting members of an organization (Lee, 2018). The means or channels of communication refer to the techniques used to transmit information. Regarding effective channels for internal communication, previous studies have extensively used the media richness theory (Daft and Lengel, 1986) as a theoretical framework. The media richness theory proposed by Daft and Lengel (1986) states that each medium has different levels of richness in the transmission of information; therefore, the medium is not merely a form, but a complex channel through which information flows in the organization.

This theory suggests a continuum that distinguishes the richness level of different communication channels to understand interactions within organizations and effective communication channels. Along this continuum, face-to-face interaction is considered the richest medium, while written documents, statements, newsletters, reports, or posters are considered less rich communication channels. In the middle of the continuum are videoconferencing, telephones, instant messages, and emails (Daft and Lengel, 1986).

In terms of internal communication, face-to-face communication seems to be preferred among all groups of employees (White et al., 2010), especially because of its effectiveness in achieving mutual understanding among parties of the internal organization (Johnson and Lederer, 2005). Brown et al. (2015) also observed that face-to-face communication is perceived to be of higher quality by internal members than telephone or email communication, or other means of communication.

Before the advent of the Internet and its tools, most organizational communication, especially between managers and other members of the organization, was conducted face-to-face (O'Reilly and Pondy, 1979). However, personal communication incurs high costs and, in some cases, makes communication impossible owing to time constraints and the geographical location of the agents involved in the constant exchange of information (Zmud, Lind, and Young, 1990).

With the advancement of globalization and the development of digital technologies, communication in organizations is increasingly focused on the use of digital information and communication technologies (ICT), which have replaced face-to-face communication in the highest decision-making bodies in organizations, for example (Sinickas, 2005; Butler, 2010). Communication technologies are designed to enhance the speed of communication, facilitate immediate access to information, and enable complex information exchanges across different geographical locations (Cheney, Christensen, Zorn, Jr. and Ganesh, 2011).

Social tools and media are also gaining popularity in the field of digital technology. Thanks, among other things, to the greater access that the population has to the Internet, a new form of communication has emerged, that is, social media (Pérez and Nicasio, 2015). As Zugasti and Sabés (2015) point out, social media, based on interactive dialogue and participation, emerged to complement web pages and blogs, as the first exponents of digital communication, enabling the appearance of new scenarios in the field of organizational communication. Social tools facilitate rapid and relatively rich communication between individuals and promote space for simultaneous interactions, similar to face-to-face communication (Cheney et al., 2011).

Nowadays, social media is configured as an ideal channel to connect with the organizational world, bypassing traditional media and allowing instant communication. This medium modifies the communication strategies of organizations and positions itself as a strategic means of communication (Cheney et al., 2011). Organizations of all kinds, regardless of their size, social structure, or legal form, have been moving to the digital space for a decade, finding a new channel for the dissemination of their messages (Criado, Martínez, and Silván, 2012) complementary to traditional media like radio and television.

Indeed, regarding media usage, Zhu (2019) highlights that organizations need to combine different digital ICTs with face-to-face communication to achieve communication goals more effectively. This is because digital ICT users generally have individual reasons for using them, or not, to communicate. Sinickas (2005) states that varied channels of communication are preferable to single and exclusive channels. This study explored the aspects of communication in agricultural cooperatives.

3 Methods

The focus of this study was to find empirical articles about communication in agricultural cooperatives in international databases. However, what we found is absent in the literature on this topic. The few empirical studies included in the analysis mainly cover the papers that gave rise to and motivation for this research. Thus, after a meticulous search, the authors decided to include studies that addressed the theme of communication in agricultural cooperatives, especially between members and the management, in the following sections of the studies: theoretical discussion, results, analysis, and final considerations.

The systematic review method adopted here is an integrative literature review, which is considered appropriate when the researcher wishes to approach a problem and draw an overview of the scientific production of a particular phenomenon. This is a necessary step in structuring a research field (Easterby-Smith, Thorpe, and Lowe, 2010). This method employs a more transparent article selection process that increases the rigor of the study and reduces the effects of the researcher's bias (Tranfield, Denyer, and Smart, 2003).

The literature analyzed here comprises peer-reviewed articles in English and published in academic journals. Three databases were used for the data collection: Web of Science (Core Collection), Scopus, and Science Direct. These databases are the main databases used in business and administration. An additional search was also conducted at AgEcon, a database that electronically collects and indexes academic research in the field of agricultural and applied economics. The search strings used in the searches were "agricultural cooperative" OR "supply cooperative" OR "marketing cooperative" OR "farmer cooperative" AND "communication" OR "information exchange". The research was made through the 'Article title, summary, keywords' field in all databases.

A total of 208 papers were initially identified. After applying database search filters, we identified 154 articles. After eliminating duplicates, inclusion and exclusion criteria were applied in 143 articles. A first-round selection was made based on the titles and abstracts. The exclusion criteria used were: (E1) the subject of study is not cooperative organizations; (E2) the study does not address a discussion about communication or exchange of information in agricultural cooperatives; (E3) the study does not address cooperative/member or cooperative/management relationship; (E4) the study is about the use of communication and information tools for electronic commerce; (E5) the study cover aspects related to the use of communication and information tools with the purpose of farm management; (E6) studies in the area of agricultural production and use of fertilizers and pesticides; (E7) communication in B2B relations; (E8) communication of information on traceability in the value chain and food security; and (E9) the study is about empirical communication between agricultural cooperatives. After applying these criteria, 54 articles remained.

The second round comprises the screening of articles the full text and evaluation of their quality. Theoretical or empirical articles in which the object of study was not “communication”, or which did not address a discussion about the importance of communication and information exchange between members and the cooperative in its theoretical framework, in the analysis, results, and discussions or in the conclusions were excluded from the review. Finally, 24 journal articles were selected for analysis. Some of the studies cited in these articles were also included in the analysis. Ultimately, 28 articles were selected for the analysis. Figure 1 illustrates a flowchart of the systematic literature review.

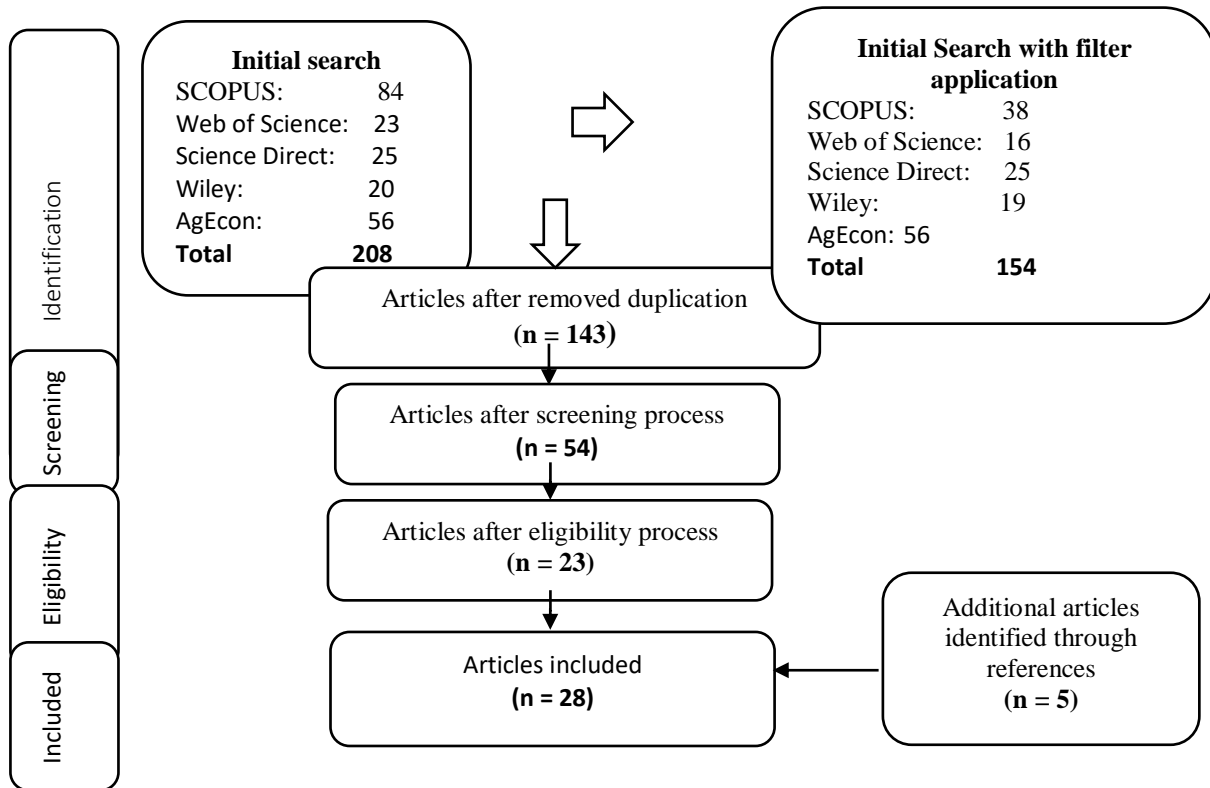


Figure 1. SLR PRISMA Flowchart
Source: the authors

The full text of the selected articles was tabulated according to the following categories: paper aim, main discussions about communication in agricultural cooperatives, how communication occurs in these organizations, the means of communication adopted by agricultural cooperatives, and the main theoretical approaches that give rise to discussions about communication in agricultural cooperatives. The next sections comprise an analysis of the selected articles following each research question posed in this paper: i) How does communication occur in agricultural cooperatives? ii) Which means of communication have been adopted by these organizations? iii) What are the main theories that support analysis of communication issues in these organizations?

4 Forms of communication in agricultural cooperatives

Although communication is present in any organization, agricultural cooperatives, because of their peculiar characteristics, may have different flows of communication with the public, especially the internal public. According to Deng, Hendrikse, and Liang (2020), an agricultural cooperative is formed by a group of farmers voluntarily engaged in achieving their collective goals and interests. Because of this characteristic, members may be involved in horizontal relationships and interactions between themselves, but also in vertical connections with the cooperative organization and its managers.

Horizontal communication in agricultural cooperatives is related to the exchange of information among members. Vertical communication, in turn, is characterized by the exchange of information between members and the cooperative (Peng et al., 2018), represented by professional management or the president of the board of directors. In cooperative organizations, both types of communication are important (Cechin, Bijman, Pascucci, and Omta, 2013a).

Horizontal communication can promote production process innovation, because members often communicate with each other to exchange technical information about production processes (Peng et al., 2018). Vertical communication generates product innovation because, when it turns to members' communication with the cooperative, the relationship is rooted in obtaining detailed information on product innovation and the market (Peng et al., 2018). However, as noted in Cechin, Bijman, Pascucci, Zylbersztajn and Omta (2013b), vertical communication is also a mechanism for coordinating the quality of farmers' production processes and reducing the free-rider problem. According to Xiang and Sumelius (2010), vertical communication may encompass member participation in cooperative governance.

On the other side, horizontal communication may also include exchanging information and making decisions in general assemblies (Chaddad and Iliopoulos, 2013). In addition, horizontal communication is strongly related to building social networks in the cooperative organization (Deng et al., 2020) and increasing the level of participation of members in the decision-making process (Barraud-Didier et al., 2012). Regarding this, members who have more active, that is, more frequent and intense participation in the governance of the cooperative, may influence the cooperative's strategy and decision-making because of their influence over other members (Verhees, et al., 2015). These members usually make things happen in the organization when the level of horizontal communication is high (Peng et al., 2018).

There are plenty of studies worried about vertical communication between members and the management in agricultural cooperatives (e.g., Trechter et al., 2002; Xiang and Sumelius, 2010; Keeling-Bond and Bhuyan, 2011; Brown et al., 2013; Verhees et al., 2015; Graça, and Arnaldo, 2016; Susanty, Bakhtiar, Jie, and Muthi, 2017). These studies, in their majority, emphasize that clear communication between them may influence the positive attitude of members toward the cooperative (Bhuyan, 2007), such as member commitment (Trechter et al., 2002), even if this influence occurs indirectly, that is, by the influence of communication on members' satisfaction and trust, usual predictors in the literature of a member's positive attitude. Indeed, information sharing between members and the cooperative is grounded in member commitment, motivation, and involvement in the governance of the cooperative (Barraud-Didier et al., 2012). For instance, Xiang and Sumelius (2010) argue that the lack of sufficient communication between members and managers damages member satisfaction and behavior in the cooperative.

On the other hand, horizontal communication among members has been less studied by researchers of agricultural cooperatives (e.g., Dobriki and Lips, 2012; Chaddad and Iliopoulos, 2013), and some have explored both horizontal and vertical communication together (e.g., Iliopoulos and Valentinov, 2017; Peng et al., 2018; Deng et al., 2020), but more emphasis has been placed on communication between management and members.

Regarding communication among members, Chaddad and Iliopoulos (2013) sought to determine whether members communicating to exchange information and making decisions posed significant challenges to the control costs of two different governance models in cooperatives. Horizontal communication in agricultural cooperatives is also related to democratic management, and consequently, to democratic costs (Pozzobon, Zylbersztajn and Bijman, 2012; Pozzobon and Zylbersztajn, 2013).

Horizontal communication has also been studied in terms of word-of-mouth communication, that is, as marketing communication in agricultural cooperatives, the informal communication between the parties regarding the assessment of goods and services to build attachment and fidelity to the cooperative services and products (Mazzarol, Soutar, and Limnios, 2019). Graça and Arnaldo (2016) also state that communication among members, and between members and the board of directors may build a reputation for the organization and enhance members' loyalty.

After reviewing how communication occurs in agricultural cooperatives, the next section explores the practices of communication in these organizations, with a special emphasis on media usage. Therefore, this section aims to describe and analyze the main communication media adopted by agricultural cooperatives to improve their relationships with their members.

5 Communication channels adopted in agricultural cooperatives

Papers selected in the SLR were first analyzed regarding the communication channels adopted by agricultural cooperatives to communicate with their members. Communication among members and between members and the cooperative may be fostered through formal or informal communication, which can use different channels of communication (Brown et al., 2013). Formal and informal communication coexist and depend on one another (Cheney et al., 2011). This study does not explore formal and informal communication in agricultural cooperatives, although it may be relevant to investigate whether cooperatives use more formal or informal communication in their relationships with their members. The interest of this study, instead, is on the channels of communication adopted to provide these two forms of communication. As members may assume different

roles in the cooperative and diverge in their interests and characteristics, they may also have different preferences related to the means of staying informed about cooperative issues (Trechter et al., 2002; Keeling-Bond and Bhuyan, 2011).

Since the beginning of the cooperative movement, vehicles of communication explored by cooperatives have relied on newsletters, personal meetings (as annual meetings or member meetings), and other written materials, such as financial reports (Haigh, 2000). Phone calls, face-to-face communication, and text messages are other traditional channels of communication that are frequently used by agricultural cooperatives (Keeling-Bond and Bhuyan, 2011; Brown et al., 2013).

Brown et al. (2013) and Peng et al. (2018) found that agricultural cooperatives still rely on personal and informal information exchanges between members and the cooperative. The study of Peng et al (2018) shows that despite a formal newsletter sent through email every week to members, most of the communication between managers and farmers is done by phone calls or in person, such as farm visits.

Nonetheless, since 2010, digital tools of communication have been being used by agricultural cooperatives to reach more diversified members (Brown et al., 2013). These new tools are used as complements to traditional communication methods and include email, texting through apps, websites, and electronic newsletters (Keeling-Bond and Bhuyan, 2011). For example, Brown et al. (2013) demonstrated that although the frequency of sending newsletters is low (generally published quarterly or less than twice a year) electronic newsletters (e-newsletters) are growing continuously and being released monthly via email as a less expensive alternative.

Brown et al (2013) shows that most cooperatives use newsletters, face-to-face contact, and websites as the most common communication channels to reach their members, but also incorporate e-newsletters to reach a more diverse public and reduce communication costs. Moreover, with the recent digital revolution in the last years, the number of farmers using digital platforms to obtain information has increased, which justifies the use of more modern and online channels to communicate, especially to enhance communication and comprehension between farmers and the cooperative (Marín and Gómez, 2021).

It was possible to observe in the literature that at the beginning of the 2000s, non-technological communication means were strongly related to member commitment, while digital communication, such as the use of email and websites, had an unfavorable impact on members' behavior, serving only as complements to the traditional means of communication (Trechter et al., 2002). However, Keeling-Bond and Bhuyan (2011) noticed that as technology advanced, more farmers started using digital resources to keep informed about the cooperative, especially the youngest.

In addition, regarding digital communication tools and the use of social media, Brown et al. (2013) and Marín and Gómez (2021) highlight that although some cooperatives are present on social media such as Facebook, Twitter, YouTube, and blogs, this presence is still extremely limited. The authors highlight that this characteristic may be due to the dominance of older generations in agricultural cooperatives. Although these digital channels are not yet widely used, they may serve as an alternative to attract younger members or even a strategy to involve more family members in cooperative issues (Duvaleix-Tréguer, Ledos and Lepetit, 2019).

In addition, the online presence of cooperatives and the use of digital sources of communication are essential for maintaining and building relationships between the cooperative and its members. Digital sources of communication can also be used to reduce the geographical distance between members and the cooperative, and are a less costly alternative; in particular, it optimizes the time for exchanging information (Keeling-Bond and Bhuyan, 2011; Marín and Gómez, 2021).

When it comes to member preferences regarding communicating with the cooperative, Trechter et al. (2002) found that, at the time the study was conducted, members appeared to have more preference for newsletters as a primary channel of communication, while the use of websites was complementary to this channel. In the same study, the authors found that annual meetings and board meetings were the least valued sources of information by members. What is not surprising is that members' participation in these meetings is usually low (Pozzobon and Zylbersztajn, 2013). Trechter et al. (2002) also showed that the website seems to be a substitute for information acquired in board meetings and for communication with managers, especially when cooperatives become larger.

In summary, as seen so far, communication channels used by agricultural cooperatives to share information with their members can be separated into two aspects: (1) Traditional channels and (2) Digital channels that involve the use of the Internet, electronic devices, and social media, such as Facebook, WhatsApp, Instagram, and YouTube, to communicate with members. The two categories of communication channels used by cooperatives are illustrated in Figure 2.

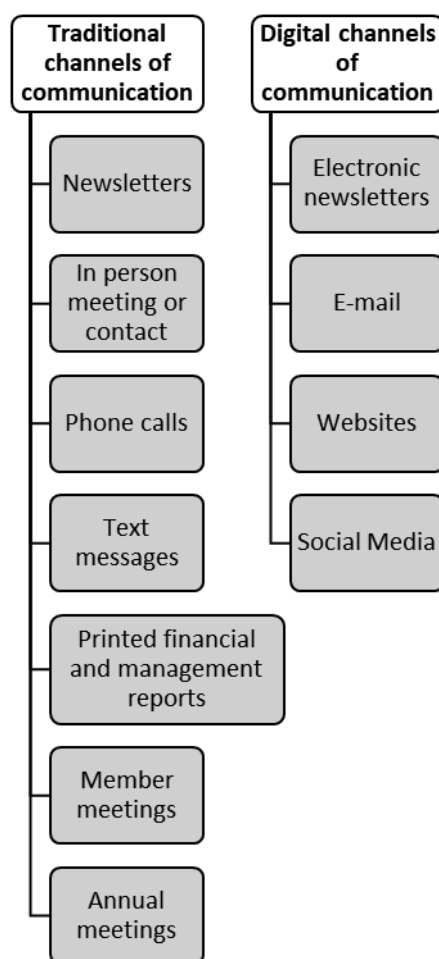


Figure 2. Traditional and Digital channels of communication adopted by agricultural cooperatives
 Source: Trechter et al. (2002), Keeling-Bond and Bhuyan (2011), Brown et al. (2013) and Peng et al. (2018)

What we observe in the studies selected in this review is the low adoption of digital channels by agricultural cooperatives to communicate with their members. This is not the reality when it comes to the adoption of digital channels to online commerce in these organizations, especially Spanish horticultural cooperatives (Jorge, Chivite, and Salinas, 2019).

According to Arcas et al. (2014) the use of channels related to ICTs could be a good option to improve information exchange in cooperatives. In particular, Ciruela-Lorenzo et al. (2020) highlight that the use of digital technologies in communication can offer opportunities for members to participate in the governance of the cooperative in a more informed manner.

Notwithstanding, the use of digital ICTs to communicate with members may face problems, since there may be resistance or apathy of some farmers regarding Internet usage as a way to communicate with their cooperative (Brown et al., 2013; Peng et al., 2018). Despite the many benefits that digital communication tools may offer, the cooperative must be careful using these technologies and try to combine them with traditional communication methods (Keeling-Bond and Bhuyan, 2011).

In addition to the channels used to communicate with members, the literature reviewed also highlights that cooperatives' management must be aware of the content of the information shared on newsletters and websites to draw members' attention and keep them informed of the information they judge relevant and necessary. Brown et al. (2013) point out that managers and board members' most valued communication packs include information on members' responsibilities and benefits, cooperative goals and purpose, and news related to the industry and market trends. Regarding members' information preferences, it seems that industry news and market trends are the most valued, once most USA agricultural cooperative websites share this content. In contrast, information about cooperative governance, which includes members' responsibilities and benefits, and information on patronage refunds and retained equity, is the least shared message to members.

Following this argument, it may be necessary for agricultural cooperatives to know the members well (Verhees et al., 2015) and incorporate more diversified communication channels to communicate with them. Additionally, it is worth knowing that the last one involves not only an extended portfolio of communication channels but also plans to reach multiple members (Brown et al., 2013) once each group of members responds differently to each communication strategy (Trechter et al., 2002).

According to Dobriki and Lips (2012), a particularly important aspect of communication is the number of members that are open to communication. This seems to be a prerequisite for all other aspects involving communication, because information can only be communicated if the intended recipient is open to receive it, if not, then communication efforts made by the cooperative will be in vain (Dobriki and Lips, 2012). This argument highlights the importance of a survey with members about their communication preferences and the factors that may influence their willingness to communicate with the cooperative leaders and managers, as done in Bhuyan (2007) and Xiang and Sumelius (2010).

The next section analyzes the theoretical approaches that give rise to discussions on communication in agricultural cooperatives. The purpose of this analysis is to identify the theoretical lenses through which it is possible to analyze issues related to communication in these organizations.

6 Theoretical approaches behind communication in agricultural cooperatives

In most of the literature involving agency problems, collective action problems, and problems related to vaguely defined property rights in agricultural cooperatives, one of the main factors that help to mitigate control and decision-making problems, free riding and opportunistic behavior include effective communication among members and especially between the members and the cooperative, as discussed below.

In the literature about “people factor” in agricultural cooperatives, the lack of proper communication strategies is the primary reason of the misunderstanding between the members and the cooperative managers (Bhuyan, 2007). Indeed, most of the studies that highlight the importance of well-designed communication strategies are concerned with members’ behavior in the cooperative (e.g., Bijman and Verhees, 2011) and the building of social capital.

The studies reviewed demonstrate that horizontal communication is a form in which cooperatives secure the existence of social capital in the organization. Social capital and communication are connected such that an increase in one of them facilitates an increase in the other. Deng et al. (2020) emphasize that social capital has advantages for members and the cooperative because of the existence of a social network that creates a platform for information sharing and exchange and because it facilitates communication and the building of a shared vision among members.

Hendrikse and Feng (2013) also argue that when a cooperative invests in a better relationship with its members through communication, the level of mutual understanding between members and the cooperative increases. Thus, members use their communicative competence to achieve mutual understanding (Iliopoulos and Valentinov, 2017). In addition, as stated by Iliopoulos and Valentinov (2017), from the moment that happens a rupture in members communication, cooperatives are likely to experience collective action dilemmas and the problems involving the vaguely defined property rights such as the free-rider problem and opportunism.

It was also noted that communication is a tool that can influence the building of trust in the farmers’ relationship with the cooperative (Verhees et al., 2015; Susanty et al., 2017). In this sense, communication is a factor that builds trust, which is fundamental in influencing members’ involvement and commitment to the cooperative (Verhees et al., 2015). Furthermore, trust also influences the level of communication because trusting relations lead to a higher frequency of information exchange as well as richer and potentially more valuable information (Deng et al., 2020). Communication is also an intensifier of corporate reputation, as identified by Graça and Arnaldo (2016).

Communication in agricultural cooperatives has also been studied through the lens of transaction cost economics and is associated with different cooperative governance structures (Peng et al., 2018) and termed as a hierarchy mechanism (Cechin et al., 2013a). Peng et al. (2018) found that product innovation and improvement were more related to vertical communication with management and a more centralized governance structure, while process innovation was rooted in horizontal communication, the exchange of technical information about the production process and a decentralized governance structure. The centralization of the governance structure of agricultural cooperatives is relative to the allocation of decision rights, that is, how much power the members delegate to the manager in terms of decisions about product innovation and production decisions.

Furthermore, Cechin et al. (2013a) concluded that communication on quality improvement between farmers and the cooperative (i.e., the vertical communication) may be a useful hierarchy mechanism for higher product quality in cooperative organizations. Because of this hierarchical coordination, vertical communication is an important tool for enhancing farmers' commitment to a customer-oriented strategy. In addition, Trechter et al. (2002) found that good communication between members and cooperative managers is strongly related to member commitment with the agricultural cooperative, in that members who communicate more with the management are more likely to be faithful, deliver their products, and make transactions with the cooperative.

Cechin et al. (2013a) showed that when members have a high frequency of information exchange with the cooperative, they are more committed to a customer-oriented strategy. Vertical communication enhances customer-oriented strategies in cooperatives and promotes competition among members (Peng et al., 2018). On the other hand, horizontal communication enhances collective action. Following this argument, horizontal communication may be a strengthening of collective action through the community mechanism of involvement, that is, a mechanism that encompasses members' involvement in the governance of the cooperative and family involvement in training courses and specific committees (Cechin et al., 2013a).

Agency theory is another field that explores the importance of communication in agricultural cooperatives. In the study of Arcas et al. (2014), communication is an important aspect, mostly seen from the perspective of principal-agent problems, which can be a mechanism to mitigate the information asymmetry, a characteristic that clearly exists in the relationship between farmers and the cooperative. This relationship is often based on information asymmetry because, first, the cooperative has information about market prices, new technologies, and consumers' behavior that members do not. Second, when cooperatives are constantly growing, members become more heterogeneous in terms of their preferences, and decision problems emerge as it becomes increasingly difficult for managers or directors to understand, be aware, and bear all members' needs and wants (Cook and Iliopoulos, 2016; Hakelius and Hansson, 2016).

In the study of Arcas et al. (2014), communication is synonymous with sharing information to reduce information asymmetry in member-cooperative relationships. It is a governance mechanism capable of reducing agency problems, especially decision and follow-up problems, by increasing members' satisfaction with the cooperative organization and business. The authors argue that sharing information with members, that is, the degree of information members receive about the cooperative, is a factor that may positively influence members' satisfaction and, therefore, the continuity of the relationship [transactions with the cooperative]. Their results showed that the more information acquired by the members, the more they will be satisfied with the cooperative. In this sense, it is important that cooperatives adopt strategies to improve all channels of communication with their members to ensure quick flows and frequency of information exchange to keep members well informed about the cooperative organization, such as governance and social and business aspects.

It is also important for the cooperative to have information about the members' preferences. That is, a contrary flow of information is also necessary, as information about members' ambitions is essential for the management of the cooperative (Verhees et al., 2015). The development of information channels in cooperatives may reduce agency problems, especially by achieving better trust, commitment, and involvement of the members with the cooperative and reducing conflicts between members and management (Arcas et al., 2014). Furthermore, according to Chaddad and Iliopoulos (2013), members communicating to exchange information and make decisions are also a form of monitoring management. In this sense, as members' interests become more heterogeneous and the cooperative grows in size and complexity, members find it difficult to understand the various aspects involving the cooperative, which leads to reducing their monitoring efforts and increasing the costs of monitoring management.

When it comes to communication between members and the cooperative, the most explored theoretical framework is agency theory and its problems related to the lack of information between parties, information asymmetry, and ownership costs (Cook and Iliopoulos, 2016). The transaction costs theory also discuss communication as a powerful coordination mechanism to improve quality and, consequently, reduce coordination costs, especially in broiler production cooperatives (e.g., Cechin et al., 2013b). Third, communication is also a factor explored by social capital theory as a means of building member trust, commitment, and involvement in the governance of agricultural cooperatives (e.g., Trechter, King and Walsh, 2002; Xiang and Sumelius, 2010). Finally, more recently, together with the literature on social capital, Deng et al. (2020) developed a study about members' relationships, and consequently, the exchange of information and communication in the cooperative organization through the lens of social networks.

7 Final Remarks

The purpose of this paper is to explore the flow of communication existing in agricultural cooperatives and the communication media used by these organizations to communicate with their members. In addition, we sought to identify the theoretical approaches used to analyze communication in these companies. One aspect noted in this review was that few studies have empirically examined aspects of communication with members in agricultural cooperative contexts, even though it is important to member commitment and involvement in the co-op and building trust and transparency between members and management. Most of the papers included in the review did not include the topic communication in agricultural cooperatives as the main subject of the study. Most of the studies included in the analysis had a discussion, somewhere in the article, about communication between members and their cooperative, but it was not the main subject of analysis of the papers.

One of the conclusions of this paper is that the cooperative should consider establishing a varied channel of communication with its members. We found that there is vast literature, especially studies developed in Spain, which emphasizes the perspective of communication in agricultural cooperatives with the main purpose of marketing their products. Although these studies were not considered in this research, it is also worthwhile to understand these forms of communication, especially because cooperatives appear to put more effort into using digital communication channels when it comes to e-commerce.

This research did not deeply investigate horizontal communication, that is, communication between members. Studies have focused on this type of horizontal interaction between members of the cooperative to address issues such as organizational culture, cooperative education, training, and a sense of belonging to the group and others. As the subject of this article was the member-cooperative relationship, this type of communication was not explored in depth.

At large, studies on communication media adopted by agricultural cooperatives aimed to determine the effectiveness of communication tools implemented by organizations to communicate the firms' value packages to their members (e.g., Brown et al., 2013). However, there is an absence of studies in the literature on communication in agricultural cooperatives that explore the use of different communication channels, especially digital means, to enhance members' involvement in the governance of the cooperative. In future work, researchers may explore this relationship between digital communication and members' involvement in the governance of cooperatives in greater depth. In particular, because it is important to keep all heterogeneous members-owners aware of what is going on in a collective-owned organization (Iliopoulos and Valentinov, 2017).

In addition, new communication technology can reduce voting costs in the General Assembly (Xiang and Sumelius, 2010). In our review, only the study by Ahabyoona, Lubega and Kibukamusoke (2019), developed in Uganda, applied the use of digital technologies to facilitate the process of credit facilitation decision-making in agricultural cooperatives. It is worth noting that there is a growing knowledge area known as decision enhancement, highlighting the adoption of ICTs to facilitate decision challenges and improve decision-making in complex and unstructured organizational systems as cooperatives. It was also noted that the theoretical backgrounds that give rise to research on communication in agricultural cooperatives are both related.

The literature review demonstrates that cooperatives should not have a few means of communicating with their members. Instead, cooperatives must invest in a mixed strategy of communication channels to reach all members' profiles and preferences. Our explorative study suggests that digital ICTs may not have great potential alone. However, when combined with traditional communication vehicles, they might be a strong source of information sharing in agricultural cooperatives. Nonetheless, cooperatives should first conduct a member survey to know what the members' preferences regarding the content and frequency of shared information are and about their preferred means of obtaining that information from the cooperative.

It is also interesting to assess whether members are willing to use digital ICTs for meetings, contact the board and managers, participation in general assemblies, meetings with other members, making decisions regarding cooperative governance and keeping informed about management actions. It is suggested here that further researchers investigate the role of more modern digital tools of communication, not only email or websites, but also social media and online platforms, to find out if they work as complements or substitutes of more traditional communication channels in these organizations.

Finally, ensuring that communication with members practiced by different cooperatives is not the same. In some cooperatives, traditional communication tools may prevail, while in others, a balance between modern digital communication means and traditional ones or, perhaps, in light of the technological advances in recent years, some cooperatives could be more advanced in exploring digital communication channels in comparison to others. It would also be interesting to investigate the conditions that lead cooperatives to adopt digital channels of communication to exchange information with their members.

This study had some limitations. We are aware that there are many more aspects of communication that can be explored in organizations, such as agricultural cooperatives. For example, the studies selected in this analysis can be analyzed through the lenses of formal and informal communication. In addition, this study did not analyze horizontal or external communication. Of course, literature on both might exist. We are also aware that the criteria to select the articles were very strict in a way that could affect replicability and make it difficult to update the study by other researchers.

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