

Governance in agricultural cooperatives:

Coexistence of mechanisms?

Andrei Cechin, Jos Bijman, Decio Zylberstajn

Abstract

Organizational economics has largely overlooked the features which make the cooperative governance structure a unique form: democracy and community. Nonetheless, agricultural cooperatives are probably the best example of organizations that combine the four ideal mechanisms proposed by Grandori and Furnari (2008): market-like, hierarchy-like, community-like and democracy-like. The main contribution of our paper to the scientific discourse on hybrids, in general, and on cooperatives specifically is to look at each transaction as governed by several mechanisms. How do governance mechanisms operate on the empirical setting? What mechanisms are used for each transaction? Are these mechanisms complements or substitutes? Through a case study with one multi-product agricultural cooperative we could analyze characteristics of different transactions and through some light on these questions.

1. Introduction

Cooperatives have been characterized by organizational economics as hybrid governance structures, that is to say, an intermediate form between markets and hierarchies. They have been characterized as a mix of autonomy and interdependence with three defining pillars: they pool resources, they coordinate through contracts that provide a framework, and they combine competition with cooperation (Ménard, 2004, 2007)

Nevertheless, “hybrid” is a vague and broad category to understand governance structures that are neither markets nor hierarchies. One step further is necessary to understand the actual mechanisms used by a governance structure as a cooperative. Bradach and Eccles (1989) had already emphasized that any governance structure combines, in different degrees, the instruments of price, authority and trust. It is the combination that determines the efficiency enhancing function of a governance structure.

Organizational economics has largely overlooked the features which make the cooperative governance structure a unique form: its democratic management model in which one member has one vote, and its bidimensionality in which it is simultaneously a social community and an enterprise (Borgen, 2001; 2004; Valentinov, 2004; Osterberg and Nilsson, 2009). We conceptualize hybrids – focusing on cooperatives – as a distinct governance structure blending not only market-like with hierarchy-like mechanisms, but also community and democratic mechanisms (Grandori and Furnari, 2008).

A cooperative that engages in vertical coordination in the food supply chain selling to customers with strict quality requirements and certifying its products and production process, may shift the relative strength of some mechanisms in order to cope with the new challenges. A major challenge in agricultural cooperatives is to coordinate farmers’ activities with customer demands and explain to the membership why the traditional member orientation has

to be altered or at least complemented with this new orientation, that is to say, to vertically coordinate members' transactions with the downstream transactions in the chain, being able, for example, to define quality norms for their supply (Bijman, 2009; Hanf, 2009). How can agricultural cooperatives deal with the related managerial challenges? In order to answer such type of practical question it is useful to have a clearer picture of all the mechanisms within the cooperative structure and their functions.

The objectives of the paper are to develop set of governance mechanisms that can be used to analyse the governance structure 'cooperative', to develop propositions on the conditions under which particular (combinations of) governance mechanisms will be used, and to "test" these propositions in a case study of a multi-product agricultural cooperative. By taking only one cooperative as a case study, the community and democracy mechanisms are assumed to be the same for all transactions, although it does not mean that the outcome, the result of these mechanism are the same for members participating in different transactions.

2. Literature Review

2.1. Transaction costs, governance structures and mechanisms

The attempt to organize the participating farmers and firms along the food supply chain generates two types of problems. The first are related to conflicts of interests among the different actors, which can be solved by aligning the interests through governance mechanisms (Granovetter, 1985; Williamson, 1975). The second type of problems that emerge are related to the alignment of actions of farmers with processing units (Mesquita and Bruschi, 2008), that is to say, coordination problems which arise either when actors fail to share accurate knowledge about the decision rules that others are likely to use or they fail to understand how one's own actions are interdependent with those of the others (Gulati et al, 2005).

The Transaction Cost Economics framework is concerned precisely with these problems, beginning with the more general observation that because markets are imperfect, they give rise to Transaction costs. These can generally be represented in terms of two major components, transactions risks and coordination costs (Grover and Malhotra, 2003). Since the term control costs is not very used in the literature we will stay with the term control costs, which makes explicit that they are costs associated with controlling opportunism.

Control costs

Control costs relate to the first type of problems, i.e., they are due to conflicting interests in a transaction, thus can be understood as costs that arise with the potential of opportunistic behaviour. These costs have been also called "appropriation concerns" (Gulati and Singh, 1998). They include the risk that other parties in the transaction will shirk their agreed upon responsibilities. For instance, the supplier might deliver a product with an inferior quality if it knows the processor may not be able to identify and measure the violation. In addition, transaction risk might also include asset-specific investments made by one party in the relationship. In this case, the risk is that the processor may demand concessions to take advantage of the supplier, as soon as the latter makes the investment.

Some important transaction characteristics determining the efficiency of the corresponding governance structure are asset specificity and measurement costs. Investments that are specific to a transaction generate a lock-in which opens up possibilities for opportunistic

behaviour (Williamson 1996). If the transaction is prematurely cancelled, substantive returns on that specific investment are lost. Thus, asset specificity leads to the need to safeguard those investments, which entails the direct transaction costs of crafting safeguards, monitoring and enforcing the agreement, and indirect transaction costs of failure to invest in productive assets.

The difficulty of measuring some attributes of a good (Barzel, 1982) in situations of asymmetric information is also an important cause of transaction costs. Buyers may incur costs as a result of uncertainty over the quality of the product delivered. The main prediction here is that when it is relatively easy to measure the attributes of the supplied farm product the transaction will be efficiently governed by market mechanisms whereas when attributes are non-observable, or costly to measure, the transaction will be efficiently governed internally by a firm or by long-term buyer-seller relationships where relational norms play an important role (Barzel, 2000).

Measurement costs are particularly problematic in markets for products that have credence quality attributes, which means that the desirable attributes are not easily measured by the consumer, even after consumption of the product. In these situations, the seller has an information advantage and may gain from withholding information. It is also costly to specify these quality attributes in formal contracts, making self-enforcement of agreements through long-term relationships and reputation-building the most efficient safeguarding option (Barzel, 2000).

Thus, these factors may determine the choice of the governance structure. Transaction cost economics proposes a discriminating alignment between governance choices and exchange hazards; this alignment allows trade partners to coordinate incentives and efforts, so as to realize efficiency gains. Thus the key assumption is that parties in a transaction choose a governance structure to prevent or to reduce control costs, that is to say, to mitigate opportunism (Williamson 1993). The most important prediction is that when asset specificity is high or measurement costs is prohibitive to stipulate attributes of goods in market contracts, the chosen structure for the transaction will be hierarchy.

Coordination costs

Organization Theory points to a dimension of governance that is beyond the mitigation of control costs, that is to say, appropriation concerns in vertical transactions with members. The cooperative firm must still process information, make decisions taking new information into account and communicate these decisions, which implies in another type of costs. Costs that are related to aligning actions even in face of joint interest, thus, that arise because of cognitive failures. Even if all appropriation concerns were addressed, still it doesn't follow necessarily for coordination problems (Gulati et al., 2005). As pointed by Hodgson (2004), we only have to admit significant potential for misinterpretation to undermine Williamson's and TCE's emphasis on opportunism as a cause of the hierarchical governance structure.

In the case of a processor-supplier transaction, coordination costs might include costs of exchanging information on products, price, availability, demand, as well as the costs of rapidly adapting the quality of the product or production process (Grover and Malhotra, 2003). TCE has emphasized the first type of transaction costs, those that are due to conflicting interests.

Vertical coordination means more interdependency among stages in the chains. Customers depend on the cooperative firm processing products according to quality standards. The cooperative firm, in turn, depends on farmers supplying products with the same quality standard plus having production processes that accord to those standards. From Organization Theory (McCann and Galbraith, 1981), one can expect that an increase in dependency will cause an increase in formalization (ranges from informal personal agreements to more formal arrangements), in the level of control (where a higher level of control corresponds to detailed and strict rules, routines, and monitoring systems), and in the centralization of decision making.

In sum, governance structures have at least two functions: facilitate control and facilitate coordination. According to TCE, there is a continuum from spot market to hierarchy with different governance structures in the middle, which are considered a hybrid category.

Hybrids

On one pole of the continuum, there is market governance, which is based on prices as the main information devices used for independent decision making on investments and activities. Ownership is decentralized. However, situations involving different interdependent tasks and transmission of non-codified information would imply high transaction costs if the market was the only mechanism available. In addition, when specific investments are at stake, market governance becomes costly.

On the other pole of the continuum there is hierarchy, which is based on legitimate authority, and implies the articulation of the division of labour as well as the allocation of resources through formal rules and plans. Ownership is centralized with one party of the transaction. By means of command and control channels, hierarchy allows the efficient transmission and processing of information as well as centralized decision-making.

Williamson (1991) treats hybrids as displaying intermediate values in all dimensions of governance, that is to say, intermediate of coordination, intermediate capacity to align interest through incentives and behaviour control. This view of hybrids as intermediaries is challenged by Makadok and Coff (2009), who observe that hierarchies increasingly use market-like instruments such as high-powered incentives, transfer pricing schemes, and decentralized decision making. Also, some market transactions adopt hierarchy-like attributes including authority, administrative controls, and incentive systems less tied to short term performance. This suggests that the hybrid governance structure does not necessarily display intermediate values in all its dimensions of governance, but uses market-like mechanisms for some dimensions and hierarchy-like for others.

According to Ménard (2007), hybrids maintain distinct and autonomous property rights and their associated decision rights on most assets. However, they simultaneously involve sharing some strategic resources, which requires a tight coordination that goes far beyond what the price system can provide. Ménard's (2004) central proposition is that hybrid organizations combine contractual agreements and administrative "authorities". Because contracts are incomplete, hybrid arrangements require a mechanism to coordinate activities, organize transactions and solve disputes. This mechanism is basically the transferring of the authority regarding some decisions to a distinct entity. These authorities vary in degree of formalization and centralization of decision making.

Community

While transaction costs can be reduced by formal hierarchical structures, as argued by TCE, they can also be reduced by social embeddedness (Zenger, Lazzarini and Poppo, 2002; Lazzarini, Miller and Zenger, 2004). Embeddedness of transactions in a social context can reduce the cost of safeguarding against opportunism by diffusing information about reputations and by facilitating collective sanctions (Grannovetter, 1985). Therefore, informal governance also has two governance functions: repeated bilateral transactions develop trust and knowledge about the partners, reducing coordination and control costs.

The fact that transactions are embedded in social context is not necessarily conducive to trust and information exchange. It will depend if community governance is effective in that context, that is to say, if there is a set of shared norms that regulates how relations, and transactions, will be carried out repeatedly over time and how commitments will be monitored and what sanctions will be imposed in case of non-performance (Bowles and Gintis, 2002).

These shared moral norms are informal rules that facilitate, motivate and govern joint action of concrete people with whom one shares common identity feelings (Coleman, 1988), since they reduce the expectation that others will behave opportunistically. In other words, they generate trust, which in turn, reduce transaction costs (Adler, 2001; Nooteboom, 2007). Thus, it is possible to include this form of governance next to market and hierarchical mechanisms in the understanding of peoples' motivation and commitment. Ouchi (19080) has named this third form of governance as "clans".

The effectiveness of community governance in reducing transaction costs depends on some structural variables such as the size of the group involved - the larger the group, the more difficult it is to achieve collective action; the heterogeneity of the participants – the more homogeneous are the interests of the group's members the lower transaction costs in reaching joint decisions (Ostrom, 1999; 2000).

In addition, community is capable of aligning activities, that is to say, coordinating because a shared cognitive framework allows for costless exchange of intangible knowledge (Kogut and Zander, 1996). Thus, important consequences of effective community governance are less safeguard stipulations in the agreements, reducing control costs, and faster and less costly information flows, reducing coordination costs (Sporleder and Wu, 2006).

Governance structures embody several mechanisms

The inclusion of community as a third discrete alternative structure acknowledges the role of shared moral norms and cognitive framework as mechanisms to reduce coordination costs and control costs, but still implies a three-way trade-off: markets, hierarchies or communities.

The hybrid category is also too broad. Several authors have emphasized that governance structures use a combination of different governance mechanisms (Hennart, 1993; Grandori and Furnari, 2008; Makadok and Coff, 2009). Bradach and Eccles (1989), for example, emphasized that any governance structure combines, in different degrees, the instruments of price, authority and trust. It is the combination of different mechanisms that determines the efficiency enhancing function of a governance structure. Thus, it may be more realistic and useful to open the Hybrid black box, looking at mechanisms of governance rather than discrete governance structural alternatives.

If governance structures use mechanisms to address at least two types of problems, control of opportunism and coordination of activities, does it mean the mechanisms are complements? For instance, real firms' internal operations typically rely to some extent on both trust and price signals, even if their primary governance mechanism is authority. Inter-firm relations may also be seen as embodying and relying on degrees of trust and hierarchical authority, even if their primary mechanism is price. If they are in fact complements, does this change when demand for control and/or coordination increases?

According to Grandori and Furnari (2008), empirically observed markets, hybrids and firms embody varying mixes of four ideal mechanisms: market-like (highly powered incentives and capacity of coordinating action with minimal communication), hierarchy-like mechanisms (predictability, transparency and accountability through formal rules, procedures and evaluation systems), community-like (infusing cohesion and homogenizing interests through knowledge and value sharing), and democracy-like mechanisms (infusing voice and integrating different interests through diffusion of ownership, decision and representation rights). So these mechanisms are, in principle, complements, because they all coexist, at least, at a minimum level, but depending on the performance objectives of the organization, and on the business environment, some trade-offs between them are likely to arise, which makes them substitutes.

3. The agricultural cooperative and its governance mechanisms

Using Grandori and Furnari's (2008) framework for understanding organizations, one could say that agricultural cooperatives are probably the best example of organizations that combine the four ideal mechanisms: market-like, hierarchy-like, community-like and democracy-like.

Agricultural cooperatives are formally democratic in decision-making and ownership. Farmers always remain independent from the cooperative firm responding at some degree to market signals. At least when they are formed, agricultural cooperatives are tight communities with strong social ties among its members. Hierarchy is difficult to conceptualize in cooperatives, since, on the one hand, members are the formal owners of the cooperative firm (thus hierarchy "flows" from members to managers), and on the other hand managers tell the members what to do regarding supply operations (thus, here hierarchy "flows" from manager to member). Ownership is not centralized as in a hierarchy, thus a cooperative cannot be considered as one.

One way out of this is to look at "authority" as a hierarchy-like mechanism used by any hybrid. As put by Ménard (2004; 2007), authority on some decisions may be with cooperative firm managers, since the membership may have transferred it to this entity in order for it to coordinate activities, organize transactions and solve disputes. In addition, the ability to use authority as a mechanism is not limited to intrafirm settings, but also can be achieved between organizations by means of contractual provisions, which essentially "produce the effects of hierarchies" (Stinchcombe 1985, p. 165). We are only interested in the authority flowing from the management to the membership (constituted by suppliers).

Cooperatives and hierarchy-like mechanisms

From a food supply chain perspective, authority is with the coordinator of the system, usually retailers or processors. Therefore, when we look at the degree of authority in cooperatives we are looking at the strength of the command structure which is in charge of designing formal rules, procedures and evaluation systems, and monitoring suppliers compliance to them. This command structure of the cooperative firm, comprised by managers, functions as the coordinating agent of this “strictly coordinated sub-system” (Zylberzstajn and Farina, 1999) of the food chain.

Advantages of hierarchy are basically a higher capacity to control performance of the other party in the transaction when compared to markets and mitigate the costs associated with the holdup problem, which arises when one party in the transaction has non-redeployable assets. In other words, hierarchies facilitate the control of opportunism where measurement costs are high or when specific investments were made.

In cases of interdependency as food supply chains, hierarchy allows for coordinated adaptation to changing circumstances. Here lies the other advantage: reduced coordination costs when compared to markets because of higher capacity of hierarchy to process information, to take it into account in decision making and to communicate these decisions.

A typical general disadvantage of hierarchy is the costs of shirking behaviour since low powered incentive may not stimulate the maximum effort. More importantly, hierarchical mechanisms are inherently contrary to cooperative principles as voluntary membership, joint interests, and participatory decision-making, thus it does not combine well with the democratic traditions and norms in cooperative governance. Strengthening hierarchy in a cooperative may eventually erode the commitment of members and thereby even jeopardize the very existence of the cooperative.

Transaction cost theory, when applied to cooperatives, predicts the more easily redeployable the assets held by the cooperative firm, the closer to market arrangements will be the governance of transaction between members and cooperative. Symmetrically, the more specific to the transactions organized by a cooperative are the assets jointly detained by the cooperative firm, the tighter the closest to hierarchy will be the arrangement (Ménard, 2007). In the latter case, the cooperative would need to safeguard its investments, and it could do so for by introducing more hierarchical mechanisms as contracted production in the member-coop transactions or even excluding members that are not able to comply with the standards that are needed to protect the brand (Bijman, 2009).

In addition, if the cooperative's customers demand non-observable, or costly to measure attributes of a product, particularly problematic in markets for products that have credence quality attributes, hierarchical mechanisms as closely monitoring members' production processes, long-term relationships and agreements with members for that specific transaction would play an important role. Thus, hierarchy-like mechanisms can reduce control costs in cooperatives.

When interdependency increases in the food chain, the need for coordination increases. This means more information needs to be processed, and decision making becomes more dependent on constant information updates because of shifts in market circumstances or in customers' quality requirements. Hierarchy-like mechanisms as an authority system to put it in place, and standard operating procedures that allow quick decisions, can be an effective

solution in situations of high anticipated coordination costs (Gulati and Singh, 1998) by clarifying decision-making procedures and anticipating issues before they arise (Stinchcombe, 1985). Thus, hierarchy-like mechanisms can reduce coordination costs in cooperatives.

We expect the higher the degree of interdependency between transactions in the chain which, the higher will be anticipated coordination costs, therefore, more authority will flow from managers to membership.

We expect that transactions which demand more control of the quality of production processes, due to credence attributes (impossible to measure even after consumption), the higher will be anticipated control costs, thus the more hierarchy-like mechanisms as on-site monitoring will be used.

We expect that transactions for which the cooperative firm has specific investments – as a brand or a certification –, the higher will be anticipated control costs, thus the more hierarchy-like mechanisms as contracted production will be used.

Cooperative and community-like mechanisms

Traditionally, cooperatives present problems with a particular kind of opportunism, the free-riding behavior. Overcoming the free-rider problem is crucial for the success of collective action. The group of members has a common interest among them, but there is a potential conflict between the common interest and each individual's interest. The problem, according to Mancur Olson (1965), is that individuals cannot achieve joint benefits when left by themselves if everyone would be benefited whether or not they contributed to the effort.

Nevertheless, many collective-action problems are embedded in preexisting networks, organizations, communities, or other ongoing relationships that often are capable of enforcing norms and overcoming member free-rider problems by directly punishing 'anti-social' actions, even without the punisher expecting to be personally repaid for this (Bowles and Gintis, 2002; Hayami, 2009; Ostrom, 1999; 2000).

In addition to being an enterprise, the cooperative is a social community where trust, moral norms and cooperative values are important governance mechanisms. The strength of cooperatives in effecting coordination resides, in principle, in their tendency to involve lower information asymmetries and greater trust in their relationships with farmers than would be the case with investor-oriented firms (Sykuta and Cook, 2001).

In agricultural cooperatives, members' identification with the organization's goals and its leaders has been identified as a factor determining commitment. Borgen (2001) showed that identification with the collective organization conditions members' trust in the benevolence/intentions of the management, and this, in turn, influences members' commitment (and loyalty).

If we understand commitment as incentive alignment, i.e., the overcoming of motivational problems, then empirical literature on cooperatives shows that community mechanisms are important in controlling opportunism. The most important consequence of community regarding the control (of opportunism; free riding) dimension in cooperatives is to mitigate members' deviation of production due to short term economic benefits (Fulton, 1999). Community mechanisms play a role potentially in every transaction since they are less related to the characteristics of the latter than to those of the relationship. Therefore, if effective it can

guarantee members' loyalty in different transactions. In addition, effective community mechanisms can make protective stipulations in contracts unnecessary.

Nevertheless, structural variables, such as the composition and the size of the membership, are crucial factors in determining the efficacy of community mechanisms. Small cooperatives and cooperatives with homogeneous memberships are more likely to make efficient use of community governance.

We expect that in a cooperative with a small and homogeneous membership, community mechanisms will be sufficient to guarantee loyalty no matter what is the transaction.

We expect that in a cooperative with a large and/or heterogeneous membership, community mechanisms will not be sufficient to guarantee loyalty no matter what is the transaction.

Community also has a coordination dimension besides that of control of opportunism, and it has to do with the fact that in a community there is a shared cognitive framework which reduces misunderstanding and allows for easier exchange of tacit knowledge. Therefore community mechanisms reduce coordination costs (Kogut and Zander, 1996).

We expect that transactions with a high interdependency on downstream customers' requirements, therefore in which communication between parties is crucial, will rely more on community mechanisms.

Cooperatives and market-like mechanisms

Market governance is based on prices as the main information device for coordination. Participants take independent decisions about their own investments and activities, mainly based on the incentives they receive. The advantage of market-like mechanisms is that they allow for autonomous adaptation with minimal communication. Therefore, it is less costly when there are no specific investments at stake and when measuring performance and the attributes of products is relatively easy.

Cooperatives generally pay 'market' prices to their members for the products delivered. Thus, the production activities of the farmer and the processing and marketing activities of the cooperative firm are coordinated through the price mechanism. Pay-for-performance schemes where the producer receives according to his efficiency are also market-like mechanisms since they work as a high powered incentive. In addition, discounts for lower quality than the required are also a market mechanism, in this case a disincentive.

Disadvantages of markets are well discussed by Transaction Costs Economics which points to all kinds of problems that arise when one party in a market transaction makes specific investments and is locked in a hold up situation. In addition, when measuring attributes of a transaction is too costly market governance loses its power because it is based on pay-for-performance. If one party cannot measure performance of the supplier adequately, market becomes costly.

We expect that transactions with a higher level of specific investments or those with credence attributes will rely on less market-like mechanisms.

We expect to see more market-like mechanisms when assets are easily deployable and measuring all the relevant attributes of the transaction is easy.

When the membership of the cooperative becomes larger and more heterogeneous, community governance may not be sufficient to incentivize loyalty and farmers may begin to require more market-like mechanisms to be fully committed to the cooperative.

Therefore, we expect to see more market-like mechanisms in large and heterogeneous cooperatives as an incentive for members not to free-ride.

Cooperative and democracy-like mechanisms

A cooperative is also a formally democratic organization and its suppliers are at the same time members who vote. This is especially important when considering collective ventures as shown by Menard and Raynaud (2010). In their empirical analysis of the millers' alliance, members of a collective venture endorse a voting procedure to exercise their control rights. Despite the uneven distribution of shares across members of the alliance, decisions are made according to a "one man, one vote" rule, as in cooperatives (Menard and Raynaud, 2010).

In the effort to understand governance in any collective venture, especially in cooperatives, it is necessary to consider a fourth mechanism, besides market-like, hierarchy-like (or authority) and community-like. Democracy-like mechanisms consists in the diffusion of ownership and decision rights through participatory decision-making and "voice giving" procedures. This mechanism aims at integrating the judgments and interests of multiple actors through representation devices.

A participatory decision framework and joint ownership strengthens the development of common interests, and this is probably the greatest advantage of this mechanism. In fact, the democratic feature is important *per se* in determining members' commitment to the collective organization. Osterberg and Nilsson (2009) found that in Swedish cooperatives members' perceptions of their participation in the governance of the organization are key determinants of members' trust and commitment. Here, the role of "voice", i.e., the possibility to complain about a relationship and try to work things out, seems to be important in the process of trust building within organizations (Nooteboom, 2007; Six, 2005).

Therefore, since ownership of the cooperative's assets is democratic, it has the potential to reduce control costs by inducing members to have common interests. In addition, if the participatory decision framework generates the perception in members that they are participating, that they are given "voice", control costs may be reduced as well.

Nevertheless, there are limits to democratic mechanisms when a high level of quality control is required from potential downstream customers. Members are often interested in selling all of their products to the cooperative, no matter the quality, while the cooperative, in order to meet buyers' requirements, should put in place a strict quality control system. If the decision about quality standards is taken democratically, there is a chance that the majority decides to set low standards, which may mean losing market opportunities. There is a potential conflict between the cooperative firm's interests in selling to higher quality markets and each individual member's interest to sell of its products (Bijman, 2009). Therefore there are control costs of democracy when the cooperative firm has to decide whether or not to supply to a more quality demanding customer.

Thus, we expect that transactions with higher demands for quality coming from potential downstream customers will be less subject to democratic mechanisms.

In addition, when interdependency in the food chain is high, therefore, when quick decisions need to be made in order to adapt to new circumstances, democratic decision making may be too slow to allow for coordinated adaptation.

We expect that the higher the interdependency of transactions on downstream customers' requirements, the higher the coordination costs, and, therefore, the less they will rely on democracy-like mechanisms.

4. Methods and Data

The method used for data collection was an embedded - more than one sub-unit of analysis - Case Study Research Method (Yin, 2003), with one agricultural cooperative in southern Brasil. The selected organization is multi-product (Poultry, Pork, Soybeans, Maize, Vegetables, Manioc), processes farm products and strives for maximum control of vertical product flow, through branding and the ownership of local supermarkets. The sub-units of analysis are three industry branches within the cooperative: soybeans, poultry and vegetables.

The questions we intend to answer through the case study are the following: how do governance mechanisms operate on the empirical setting? What mechanisms are used for what transactions? Are these mechanisms complements or substitutes?

For the purpose of simplicity, in the operationalization of the concept of 'governance mechanisms', we will follow Grandori and Furnari (2008) by selecting and measuring practices that can be considered 'carriers' of one mechanism. For example, 'pay for performance' practices will be considered carriers of market-like mechanisms, while centralized decision making will be considered carriers of hierarchy-like mechanisms. A semi structured questionnaire was built for this purpose. To analyse the qualitative data a table comparing three different transactions was built in order to show the relation between the characteristics of each transaction in terms of control and coordination needs and the mechanism used for them.

During the 2 visits in 2010 (March and October) to Cooperative LAR the author visited farms and industrial and county units, conducted in-depth interviews with managers and producers, participated in committee meetings and had access to internal documents such as internal press magazines. The following actors from inside the cooperative were interviewed: Quality Program Manager, Industrial Unit Managers (Poultry, Soybeans and Vegetables), Livestock Division Manager, Industrial Division Manager, Education Advisor, Chief Secretary (member part of the Executive Directory), Poultry, vegetables and soybean Farmers.

The interviews followed a protocol that focused on 2 main aspects: control and coordination demands due to the characteristics of transactions being one, and practices that carry the four governance mechanisms the other. Initially the author thought that the questionnaire could be answered by both managers and producers. It turned out that managers could easily answer questions related to control and coordination demands due to the characteristics of transactions, and to vertical arrangements with farmers, after all they are the contracting party and it is their job to determine the control, monitoring, incentives and information transmission schemes. In other words, managers could answer questions on market-like and hierarchy-like mechanisms, nevertheless, they couldn't answer questions related to the

specific feature of cooperative governance: for instance, issues related to democracy and participation, community and identification. Their main point was that things were completely separated.

“We (processing unit managers) are responsible for the industries which are owned by the coop. We are not members and not involved in the governance of the cooperative organization; we are hired to make that specific industry branch work. For us, members are suppliers and that is all” (Soybean processing unit manager). Still, by making such commentary, important insights were given about the importance of democracy-like mechanisms in the cooperative.

4.1. Background of the Case Study

Data from the Organization of Brazilian Cooperatives (OCB) shows the importance of agricultural cooperatives in this country. Their economic importance goes beyond the number of cooperatives and jobs created; these organizations contributed 38.4% of agricultural GDP and hold about 7.5% of total capacity of grain handlers in the country (OCB, 2009). The south and southeast regions concentrate the cooperatives whose regional aggregated revenue is equal to respectively 51% and 39% of total revenue. Cooperatives in the state of Paraná (in the South) are a case of economic success, leading Brazilian exports of agricultural goods.

In the early 1990s, agricultural cooperatives were faced with a scenario of uncertainty that came up with the process of openness of the Brazilian economy, high interest rates and poor harvests. In an increasingly competitive market, many cooperatives were forced to reorganize and set new focuses. At the time, producers were losing income on their property and were thickening the rural exodus in search of work in city. The analysed cooperative, from the state of Paraná, is nowadays a large industrialized cooperative with thousands of members from which, like most cooperatives in that state, was founded in the 1960's initially by a very small number of farmers.

Cooperativa LAR was idealized by 55 farmers coming from the states of southern Brazil. At first, coop LAR was dedicated to the marketing of agricultural products, mainly grains. In 1976 the coop starts a horizontal diversification process acquiring its own fleet for transportation. The 1980s was a milestone for LAR's growth, when it started operating 13 supermarket stores in addition to investing in social education and technical training of its members and their families. Soybeans processing also began in the 1980s with the acquisition of an oil industrial unit, and, in 1985, LAR puts into operation a Feed Industrial Unit.

The 1990s was characterized by the administrative modernization of LAR, with the introduction of practices such as strategic planning, reducing managerial costs, and emphasis in business performance. Internal reforms were developed with the goal of reducing the time of decisions, such as the 5S¹ reducing waste program, originally from post-World War Japan. LAR was ranked in 1990 for the first time among the 500 biggest companies in terms of turnover in the country (Marschall, 2009). The end of 1990's represented a landmark change in the economic profile of the coop, with the new poultry and vegetable industrial units which led the coop to become definitely a food producer, with its own LAR brand for frozen poultry

¹Phase 1 - Seiri (Sorting); Phase 2 - Seiton (Straighten or Set in Order); Phase 3 - Seiso (Sweeping); Phase 4 - Seiketsu (Standardizing); Phase 5 - Shitsuke (Sustaining)

meat and canned and frozen vegetables. In 2000, the poultry industry was enabled to export for the Common European Market through the license of the Ministry of Agriculture (LAR, 2008).

4.2. Mechanisms and transactions: operationalization

In order to focus on the differences between transactions and the mechanisms used for them we will first follow our initial assumption that the objective democratic and community mechanisms are the same for all transactions since they features of the organization as a whole. We will explain the general working of these mechanisms within the analyzed cooperative before comparing the three transactions: poultry, vegetables and soybeans. But first we will show the operationalization for each mechanism and for the characteristics of transactions.

Table 1. Governance Mechanisms

<p>Hierarchy: Importance of monitoring producers' activities on-site Importance of input control Presence of Contract Possibility of exclusion as a penalty for non-compliance</p>
<p>Market: Presence of pay-for-performance schemes Autonomy in deciding on farm productive activities Importance of monetary incentives for members' loyalty</p>
<p>Democracy: Members' participation in General Assemblies Members' participation in daily decision making Members' participation in strategic decision making Members' participation in defining quality grades</p>
<p>Community: Members' loyalty to the cooperative Sharing of knowledge on productive activities Sharing of cooperative values among members Importance of committees and of personal interaction as channels for transmitting relevant information</p>

Table 2. Characteristics of transactions

Who sets quality requirements for the products?
Difficulty in aligning members' activity with the processing activities of the coop
Presence of specific investments as brand and/or certification in order to sell to a specific customer
Extent to which production processes are custom-tailored?
Difficulty (costs) of switching customers?
Extent to which the Coop's brand is associated with a specific quality
Difficulty in measuring members' product quality
Presence and importance of quality requirements from downstream customers for production processes

4.3. Activity committees as community governance

In order to understand community mechanisms empirically, the visits and protocol had the aim of answering if and how does the organization deliberately infuse cohesion and homogenizes interests. The literature considers that knowledge and value sharing are the aims of such mechanism, therefore, in a cooperative, we should look if and how cooperative values

and principles, and knowledge on the cooperative's strategy and on best practices for each productive activity is diffused.

The cooperative has the practice of giving voice to members through the Central Education Committee, which has an advisory and auxiliary function to the Board. This Central Committee informs the Board of directors of the desires and demands of the membership. In addition, it is responsible for transmitting and disseminating the general guidelines of the company to the membership.

Linked to this Central Committee are the Productive Activity Committees which intend to promote professionalism and economic viability of farm production, within the productive activities undertaken by the coop such as poultry, vegetables, swine and agriculture. They diffuse knowledge and best practice guidelines regarding productive activities, where technicians, producers, professional managers and one member from the Executive Directory (usually the Chief Secretary) interact and discuss the challenges and the recurrent problems in that chain.

In the analyzed cooperative, knowledge on productive activities is shared in these committees as well as cooperative values and culture is diffused, in a tentative to generate a collective understanding and agreement with the cooperative strategy. This happens for every transaction.

As we have seen, commitment and loyalty is a desirable outcome of community governance. When asked about the issue of loyalty and sharing of cooperative principles among the membership, interviewed producers, the Chief Secretary, and the Education Advisor converged in saying that while some members participate actively in the cooperative's governance, through participation in committees, others rarely participate.

The fact is that member commitment and loyalty in the analyzed cooperative is not achieved only with community mechanisms. There is a market-like mechanism to incentivize loyalty which is a payment of 2% of the value of all transactions made with cooperative firm during the year for those members who were fully loyal to the cooperative, that is to say, bought inputs and sold all products to their own cooperative. Thus community governance in this cooperative is not enough, not effective in guaranteeing loyalty, probably because of the structural variables size and heterogeneity.

4.4. Formal democracy

To understand democratic mechanisms the case study aimed at answering if and how members participate in the cooperatives governance. Both farmers and managers were asked in semi structured interviews about the importance of members' participation in the day-to-day decision making, in the setting of quality standards and in strategic issues.

Farmers do not decide anything regarding the cooperatives' day-to-day operations, or regarding the quality standards, since they are supplying to vertically coordinated chains with top-down quality requirements coming ultimately from retailers and final customers. During the last decade public regulation of hygiene / safety / sanity became stricter. Even commodities as soybeans have to comply with public standards for good agricultural and processing practices. In addition, there was a strengthening of private standards such as certifications from BRC and McDonalds.

Members decide on strategic issues by voting. The Executive directory together with the board of directors comes up with a project, such as building a facility or entering a new business, and brings the project to the assembly to be voted. Members decide with their votes on these occasions. This happens regardless of the transaction.

5. Governance mechanisms used for each transaction: a discussion

Poultry

The most important characteristic of the poultry transaction in terms of control and coordination needs is the fact of selling to a customer who has strict quality requirements as McDonalds. In order to continue being a supplier, specific procedures at the processing unit level but also at the farm level have to be followed. Among the requirements are Non-GMO feed and respect for sanitary and animal welfare conditions.

Quality requirements concern both conforming to meat quality standards, i.e., quality that is intrinsic to the product, but also to sanitary and animal welfare standards, i.e., quality of the production processes, which are credence quality attributes. There are audits to make sure the coop is conforming to specific customers' and third party certification norms. Among the audits to which the processing unit and the poultry producers are subject are McDonalds, British Retail Consortium. The cooperative complies simultaneously to several requirements from different clients. Since they are non-conflicting requirements, all the poultry is produced complying with several of the sanitary and animal welfare conditions and meat quality standards in order to sell to its European, Russian and Asian customers.

The whole chain must be coordinated in function of quality requirements since even the feed must have "human feeding quality". In addition, the cooperative exports chicken feet to Chinese customers, thus poultry suppliers are discounted for things such as chicken feet callus. To avoid this, producers have to manage their production process in specific ways.

There are simultaneously high measurement costs, because of process quality requirements, and specific investments at stake, for instance reputation (and certification) with customers as McDonalds.

What are the governance mechanisms used for this transaction?

Hierarchy-like

These are the most important governance mechanism for these transactions because of the high transactional risks. If farm level production is not in accordance with the standards requirements the coop firm risks losing the customer. Thus, monitoring of members poultry raising activity is crucial, which is done by field assistants from the cooperative who are veterinary technicians. They continuously update information on the farmers' production process to the cooperative firm, and on new raising techniques to the farmers.

Strict monitoring of the production process takes place not only because of quality requirements but also to assure efficiency. It is possible to say that these transactions are quasi-integrated – in the sense that the coop owns the inputs, and the farmers' job is to raise the animals in a very controlled environment– although the production units (farm and processing firm) continue being assets under different ownership. Contracts with members

specify a payment formula, obligations of both parties, conflict resolution and delivery conditions. If producers have very low efficiency during 3 raising periods, they will be given a last chance to improve otherwise they will be excluded of the poultry business within the cooperative.

The fact that the cooperative is complying to private standards with production process audits, means it has to process and keep an enormous amount of information regarding each of members' quality - quality of delivered products, quality of process, efficiency indicators. A professionalized management is needed to organize the information, use the information in decision making in order for the cooperative's policies to be more technically based and more effective. And this is the coordination role of authority in poultry transactions. Information on every producer is centralized so the cooperative knows exactly who is performing badly in terms of efficiency and of compliance with product and process quality requirements.

Market-like

The payment scheme is a composed productivity formula which determines the producers' share. It is a partnership contract, where the producers' share depends on the efficiency of their own production process. In a given time there are different grades associated with colours (red, orange, yellow, green). Each colour is a range of productivity indexes. Price is different for each colour. If producer is assessed 3 times in red (lowest productivity range) – he is called by the managers and receives a last chance to improve efficiency; a specific implementation plan and training is provided. This is high powered incentives to align interests of members with those of the cooperative. Although measurement of process quality such as sanitary and animal welfare conditions is difficult, it is highly correlated to the efficiency of the producer. If chicken are stressed they do not convert food into body mass at the same rate, and bad sanitary conditions leads to illness and deaths lowering efficiency.

In addition, a market-like mechanism is used to incentivize loyalty, even if this is not a big problem in poultry transactions. 2% of the value of all poultry transactions made with cooperative firm during the year is paid for those members who sold all their poultry to their own cooperative.

Community-like

If the Chief Secretary is right, these members tend to participate more actively in the cooperative and their families tend to get more involved in the social activities. Of course, they are subject to strict control and monitoring, therefore they are less prone to deviate production since any deviation would be easily discovered. Regardless of the control dimension of community which is to guarantee loyalty, the coordination dimension of community is important in poultry. Knowledge exchange is very important and the most important channels are personal interaction with technicians and interaction with other producers in the committees. This informal interaction facilitates coordination.

Vegetables

The most important characteristics of the vegetable transaction in terms of control and coordination needs is the fact that to be frozen and canned coal flower, broccoli, carrot, sweet corn need to be fresh and comply with some intrinsic quality requirements such as size, colour, moisture and nutrients.

The cooperative's production process is not custom-tailored as is in the poultry chain, and switching customers does not represent costs since the cooperative sells canned and frozen vegetable to different supermarkets. In addition, the brand is not associated with a specific vegetable quality. Furthermore, the transaction does not have credence attributes since quality requirements concern only intrinsic characteristics of the product which can be detected by visual inspection, microbiological test and consumption.

What are the governance mechanisms used for them?

Hierarchy-like

In the vegetable business there are more detailed contracts between member and cooperative, when compared to poultry transactions, specifying the price, the variety of what will be planted, conflict resolution mechanisms, when to plant, how much to plant, i.e., the contracted area, the obligations of both parties, the quality measurement methods, and the delivery conditions.

Thus the farmer-coop transaction is subject to less monitoring and the degree of integration when compared to poultry is lower. While Poultry transactions are quasi-integrated, the arrangement for vegetable transaction is a case of contracted production with fixed price. Control at deliverance through visual inspection and microbiological inspection in the coop's lab is sufficient, and monitoring of the process, although important, is not as in poultry.

As in Poultry, the industrialization process meant controlling downstream stages of the chain transforming farm product into canned and frozen vegetables. The coop firm has to process and keep an enormous amount of information regarding each of members' quality - quality of delivered products. This information is constantly updated. A professionalized management is needed to organize the information, use the information in decision making in order for the cooperative's policies to be more technically based and more effective.

Market-like

Discounts for lower quality function as a market-like mechanisms of disincentive. In addition, the same market-like mechanism is used to incentivize loyalty, even if this is not a big problem in vegetable transactions.

Community-like

If the Chief Secretary is right, these members tend to participate more actively in the cooperative and their families tend to get more involved in the social activities. Of course, they have a contracted production arrangement with the industrial unit, therefore they are less prone to deviate production since any deviation would be easily discovered. Regardless of the control dimension of community which is to incentivize loyalty, the coordination dimension of community is also important in vegetables. The most important knowledge exchange channels in this transaction are personal interactions with technicians and interaction with other producers in the committees. This informal interaction facilitates coordination.

Soybeans

The most important characteristics of the soybeans transaction in terms of control and coordination needs is the discrimination between GMO and GMO-Free grains. The Cooperative processes part of its soybeans into animal feed. And the feed needs to be GMO-

Free. Therefore, specific machinery would be necessary to process GMO-Free grains in order to avoid contamination. The Coop does not have specific machinery though. Part of the supplied GMO-Free grain is, thus, used to “clean” the machinery.

Poultry customers as McDonalds require that chicken feed is GMO-Free, that is why the Coop, who owns the feed industrial unit, has to process GMO-Free grains as well. The processed GMO-Free soybeans are then certified.

The cooperative’s conventional (GMO) soybean transactions are not associated with any specific quality and do not have specific assets involved. Switching customers is, thus, not a big deal since the cooperative sells unprocessed soybeans in spot market and the processing is done indoors. Quality standards for soybeans are international and they refer to intrinsic quality attributes such as size, moisture and nutrients.

What are the governance mechanisms used for them?

Hierarchy-like

Different from all other transactions in the analyzed cooperative, information on soybean producers is NOT centralized. Therefore, not even for the purpose of coordination there is an administrative authority in soybeans transactions. There are units for buying and selling soybeans in all the 11 counties where the cooperative operates. Technicians are also allocated throughout these county units. When the authors tried to get a list of all soybeans producers there was no such thing. Since interdependency is not important here coordination costs are insignificant and soybean transactions are coordinated through prices with minimal communication. Each producer decides on how much to plant depending on market circumstances.

Market-like

Market mechanisms are precisely the mechanisms in soybeans production. Transactions occur in the spot market; there are no contracts. Even in the case of GMO-Free soybeans a market mechanism as price premium is what incentives, but not necessarily determines, production. Producers have the option to produce GMO or GMO-Free soybeans, and they will get a 2 % price premium if the sample of GMO-Free soybeans is not contaminated when delivered the processing unit.

Since quality requirements refer only to intrinsic characteristics and there are international standards for this, control at deliverance through visual inspection and microbiological inspection in the coop’s lab sufficient, and monitoring of process is not important.

Finally, the market-like mechanism to incentivize loyalty was designed for soybeans transactions since here members are prone to “deviating” production if another buyer offers a higher price, and there is nothing the cooperative can do about it.

Community-like

According to the current Chief Secretary, specialized grain producers tend to be less loyal, which means it is not rare that they will sell their product to others (outside the coop) if a better price is offered. Although there is a committee for agriculture (maize, wheat and soybeans), because there isn’t an strong interdependency with processing activities and the need for knowledge exchange is way lower than in other transactions, these members

participate less in committees, and because of that one could speculate they are not as exposed to the diffusion of coop values and principles as other members are.

6. Final considerations and suggestions for future research

As far as the empirical research on hybrids is concerned, the operationalization of the four governance mechanisms may prove to be useful as shown by Grandori and Furnari (2008). Specifically, regarding agricultural cooperatives this framework allows the researcher to look at practices in the empirical setting that embody the ideal governance mechanisms. To fully understand governance in cooperatives and the challenges of vertical coordination in food supply chains, attention must be paid to all of these mechanisms. It is not rare that papers on cooperatives conclude with the suggestion for future research of looking more closely at social community aspects.

In principle governance mechanisms are complementary, since we can identify practices within agricultural cooperatives that embody all of them. Nevertheless, when the need for control and coordination is higher due to strict quality requirements from customers, some mechanisms may substitute others. Trade-offs may emerge. Beyond the classic trade-off between market and hierarchy-like mechanisms, which emerges in the control of opportunism when the cooperative makes specific investments to sell to customers and depends on its members to supply the right quantity and quality, there is also a trade-off between democracy and authority regarding the coordination dimension of governance. In order to make quick decisions taking into account the constant updating of information authority may substitute for democracy in an important subset of decisions.

Community mechanisms are in principle complementary and necessary, but it seems when a cooperative gets large and heterogeneous, they cease to be effective enough to guarantee members' loyalty. In the analyzed cooperative, market-like mechanisms were needed to incentivize member loyalty. Nevertheless, community mechanisms play a coordination role in every transaction through activity committees where knowledge on productive activities and on the cooperative's strategy is diffused.

The main contribution of our paper to the scientific discourse on cooperatives is to look at each transaction as governed by several mechanisms. From the case we learned that market and hierarchy mechanisms coexist in a transaction, for instance through the payment of 2% over the value of all transactions the member has done in one year with the cooperative. It is a market-like mechanism used to incentivize members' loyalty. Also some hierarchy-like mechanisms are present in all transactions since information is centralized and decisions are made by an administrative authority, for the purpose of reducing coordination costs.

For further research, developing a structured questionnaire with scale answers to be applied as a survey among members could be useful to make comparisons *across* cooperatives regarding the salience of each mechanism, for example. Therefore, this is the biggest limitation of our paper; by looking at only one cooperative it is not possible to compare objective democratic and community mechanisms since they are the same within one cooperative. Still, because community involves a cognitive aspect, one could still make a comparison within one heterogeneous cooperative using a survey to measure perceptions. Do these members have a different perception regarding identification, trust, perception of participation? And if there are differences among members are they correlated to the kind of transaction they are part of?

Since we don't have results that can be generalized, the most we can say regarding the implications for cooperative managers is that all mechanisms should be taken into account if the objective is to reduce transaction costs related to controlling opportunism and coordinating activities, and simultaneously guarantee members' commitment and loyalty, essential for the existence of the cooperative.

References

- Adler, Paul S (2001). "Market, Hierarchy, and Trust: The Knowledge Economy and the Future of Capitalism". *Organization Science*, vol. 12 (2): 215-234.
- Barzel, Yoram (1982). "Measurement cost and the organization of markets". *Journal of Law and Economics* 25: 27-48.
- Barzel, Yoram (2000). "The Role of Contract in Quality Assurance". *A Journal of the Canadian Agricultural Economics Society*, 1: 1-10.
- Bijman, Jos (2005). "Cooperatives and heterogeneous membership: eight propositions for improving organizational efficiency". Paper presented at the *EMNet-Conference*. Budapest, Hungary, September 15 – 17, 2005.
- Bijman, Jos (2009). "Vertical coordination in the agrifood supply chain; structure and strategy of the agricultural cooperative", In: Decio Zylbersztajn and Onno Omta (eds), *ADVANCES IN SUPPLY CHAIN ANALYSIS IN AGRO-FOOD SYSTEMS*, Sao Paulo: Editora Singular, 2009, pp. 55-87.
- Borgen, S.O. (2001) "Identification as a Trust-Generating Mechanism in Cooperatives", *Annals of Public and Cooperative Economics*, Vol. 72 No.2: 209–228.
- Borgen, S.O (2004) "Rethinking incentive problems in cooperative organizations". *Journal of Socio-Economics* Volume 33, Issue 4: 383-393.
- Bowles, Samuel and Gintis, Herbert (2002). "Social Capital and Community Governance". *Economic Journal*, Vol. 112: 419-436.
- Bradach, Jeffrey L. and Eccles, Robert G (1989). "Price, authority and Trust: From Ideal Types to Plural Forms". *Annual Review of Sociology*, vol 15: 97-118.
- Chaddad, F.R. (2009). "Both Market and Hierarchy: Understanding the Hybrid Nature of Cooperatives". Paper prepared for the International Workshop "Rural Cooperation in the 21st Century: Lessons from the Past, Pathways to the Future," Rehovot, Israel, June 15-17, 2009.
- Chaddad, F.R. and M.L. Cook (2004), "Understanding new cooperative models: An ownership-control rights typology," *Review of Agricultural Economics*, 26 (3), 348-60.
- Coleman, James. S. (1987). "Norms as Social Capital." In *Economic Imperialism: The Economic Approach Applied Outside the Field of Economics*, ed. G. Radnitzky and P. Bernholz. New York: Paragon House.
- Fulton, M.E (1999). "Cooperatives and Member Commitment." *The Finnish Journal of Business Economics* 4 (1999).
-

- Grandori, Anna (1997). "Governance Structures, Coordination Mechanisms and Cognitive Models". *The Journal of Management and Governance* 1: 29–47.
- Grandori, Anna and Furnari, Santi (2008). "A Chemistry of Organization: Combinatory Analysis and Design". *Organization Studies*, 29 (03): 459–485.
- Granovetter, M. (1985) "Economic action and social structure: the problem of embeddedness". *American Journal of Sociology*, 91(3), pp. 481–510.
- Grover, Varun and Malhotra, Manoj K (2003). "Transaction cost framework in operations and supply chain management research: theory and measurement". *Journal of Operations Management*, 21: 457–473.
- Grunert, Klaus G. (2005). "Food quality and safety: consumer perception and demand". *European Review of Agricultural Economics*, Vol. 32 (3): 369–391.
- Gulati, R., and H. Singh (1998). "The architecture of cooperation: Managing coordination costs and appropriation concerns in strategic alliances." *Administrative Science Quarterly* 43(4): 781-814.
- Gulati, R., P. R. Lawrence, and P. Puranam (2005). "Adaptation in vertical relationships: beyond incentive conflict." *Strategic Management Journal* 26(5): 415-440.
-
- Hanf, Jon (2009). "Challenges of a vertical coordinated agri-food business for cooperatives". *Journal of Co-operative Studies*, volume 42 (2): 5-13
- Hayami, Yujiro (2009) "Social Capital, Human Capital and the Community Mechanism: Toward a Conceptual Framework for Economists", *Journal of Development Studies*, 45:1,96 — 123
- Hennart, Jean-Francois (1993). "Explaining the Swollen Middle: Why Most Transactions Are a Mix of "Market" and "Hierarchy". *Organization Science*, Vol. 4 (4): 529-547.
- Henson, Spencer and Reardon, Thomas (2005). "Private Agri-food Standards: Implications for Food Policy and Agri-food Systems". *Food Policy* Volume 30 (3):241-253
- Hodgson, Geoffrey (2004). "Opportunism is not the only reason why firms exist: why an explanatory emphasis on opportunism may mislead management strategy". *Industrial and Corporate Change*, vol. 13(2): 401-418.
- Kogut, Bruce and Zander, Udo (1996). "What Firms Do? Coordination, Identity, and Learning" *Organization Science* Vol. 7, (5): 502-518.
- Lazzarini, S.G; Miller, G.J; and Zenger, T.R. (2004). "Order with Some Law: Complementarity versus Substitution of Formal and Informal Arrangements" *The Journal of Law, Economics, and Organization*, Vol. 20 (2): 261-298.
- Makadok, Richard, & Coff, Russell (2009). "Both Market and Hierarchy: An Incentive-System Theory of Hybrid Governance Forms," *Academy of Management Review*, vol. 34 (2): 297-319.
- Malone, T.W. and K. Crowston (1994). "The interdisciplinary study of coordination." *ACM Computing Surveys* 26(1): 87-119.
-

- Marschall, Clélio Roberto (2009). "Motivações para o Cooperativismo na Pequena Propriedade". *Organizações e Sociedade*, V. 16 (49): 287-306.
- Ménard, C. (2004). "The economics of hybrid organizations." *JITE* 160, no. 1: 1-32.
- Ménard, C. (2007). "Cooperatives: Hierarchies or Hybrids?", ed. K. Karantininis, and J. Nilsson. Dordrecht, Springer, pp. 1-17.
- Ménard, C. and Raynaud, Emmanuel. (2010). "Ulysses and the Sirens: Hands-Tying Governance in Hybrid Organizations". Draft version, University of Paris (Pantheon-Sorbonne), September 2010.
- Mesquita, Luiz F. and Brush, Thomas (2008). "Untangling Safeguard and Production coordination effects in long-term buyer-supplier relationships". *Academy of Management Journal* Vol. 51 (4): 785–807.
- Nee, Victor and Swedberg, Richard (2005). "Economic Sociology and New Institutional Economics", in: *The Handbook of New Institutional Economics*, Claude Menard and Mary Shirley (eds), Amsterdam: Kluwer Publication, 2005): 789-818.
- Nooteboom, Bart (2007). "Social capital, institutions and trust". *Review of Social Economy*, Vol. 65 (1): 29-53.
- Organização das Cooperativas Brasileiras – OCB (2009). Estatísticas. www.ocb.org.br/site/ramos/estatisticas.asp
- Olson, Mancur Lloyd. (1965). *The Logic of Collective Action: Public Goods and the Theory of Groups*. Harvard University Press.
- Osterberg, Peter and Nilsson, Jerker (2009) "Members' perception of their participation in the governance of cooperatives: the key to trust and commitment in agricultural cooperatives". *Agribusiness*, Vol. 25(2): 181–197.
- Ostrom, E. (1999). "Social capital: A fad or a fundamental concept?" Pp. 172-215 in *Social Capital: A multifaceted perspective*, edited by Ismail Serageldin. Washington, DC: World Bank.
- Ostrom, E. (2000). "Collective Action and the Evolution of Social Norms". *The Journal of Economic Perspectives*, vol. 14 (3): 137-158.
- Ouchi, William (1980). "Market, bureaucracies, and clans". *Administrative Science Quarterly* 25: 129 - 141.
- Six, F. (2007). "Building interpersonal trust within organizations: a relational signalling perspective". *J Manage Governance*, Vol. 11: 285–309.
- Stinchcombe, Arthur L. (1985), "Contracts as Hierarchical Documents," in *Organization Theory and Project Management*, A.L. Stinchcombe and C. Heimer, eds. Oslo: Norwegian University Press, 121-71.
- Valentinov, V. (2004). "Toward a social capital theory of cooperative organization". *Journal of Cooperative Studies*, Vol. 37(3): 5-20.
-

- Valentinov V. (2007), Why are cooperatives important in agricultural economics perspective, *Journal of Institutional Economics*, 3(1): 55-6
- Williamson, O.E. (1991) “Comparative economic organization: the analysis of discrete structural alternatives”. *Administrative Science Quarterly* 36: 269–296.
- Williamson, O.E. (1993) “Calculativeness, Trust and Economic Organization,” *Journal of Law and Economics*, 36 (1): 453-486.
- Williamson, O. (1996) *The Mechanisms of Governance*, Oxford, Oxford University Press.
- Yin, R. K. (2003). *Case study research, design and methods*, 3rd ed. Newbury Park: Sage Publications
- Zenger, T.R., S.G. Lazzarini, and L. Poppo (2002). “Informal and formal organization in new institutional economics”, In: P. Ingram and B.S. Silverman, eds. *New Institutionalism in Strategic Management*, Vol. 19. Amsterdam, JAI-Elsevier Science, pp. 277-305
- Zylbersztajn, D. and Farina, E. M. M. Q (1999). “Strictly Coordinated Food Systems: Exploring the Limits of the Coasian Firm” *International Food and Agribusiness Management Review*. Vol 2, n.2.
- Zylbersztajn, Decio (2005). “Papel dos contratos na coordenação agro-industrial: um olhar além dos mercados”. *Rev. Econ. Sociol. Rural*, vol.43 (3): 385-420. <http://www.scielo.br/pdf/resr/v43n3/27739.pdf> Retrieved from the Internet on October 2009.