

**Both Market and Hierarchy:
Understanding the Hybrid Nature of Cooperatives**

Fabio Chaddad

University of Missouri and Insper

125 Mumford Hall

Columbia, MO 65211

E-mail: chaddadf@missouri.edu

Abstract: What is a cooperative? Until the early 1960s much of the theoretical debate focused on whether cooperatives represented a form of vertical integration by farmers, that is, an extension of the member firms, or whether cooperatives could legitimately be analyzed as organizations having scope for decision making independent of their member firms. Subsequent theoretical work has modeled cooperatives based on coalition, nexus of contracts, and property rights perspectives. More recently, the cooperative has been characterized as an intermediate (or hybrid) form of governance. This paper contributes to the economic theory of the cooperative organization by examining it from a comparative economic perspective. Departing from Williamson's unidimensional continuum of governance structures, the paper adopts the view that governance structures exhibit multiple dimensions – including asset ownership, authority, administrative controls, and incentives – and “true hybrids” are market-like on some of these dimensions while hierarchy-like on others. I show that cooperatives blend market-like attributes with hierarchy-like mechanisms and thus should be viewed as a true hybrid rather than as an intermediate form. In other words, cooperatives have architectures of their own which are distinct from markets and hierarchies. The paper concludes with a discussion about the usefulness of this approach to our understanding of the economic nature of cooperatives as it informs potential avenues for future research.

Key words: hybrids, cooperatives, governance, transaction costs.

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. I would like to thank, without implicating, the comments from Mike Cook, Costas Iliopoulos and Peter Klein.

First Draft – May 2009

Both Market and Hierarchy:

Understanding the Hybrid Nature of Cooperatives

1. Introduction

In the opening paragraph of his oft-cited paper on comparative economic organization, Williamson (1991: 269) argues that “although microeconomic organization is formidably complex and has long resisted systematic analysis, that has been changing as new modes of analysis have become available, . . . , and as the limits of earlier modes of analysis have become evident. Information economics, game theory, agency theory, and population ecology have all made significant advances.” A similar argument may be posited regarding the recent evolution of the theory of cooperative organization. Building on a solid foundation of neoclassical and industrial organization research, information economics, game theory, agency theory, property rights theory, and transaction cost economics have made great contributions to our understanding of cooperatives (Cook, Chaddad and Iliopoulos, 2003; Staatz, 1989).

In spite of these theoretical developments a debate still persists regarding the economic nature of the cooperative organization. Until the early 1960s much of the theoretical debate focused on whether cooperatives represented a form of vertical integration by farmers, that is, an extension of the member firms (Emelianoff, 1942; Phillips, 1953), or whether cooperatives could legitimately be analyzed as organizations having scope for decision making independent of their member firms (Enke, 1945; Savage, 1954; Helmberger and Hoos, 1962). Subsequent theoretical work has modeled cooperatives based on coalition (Staatz, 1983; Sexton, 1986; Zusman, 1992), nexus of contracts (Shaffer, 1987; Staatz, 1987), and property rights perspectives (Vitaliano, 1983; Cook, 1995; Hendrikse and Veerman, 2001). There is, however, no consensus yet as to how to define a cooperative in the continuum of generic forms of economic organization. Is the

cooperative an extension of the farm (e.g., Phillips, 1953), a vertical integration of a horizontal association of producers (e.g., Sexton, 1984), a firm (e.g., Helmberger and Hoos, 1962; Feng and Hendrikse, 2007), a hybrid or an intermediate form between markets and hierarchies (e.g., Bonus, 1986; Schaffer, 1987; Iliopoulos, 2003; Ménard, 2004, 2007)?

The objective of this paper is to contribute to this debate from a comparative economic organization perspective. According to this perspective, organizational forms – markets, hierarchies, and hybrids – are examined in relation to feasible alternatives, never separately or in relation to some theory-driven optimal solution¹. The choice among feasible organizational forms is driven by the logic of transaction cost minimization (Coase, 1937)². Organizations that are not cost efficient tend to disappear over time as competitive markets weed out ill-designed organizations (Alchian, 1950; Fama and Jensen, 1983). “First-order economizing” – i.e., effective adaptation and elimination of waste – is therefore critical to the problem of economic organization (Williamson, 1991).

Following recent theoretical developments in organization economics, I approach each generic form of organization as a “syndrome” (Williamson, 1991) or “system” (Holmstrom and Milgrom, 1994) of attributes. That is, organizations are distinguished by different coordinating, control and incentive mechanisms (or instruments) – i.e., the attributes of governance structures. Based on a review of the literature I identify the main instruments or mechanisms of governance and define each of them in a continuum from market-like to hierarchy-like. Subsequently I show that each discrete form of organization exhibits a particular mix of these coordination and control mechanisms in various degrees. More specifically, I demonstrate that cooperatives are “true

¹ As eloquently expressed by Goldberg (1976: 46), the fundamental question of economic organization is “What imperfect institutions should govern particular sets of transactions?”

² In fact, firms should minimize the sum of transaction and production costs (see, for example, Williamson, 1985: 92-95).

hybrids”³ in that they blend market-like mechanisms (e.g., separated ownership and high powered incentives) with hierarchy-like instruments (e.g., administrative controls, authority and common staff in a central structure). The paper concludes with a discussion of the usefulness of studying cooperatives as a hybrid system of attributes illustrated by a set of research questions and queries.

2. Conceptualizing Alternative Governance Structures

The transaction cost theory of the firm introduced by Coase (1937) has become a standard framework for the study of organizations. The Coasian framework helps explain not only the existence of the firm, but also its size, scope, and internal organization (Milgrom and Roberts, 1992; Brickley, Smith and Zimmerman, 2009). Coase (1937) introduced the notion that firms and markets are alternative institutional arrangements to govern transactions. In particular, he posited that the firm supersedes the market when the transaction costs of internal organization are relatively lower than in the market. In this sense, firm boundaries depend not only on technology, but also on organizational considerations; that is, on the costs and benefits of various organizational alternatives.

Since Coase’s pioneering work, the make-or-buy decision has become one of the most studied topics in the modern theory of the firm (Klein, 2008). Building on Coase’s original insight, the transaction cost approach emphasizes that vertical coordination can be an efficient means of protecting relationship-specific investments or mitigating other potential conflicts in the context of incomplete contracting (Klein, Crawford and Alchian, 1978; Williamson, 1979; Grossman and Hart, 1986). The Coasian perspective has also spurred many developments in the theory of the firm focusing on its internal coordination and motivation challenges. For example,

³ Differently from a true hybrid organization, an intermediate form is between a market and a hierarchy in all of the dimensions that distinguish these two polar forms. That is the original concept of “the hybrid mode” offered by Williamson (1991: 281) that has inspired Ménard (2004, 2007) to examine the cooperative organization as a hybrid.

agency cost and property rights theorists have advanced models featuring agency relationships and incentive problems in organizations (Alchian and Demsetz, 1972; Jensen and Meckling, 1976).

However, the models put forward by organization economists have primarily focused on just one of the attributes that distinguish markets from hierarchies. For example, Coase (1937) and Simon (1951) focus on the *authority* relationship between the asset owner and employees; Williamson (1985) and Hart and Moore (1990) emphasize lateral and vertical *ownership* of assets by the firm; while the principal-agent literature features *monitoring and compensation* systems to align the interests of agents and principals (Holmstrom, 1982; Prendergast, 1999; Sappington, 1991).

More recent versions of these theories have started to realize the multidimensional nature of governance. Williamson (1991: 271) suggests that “each viable form of governance – market, hybrid, and hierarchy – is defined by a *syndrome of attributes* that bear a supporting relation to one another.” Williamson (1991) concedes that transaction cost economics has focused on the study of polar forms (i.e., markets and hierarchies), at the expense of hybrids, and also has neglected the abstract description of governance structures. The relative costs and competencies of alternative modes of governance have received less attention than the attributes of the transaction. He advances the hypothesis that each generic form of governance is supported by a different form of contract law; and that there are crucial differences between markets, hybrids and hierarchies in how they adapt to changing circumstances and in the use of incentive and administrative control instruments.

Holmstrom and Milgrom (1994: 972) also hypothesize that markets (“outside procurement”) and hierarchies (“inside procurement”) are “two alternative *systems* for managing

incentives for the wide array of tasks for which a single worker may be responsible.” They further posit that “firms use a variety of incentive *instruments* in such systems” and that “all the instruments are endogenous variables in the problem of structuring incentives.” In other words, the purpose served by the incentive systems of alternative forms of governance is to minimize agency costs between principals and agents. Their system of attributes approach to the study of economic organization includes authority, asset ownership, incentives, and job design as the key mechanisms of governance. They observe that “the fact that employment and contracting are multifaceted relationships, each characterized by its own distinct set of attributes, ranks as one of the most significant regularities to be explained by a theory of the firm” (p. 988).

Attributes of Governance Structures

Conceptualizing organizational forms as “syndromes” or “systems” of attributes begs the question “what are the main attributes”? In other words, what are the instruments that should be considered in analyzing alternative modes of governance? What are the organizational design decision variables that an organizational scholar should consider? In reviewing various theoretical approaches in the literature on inter-firm organizational arrangements, Grandori and Soda (1995) identify and systematize a wide range of coordination and control mechanisms that are employed to sustain cooperation between firms. Their systematization of contributions from economics, sociology, social psychology and organization theory includes the following mechanisms: (1) communication, decision and negotiation mechanisms; (2) social coordination and control; (3) integration and linking-pin roles and units; (4) common staff; (5) hierarchy and authority relations; (6) planning and control systems; (7) incentive systems; (8) partner selection systems; (9) information systems; and (10) public support and infrastructure. Their literature review suggests these ten mechanisms are used in inter-firm arrangements in various

combinations and degrees. In addition, the substance of an inter-firm relation, in terms of the mix of mechanisms employed by partners, can vary substantially in degree of formalization. The extent to which an inter-firm relationship is controlled and safeguarded by a formal contract is another important dimension of governance. Contractual arrangements may be used to regulate the horizontal association of cooperating firms and/or the vertical exchange between parties.

A more recent review of the literature on hybrid forms is offered by Ménard (2004). His central proposition is that hybrid organizations form a “specific class” of governance structures combining contractual agreements and administrative entities or “authorities” with the purpose of coordinating partners’ efforts to generate rents from mutual dependence while controlling for the risks of opportunism. The role of contracts in hybrid arrangements is crucial in coordinating partners and sharing quasi rents. Contracts achieve these purposes by (1) selecting partners; (2) determining the duration of the relationship; (3) specifying quantity and quality requirements; (4) laying out procedures for regulating renegotiations when ex post adaptation is required; and (5) specifying rules for distributing the expected gains from joint actions. Because contracts are unavoidably incomplete, the stability and continuity of hybrid arrangements require “specific mechanisms designed for coordinating activities, organizing transactions, and solving disputes.” According to Ménard (2004: 366), a core element in the architecture of hybrid organizations is the presence of private governments (or authorities) that “pair the autonomy of partners with the transfer of subclasses of decisions to a distinct entity in charge of coordinating their action.” These authorities vary in degree of formalization and centralization of decision making, ranging from trust to formal government.

This study builds on the foundations of Williamson (1991) and Holmstrom and Milgrom (1994) and complements their conceptualization of governance modes as systems of attributes

with an additional set of attributes that were identified in the systematizations offered by Grandori and Soda (1995) and Ménard (2004). An enlarged and yet selective set of attributes to characterize distinct modes of governance is found in table 1. This set of attributes is used to describe markets, hierarchies and cooperatives in the next section.

3. The Organizational Architecture of Markets, Hierarchies, and Hybrids

The Market

Consider the transaction between a farmer supplying a commodity to a downstream processor. In a pure market transaction, ownership is separated in the sense that the farmer owns – i.e., has residual claim and control rights over – farm assets and the processor owns processing assets. There is no authority relationship between the two parties and no central structure, common staff or administrative controls are deployed to govern the transaction. The price system provides “high powered” incentives for both parties to be efficient and adapt to changing market conditions. In a market with a large number of transactors, partner identity is not relevant and thus partner selection mechanisms are not needed. In such a “thick” market there is no mutual dependency relation between exchange partners. Consequently, switching costs are negligible if the processor wants to buy raw material from another farmer or if the farmer wants to supply a rival processor.

Market transactions are supported by classical contract law, where “more formal terms supersede less formal should disputes arise” (Williamson, 1991: 271). This “inelastic” contracting regime coupled with third party enforcement mechanisms is well suited when continuity is not relevant to exchange partners. Adaptation to disturbances occurs in a decentralized and autonomous fashion as exchange partners react and reposition to changing relative prices and other market signals. In Williamsonian jargon, adaptation A prevails. This is

the world of extreme decentralization that has fascinated neoclassical economists since Adam Smith coined the term “invisible hand.”

Hierarchy

As a result of market failures and transaction costs, a hierarchy might supersede the market. For example, the farmer might decide to vertically integrate downstream and acquire the processing assets.⁴ Joint or unified ownership results as now one party (in our example, the farmer) has residual claim and control rights over both farm and processing assets. The owner has complete authority over decisions regarding farm and processing asset use. The “visible hand” of the manager or central planner emerges. The interdependence (or mutual dependence) between upstream (i.e., farm) and downstream (i.e., processing) assets suggests that partner identity matters thus creating the need for partner selection mechanisms.

As the firm grows in scale and scope, common staff and administrative controls are needed to coordinate activities inside the firm. Administrative control mechanisms include planning, information sharing, integration, monitoring, and performance evaluation systems. In other words, coordinated adaptation (i.e., adaptation C) substitutes for autonomous adaptation to unanticipated disturbances. But as authority and centralized decision making supersede the price system as coordinating devices, incentives inside the vertically integrated firm become low powered and bureaucratic costs emerge. The implicit contract law of internal organization is known as “forbearance” as courts following the business judgment rule refuse to hear disputes between internal divisions. In other words, “hierarchy is its own court of ultimate appeal” (Williamson, 1991: 274).

⁴ Alternatively, the processor can also vertically integrate upstream and acquire farm assets. For the purposes of this discussion, the direction of vertical integration is not a relevant issue. For details, see Hart (1995).

Hybrids and Intermediate Forms

In the transaction cost perspective, markets and hierarchies are polar modes of governance in a unidimensional continuum, while “the hybrid mode displays intermediate values in all four features.” In particular, the hybrid form is characterized by “semi-strong incentives, an intermediate degree of administrative apparatus, displays semi-strong adaptations of both kinds, and works out of semi-legalistic contract law regime” (Williamson, 1991: 281). Building on this view, Ménard (2004) distills a large and amorphous literature on hybrid arrangements including networks, supply chains, franchise agreements, partnerships and cooperatives. He identifies three common features or “regularities” of such “strange forms”: pooling, contracting and competing. He argues that “*there is indeed a great diversity of agreements among legally autonomous entities doing business together, mutually adjusting with little help from the price system, and sharing or exchanging technologies, capital, products, and services, but without a unified ownership. These characteristics are likely the minimum required to encapsulate the variety of hybrids*” (Ménard, 2004: 348). Additionally, Ménard (2004) classifies this variety of hybrid arrangements in four generic configurations – trust, relational network, leadership and formal government – which are defined as intermediate governance modes between markets and hierarchies. Subsequently, Ménard (2007) conceptualizes cooperatives as hybrids and also locates four generic cooperative structures as intermediate modes along the market-hierarchy continuum⁵.

But are all hybrid structures really intermediate forms that adopt intermediate values in all governance dimensions? In a recent article, Makadok and Coff (2009) take issue with this view. They observe that hierarchies increasingly use market-like instruments such as high-

⁵ To be fair, Ménard is not the first economist to conceptualize cooperatives as a hybrid form. For earlier views, see Bonus (1986) and Schaffer (1987).

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 true hybrid forms are market-like in some dimensions and hierarchy-like in others. Makadok and Coff (2009) proffer a taxonomy of hybrid governance forms based on three dimensions of governance – authority, ownership, and incentives. Building on the “systems of attributes” approach of Holmstrom and Milgrom (1994), they also develop a formal theory predicting when a given hybrid form will be efficient in a multitask principal-agent setting.

Working independently from Makadok and Coff (2009), but inspired by their approach, I also conceptualize hybrids – focusing on cooperatives – as a distinct governance mode blending market-like attributes with hierarchy-like mechanisms. In what follows I show that cooperatives may be usefully regarded as a true hybrid form exhibiting a particular mix of coordination and control mechanisms in various degrees. In other words, cooperatives have architectures of their own which are distinct from markets and hierarchies.

4. Cooperatives as True Hybrids

Bargaining Association

Consider again our simple farmer-processor transaction. Because of scale economies and wealth constraints, it is often not efficient or feasible for a single farmer to vertically integrate downstream. Overcoming initial free ridership and collective decision making costs, a group of farmers organize an association to collectively bargain for better terms of trade with the processor⁶. Initially, no assets are acquired downstream and ownership rights are separated. Each farmer has decision control and residual claim rights over her farm assets and the processor owns and controls processing assets. No authority relationship exists between exchange parties.

⁶ This is the “Sapiro I” cooperative defined in Cook (1995).

In addition, no or minimal administrative controls are established in a central structure and entry into the association is open to all interested farmers.

Differently from a pure market transaction, farmers are required to sign a “marketing agreement” every year committing their production volume to the association. This agreement is a formalization of the horizontal or associational relationship between farmers. The bargaining association can thus be thought of as a coalition in that independent asset owners (i.e., the farmers) agree to restrict or control their actions – in this case, they commit to market their production to the processor under the terms of trade bargained by the association – to realize higher returns than they would had they otherwise decided to market independently (Alchian, 1984: 37). In addition, the bargaining association might be formalized as a separate legal entity, with incorporation statutes and bylaws, but it does not necessarily need to own assets. Equity capital required from members is thus low or close to zero. Farmers might also share information about expected crop size and quality with the central office to facilitate bargaining efforts. One representative of the farmers is selected or an agent-manager is hired to bargain with the processor but the association does not take ownership of the commodity being traded. Information sharing and collective bargaining are weak forms of coordinated adaptation. Each farmer delivers the commodity directly to the processor and receives a uniform, bargained price that might be a bit higher than the market price primarily due to a volume premium. Farmers still compete with each other and are therefore subject to the high powered incentives of the market. Autonomous adaptation, supported by classical contracting, continues to be present in strong form.

In sum, the bargaining association is a cooperative hybrid that combines dimensions which are market-like (e.g., separated ownership, no authority relationships, strong incentive

intensity, and autonomous adaptation) with hierarchy-like features (e.g., information sharing mechanisms, coordinated adaptation, formal horizontal agreements, and common staff).

Processing (or Marketing) Cooperative

Because of some defensive or offensive economic motivation (Sexton and Iskow, 1988; Hendrikse and Bijman, 2002; Cook and Plunkett, 2006), the farmers decide to vertically integrate downstream to bypass the proprietary processor or add value to their farm commodity. In a processing (or marketing) cooperative, the farmer-members pool resources and risk capital to invest in downstream processing assets⁷. The farm commodity is therefore stored, sorted, processed, and/or marketed by the cooperative. Farm assets are owned independently by the individual farmers but the cooperative processing plant is jointly owned by the farmer-members. Note that this arrangement is not pure vertical integration (or hierarchy) because farm assets and processing assets are not under a single entity with unified ownership. Put differently, “the members remain economically independent: they do not merge their activities into one large firm” (Bonus, 1986: 312). Rather, the processing cooperative can be viewed as a joint venture (or equity-based alliance) arrangement in the ownership dimension of governance (Peterson, Wysocki and Harsh, 2001)⁸. As farmer-members remain independent they are still subject to the high powered incentives of the market.

Both the mechanism used by the cooperative to acquire risk capital from members and the amount of risk capital invested by members may vary across processing cooperatives. In general, traditional cooperatives rely on low amounts of upfront member-contributed equity capital and therefore depend on passive or quasi-passive internally generated capital. Internally generated capital may be retained in allocated accounts or in unallocated retained earnings. Non-

⁷ This is Cook’s (1995) Sapiro II cooperative.

⁸ The bargaining association discussed in the previous section would be considered a non-equity alliance.

traditional cooperatives introduce more active or investor-driven capital acquisition instruments (Chaddad and Cook, 2004). Another feature of most traditional processing cooperatives is the open membership policy; the adoption of partner (or member) selection mechanisms is not common practice.

Because the farmers now jointly own the processing assets, they have formal authority or residual control rights over how they are deployed. *De facto* authority or effective control depends on organizational design variables such as membership size and heterogeneity, corporate governance practices, and member commitment but they are normally muted by agency and collective decision making costs (Hansmann, 1996). Ultimately the degree of authority and member control in a cooperative is an empirical issue and may vary widely across cooperatives.

In general, the farmer-members of a processing cooperative hire an agent (i.e., the general manager) to run the business, who in turn employ staff in a central structure (just like a hierarchy). In addition, administrative mechanisms – including planning, information, integration and monitoring systems – are employed to coordinate activities in the central office but also to coordinate interdependencies among members and between members and the cooperative. The complex interdependencies present in most cooperatives – including pooled, sequential, and reciprocal interdependencies – suggest the need for a combination of several types of coordination mechanisms (Thompson, 1967; Lazzarini, Chaddad and Cook, 2001). Perhaps more importantly, administrative controls are needed to mitigate opportunistic behavior by members and agents in the central office.

This hybrid cooperative structure combines autonomous with coordinated adaptation. Autonomous adaptation occurs primarily at the farm level as independent farmers react to price

and other market signals using local, specific knowledge. Coordinated adaptation is present both at the processing level and between the processing level and the farm level as result of interdependencies that originate from resource pooling and joint investment decisions in specific assets. According to Ménard (2004), the level of centralization and the extent to which coordination mechanisms are used depend on the specificity of mutual investments and the consequent interdependencies.

Similarly to the bargaining association, a separate legal entity is established by the farmer-owners of the processing cooperative. They formalize their associational agreement with the cooperative incorporation statutes and bylaws. In addition to a formal horizontal agreement, the processing cooperative might introduce a formal contract to regulate vertical interdependencies with the members. Again, the degree of formalization and the substance of this vertical agreement vary widely across cooperatives.

Since specific investments of farmer-members lead to mutual dependence, the relationship requires continuity. The rigidity and inflexibility of classical contract law is ill-suited to this situation as it hinders adaptation to unforeseen contingencies. Consequently, partners in a hybrid arrangement adopt a more “elastic” neoclassical contracting regime. “More generally, long-term, incomplete contracts require special adaptive mechanisms to effect realignment and restore efficiency when beset by unanticipated disturbances” (Williamson, 1991: 271). The neoclassical contract in a hybrid arrangement works as a framework, i.e. “an occasional guide in cases of doubt, and a norm of ultimate appeal when the relations cease in fact to work” (p. 272).

In sum, the processing cooperative is a hybrid arrangement with some market-like attributes (high powered incentives, no partner selection mechanisms, and autonomous

adaptation), some hierarchy-like mechanisms (formal authority, administrative controls, and common staff in a central office) and intermediate levels in some governance dimensions such as ownership, contract law, and coordinated adaptation. “The workability of this mix depends on specific mechanisms capable of reconciling legal autonomy and interdependence” (Ménard, 2004: 352).

New Generation Cooperative

According to Cook (1995: 1158), several marketing and processing cooperatives have shifted to a new generation cooperative structure that “tempers the disincentives of the five property rights constraints” of traditional cooperatives. In addition, numerous new value-added, rent-seeking, farmer-owned ventures have been formed since the 1980s (Cook and Iliopoulos, 1999). The new generation cooperative model introduces ownership rights in the form of delivery right assets that are tradable among a well-defined member-patron group. The defining organizational characteristics of this “non-traditional” model include: (1) ownership rights are restricted to member-patrons; (2) membership is defined; (3) members are required to make substantial up-front investment in delivery rights in proportion to patronage; (4) and supply is controlled by means of uniform and legally binding marketing agreements.

Similarly to the traditional processing cooperative described above, ownership rights are separated but farmer-members have considerably more capital at risk in this cooperative hybrid. That is, the level of member investment in the cooperative joint venture is higher than in the previous model. However, this model falls short of the pure vertical integration mode with unified ownership. Also like the previous model, the new generation cooperative adopts administrative controls and common staff in a central structure. The members have formal authority over processing assets but have more incentives to monitor the agent because they have

more capital at risk. In addition, transferability and appreciability of delivery rights provide an instrument to evaluate the performance of the management team. Incentive intensity at the farm level continues to be high powered as independent farmers compete with each other and attempt to cope with an increasingly volatile business environment.

In a new generation cooperative, membership is restricted to a well-defined farmer-investor group; that is, entry of new members is not free as partner selection mechanisms are introduced. The entry of a new member requires both the acquisition of delivery rights and approval by the cooperative board of directors. Additionally, a uniform contractual agreement is signed with members formalizing the exchange relationship between members and their cooperative processing plant. This contractual agreement transfers decision rights to the cooperative entity regarding quantity, quality, timing of delivery, pricing mechanisms, and penalties related to non-compliance, among other attributes of the exchange relationship. In other words, autonomous adaptation is weakened whereas coordinated adaptation is strengthened. As a result, more decisions are centralized.

Even though the new generation cooperative exhibits several attributes of the hierarchy mode of governance – formal authority, administrative controls, common staff, coordinated adaptation in strong form, and high degrees of formalization and centralization – it still retains some market-like attributes including separated ownership, high powered incentives, and an intermediate level of autonomous adaptation.

5. Summary and Queries for Future Research

This paper adopted a microanalytic approach to economic organization, which seeks to inform the comparative efficacy of alternative generic forms of governance – markets, hybrids and hierarchies. We are interested in a particular governance mode – the cooperative – and its

efficiency relative to alternative forms of organization – in particular, the investor-oriented firm (IOF). But what kind of governance structure is a cooperative and how does it differ from an IOF? This is a critical theoretical question that needs to be adequately addressed so that we can compare and contrast the cooperative with alternative governance modes.

This paper attempts to show that cooperatives blend market-like with hierarchy-like instruments and thus may be viewed as a “true hybrid” mode. In doing so, the paper distinguishes between three generic types of cooperatives exhibiting particular mixes of governance attributes. “Typologies matter in science because they require criteria grounded in theory, thus helping to refine or revise the latter” (Ménard, 2004: 370). One obvious avenue for future research is to describe other types of cooperative organizations – input supply cooperatives, consumer cooperatives, credit cooperatives, multipurpose cooperatives, etc. – using the conceptual framework summarized in table 1. Also, the generic types described here should be confronted with empirical data.

Having described the *variability* in the mix of governance attributes used by different cooperative hybrids, a logical follow-up research query is “what are the determinants of these forms?” For example, what factors might explain the higher degrees of formalization and centralization in the new generation cooperative compared to its more traditional cooperative counterparts? According to Williamson (1991) and also Holmstrom and Milgrom (1994), each viable form of governance is defined by a “syndrome” or “systems” of attributes exhibiting a complementary relation to one another. What is the logic behind different combinations of attributes? What purposes do they serve? Under what conditions a particular “syndrome of attributes” will emerge and/or fit with organizational strategy and the business environment? Why do we observe different types of cooperatives (with different organizational architectures)

co-existing simultaneously and often competing in the same industry? Related to these questions is the issue of the *dynamics* and *stability* of cooperative hybrids and the institutional and market forces that shape their structural characteristics.

Ultimately organizations that economize on transaction costs, adapt effectively to changing market conditions, and eliminate waste should survive and thrive. Notwithstanding the large empirical literature comparing the economic efficiency of cooperatives with IOFs (e.g., Porter and Scully, 1987; Sexton and Iskow, 1993), future empirical research on this issue would benefit from Williamson's (1991) recommendation that first-order economizing should take precedence to second-order economizing (i.e., optimization at the margin). Or could it be the case that cooperatives trade-off technical and/or allocative efficiency with increased transactional performance?

Another potential research avenue relates to the role and effectiveness of informal coordinating and control mechanisms, including reputation (Bonus, 1986), repeated relationships (Baker, Gibbons and Murphy, 2002) and trust (Arrow, 1974). As business relationships are embedded in social interactions (Granovetter, 2005), partners are likely to have greater confidence in the predictability of each other's actions and thus anticipate lower appropriation concerns when they form a hybrid arrangement. Trust can also work as a "lubricant" for hybrids that involve considerable interdependence and task coordination between partners. As a result, trust should help to address both coordination-cost and appropriation concerns thereby reducing the need for hierarchical controls and possibly formal contractual arrangements. The contributions by Bonus (1986) on the cooperative as a "social group" with an "*esprit de corps*" and James and Sykuta (2005) on the relationship between property rights and level of trust in cooperatives illustrate the relevance of this topic.

References

- Alchian, A.A. (1984). "Specificity, Specialization, and Coalitions," *Journal of Institutional and Theoretical Economics*, 140: 34-49.
- Alchian, A.A. (1950). "Uncertainty, Evolution, and Economic Theory," *Journal of Political Economy*, 58(3): 211-221.
- Alchian, A.A. and Demsetz, H. (1972). "Production, Information Costs, and Economic Organization," *American Economic Review*, 62: 777-795.
- Arrow, K.J. (1974). *The Limits of Organization*, New York: Norton.
- Baker, G., Gibbons, R. and Murphy, K.J. (2002). "Relational Contracts and the Theory of the Firm," *Quarterly Journal of Economics*, 117(1): 39-84.
- Bonus, H. (1986). "The Cooperative Association as a Business Enterprise: A Study in the Economics of Transactions," *Journal of Institutional and Theoretical Economics*, 142: 310-339.
- Brickley, J.A. Smith, Jr., C.W. and Zimmerman, J.L. (2009). *Managerial Economics and Organizational Architecture*, Fifth Edition, New York: McGraw-Hill.
- Coase, R. (1937), "The Nature of the Firm," *Economica*, n.s.
- Chaddad, F.R. and Cook, M.L. (2004). "Understanding New Cooperative Models: An Ownership-Control Rights Typology," *Review of Agricultural Economics*, 26(3): 348-360.
- Cook, M.L. (1995). "The Future of US Agricultural Cooperatives: A Neo-Institutional Approach," *American Journal of Agricultural Economics*, 77(5): 1153-1159.
- Cook, M.L., Chaddad, F.R. and Iliopoulos, C. (2003) "Advances in Cooperative Theory since 1990: A Review of Agricultural Economics Literature," *Restructuring Agricultural Cooperatives*, George Hendrikse (ed.), Haveka, pp. 65-90.

- Cook, M.L. and Iliopoulos, C. (1999). "Beginning to Inform the Theory of the Cooperative Firm: Emergence of the New Generation Cooperative," *The Finnish Journal of Business Economics*, 4: 525-535.
- Cook, M.L. and Plunkett, B. (2006). "Collective Entrepreneurship: An Emerging Phenomenon in Producer-Owned Organizations," *Journal of Agricultural and Applied Economics*, 38(2): 421-428.
- Emelianoff, I.V. (1942). *Economic Theory of Cooperation*, Ann Arbor: Edward Brothers.
- Enke, S. (1945). "Consumer Cooperatives and Economic Efficiency," *American Economic Review*, 35(1): 148-155.
- Fama, E.F. and Jensen, M.C. (1983). "Separation of Ownership and Control," *Journal of Law and Economics*, 26: 301-325.
- Feng, L. and Hendrikse, G. (2007). "On the Nature of a Cooperative: A System of Attributes Perspective," *ERIM working paper ERS-2007-093-ORG*, Erasmus Universiteit Rotterdam.
- Goldberg, V.P. (1976). "Toward an Expanded Economic Theory of Contracts," *Journal of Economic Issues*, 10: 45-61.
- Grandori, A. and Soda, G. (1995). "Inter-Firm Networks: Antecedents, Mechanisms and Forms," *Organization Studies*, 16(2): 183-214.
- Granovetter, M. (2005). "The Impact of Social Structure on Economic Outcomes," *Journal of Economic Perspectives*, 19(1): 33-50.
- Grossman, S. and Hart, O. (1986). "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration," *Journal of Political Economy*, 94: 691-719.
- Hansmann, H. (1996). *The Ownership of Enterprise*, Cambridge: The Belknap Press of Harvard University Press.

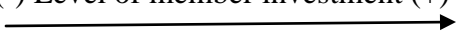
- Hart, O. (1995), *Firms, Contracts and Financial Structure*, Oxford: Oxford University Press.
- Hart, O. and Moore, J. (1990). "Property Rights and the Nature of the Firm," *Journal of Political Economy*, 98: 1119-1158.
- Helmberger, P. and Hoos, S. (1962). "Cooperative Enterprise and Organization Theory," *Journal of Farm Economics*, 44(2): 275-290.
- Hendrikse, G.W.J. and Bijman, J. (2002). "Ownership Structure in Agrifood Chains: The Marketing Cooperative," *American Journal of Agricultural Economics*, 84: 104-119.
- Hendrikse, G.W.J. and Veerman, C.P. (2001). "Marketing Co-operatives: An Incomplete Contracting Perspective," *Journal of Agricultural Economics*, 52(1): 53-64.
- Holmstrom, B. (1982). "Moral Hazard in Teams," *Bell Journal of Economics*, 13(2): 324-340.
- Holmstrom, B. and Milgrom, P. (1994). "The Firm as an Incentive System," *American Economic Review*, 84: 972-991.
- Iliopoulos, C. (2003). "Vertical Integration, Contracts, and the Theory of the Cooperative Organization," Invited paper, EURESCO Conference: Vertical Markets and Cooperative Hierarchies: The Role of Cooperatives in the International Agri-Food Industry, Bad Herrenalb, Germany, June 12-16.
- James Jr., H.S. and Sykuta, M.E. (2005). "Property Right and Organizational Characteristics of Producer-Owned Firms and Organizational Trust," *Annals of Public and Cooperative Economics*, 76(4): 545-580.
- Jensen, M.C. and Meckling, W.H. (1976). "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure," *Journal of Financial Economics*, 3: 305-360.
- Klein, P. (2008). "The Make-or-Buy Decision: Lessons from Empirical Studies," *Handbook of New Institutional Economics*, C. Menard and M. Shirley (eds.), Berlin: Springer-Verlag.

- Klein, B., Crawford, R. and Alchian, A. (1978). "Vertical Integration, Appropriable Rents and the Competitive Contracting Process," *Journal of Law and Economics*, 21: 297-326.
- Lazzarini, S.L., Chaddad, F.R. and Cook, M.L. (2001). "Integrating Supply Chain and Network Analysis: The Study of Netchains," *Journal on Chain and Network Science*, 1(1): 7-22.
- Makadok, R. and Coff, R. (2009). "Both Market and Hierarchy: An Incentive-System Theory of Hybrid Governance Forms," *Academy of Management Review*, 34(2): 297-319.
- Ménard, C. (2004). "The Economics of Hybrid Organizations," *Journal of Institutional and Theoretical Economics*, 160: 345-376.
- Ménard, C. (2007). "Cooperatives: Hierarchies or Hybrids?" *Vertical Markets and Cooperative Hierarchies: The Role of Cooperatives in the Agri-Food Industry*, K. Karantininis and J. Nilsson (eds.), Dordrecht: Springer, pp. 1-17.
- Milgrom, P. and Roberts, J. (1992). *Economics, Organization and Management*, Englewood Cliffs: Prentice Hall.
- Peterson, H.C., Wysocki, A. and Harsh, S.B. (2001). "Strategic Choice Along the Vertical Coordination Continuum," *International Food and Agribusiness Management Review*, 4: 149-166.
- Phillips, R. (1953). "Economic Nature of the Cooperative Association," *Journal of Farm Economics*, 35(1): 74-87.
- Porter, P.K. and Scully, G.W. (1987). "Economic Efficiency in Cooperatives," *Journal of Law and Economics*, 30: 489-512.
- Prendergast, C. (1999). "The Provision of Incentives in Firms," *Journal of Economic Literature*, 37: 7-63.

- Sappington, D.M. (1991). "Incentives in Principal-Agent Relationships," *Journal of Economic Perspectives*, 5(2): 45-66.
- Savage, J.K. (1954). "Comment on the Economic Nature of the Cooperative Association," *Journal of Farm Economics*, 36: 529-534.
- Sexton, R.J. (1984). "Perspectives on the Development of the Economic Theory of Cooperatives," *Canadian Journal of Agricultural Economics*, 423-436.
- Sexton, R.J. (1986). "The Formation of Cooperatives: A Game-Theoretic Approach with Implications for Cooperative Finance, Decision Making and Stability," *American Journal of Agricultural Economics*, 68: 214-225.
- Sexton, R.J. and Iskow, J. (1988). "Factors Critical to the Success or Failure of Emerging Agricultural Cooperatives," *Gianini Foundation Information Series, No. 88-3*, University of California – Davis.
- Sexton, R.J. and Iskow, J. (1993). "What Do We Know About the Economic Efficiency of Cooperatives: An Evaluative Survey," *Journal of Agricultural Cooperation*, 8: 15-27.
- Shaffer, J. (1987). "Thinking About Farmers' Cooperatives, Contracts, and Economic Coordination," *Cooperative Theory: New Approaches*, J.S. Royer (ed.), ACS Service Report 18, Washington, DC: USDA, Agricultural Cooperative Services, 61-86.
- Simon, H. (1951). "A Formal Theory of the Employment Relationship," *Econometrica*, 19(3): 293-305.
- Staatz, J.M. (1989). "Farmer Cooperative Theory: Recent Developments." *ACS Research Report No. 84*, Washington D.C.: U.S. Department of Agriculture, Agricultural Cooperative Service.

- Staatz, J.M. (1987). "The Structural Characteristics of Farmer Cooperatives and Their Behavioral Consequences," *Cooperative Theory: New Approaches*, J.S. Royer (ed.), ACS Service Report 18, Washington, DC: USDA, Agricultural Cooperative Services, 33-60.
- Staatz, J.M. (1983). "The Cooperative as a Coalition: A Game-Theoretic Approach," *American Journal of Agricultural Economics*, 65: 1084-1189.
- Thompson, J.D. (1967). *Organizations in Action: Social Science Bases of Administrative Theory*, New York: McGraw-Hill.
- Vitaliano, P.W. (1983). "Cooperative Enterprise: An Alternative Conceptual Basis for Analyzing a Complex Institution," *American Journal of Agricultural Economics*, 65(5): 1078-1083.
- Williamson, O.E. (1991). "Comparative Economic Organization: The Analysis of Discrete Structural Alternatives," *Administrative Science Quarterly*, 36: 269-296.
- Williamson, O.E. (1985). *The Economic Institutions of Capitalism*, New York: Free Press.
- Williamson, O.E. (1979). "Transaction-Cost Economics: The Governance of Contractual Relations," *Journal of Law and Economics*, 22(2): 233-261.
- Zusman, P. (1992). "Constitutional Selection of Collective-Choice Rules in a Cooperative Enterprise," *Journal of Economic Behavior and Organization*, 17: 353-362.

Table 1. Markets, Hierarchies and Cooperatives as Systems of Attributes

Mechanisms / Instruments	MARKET	Bargaining Association	Processing Cooperative	New Generation Cooperative	HIERARCHY
1. Ownership (property rights)	Separated	Separated (-) Level of member investment (+) 			Joint (Unified)
2. Authority (formal)	0	0	++	++	++
3. Incentive intensity	++	++	++	++	0
4. Administrative Controls <ul style="list-style-type: none"> • Planning • Information • Integration • Monitoring 	0	0 + 0 0	++	++	++
5. Common staff (central structure)	0	+	++	++	++
6. Partner selection	0	0	0	++	++
7. Adaptation A	++	++	++	+	0
8. Adaptation C	0	+	+	++	++
9. Contract law	++	++	+	+	0
Degree of Formalization <ul style="list-style-type: none"> • Association (horizontal) • Exchange (vertical) 	0 0	++ 0	++ 0 / +	++ ++	++ ++
Degree of Centralization	0	+	+ / ++	++	++

Note: ++ = strong; + = semi-strong; 0 = weak. This table builds on and extends table 1 in Williamson (1991: 281).

