Collective Action through Marketing Boards: An Efficient Hybrid Governance?

Annie Royer[1], Claude Ménard[2], Daniel-Mercier Gouin[3]

Abstract

Because of their perishable nature on the one hand and the impact of their quality on consumers on the other hand, agricultural products have always raised important problems of coordination and control with high transaction costs. In the agrifood industry, the recent period has registered substantial evolution in devices intended to provide vertical coordination among the various agents of value chains. The most noticeable evolution might be the progressive dismantlement of collective organizations in favor of a contractual approach that would be more compatible with the requirements of a market-oriented policy. In this paper, we revisit the role of marketing boards, mainly through the Canadian experience, more specifically in the Province of Quebec. Examining their nature and their role, we intend to better understand the type of problems marketing boards were trying to face and still do, and their success and failures in terms of an efficient organization of complex transactions with strong asymmetries among partners. We shall argue that their occurrence in very different contexts as well as their resilience is rooted in a relatively successful combination of organizational properties, embedded in their hybrid nature, and institutional legitimacy, thanks to the guarantees they provide.

Keywords: Hybrid Governance, Organization, Agriculture, Marketing Board, Institutions, Regulation, Transaction Costs.

1. Introduction.

Because of their perishable nature on the one hand and the impact of their quality on consumers on the other hand, agricultural products have always raised important problems of coordination and control, mainly across the different stages of the chain value, with high transaction costs as a result. The traditional polar modes of governance provide limited tools in that respect: vertical

[1] Wageningen University, Business Administration Department
[2] University Paris 1 Panthéon-Sorbonne, Centre d'économie de la Sorbonne
[3] Laval University, Agricultural Economics and Management Department

integration in large business firms confronts acute problems of incentives, particularly at the production stage; fully decentralized coordination through the price mechanism face problems of coordination, quality control, and volatility of prices. It is noticeable that the agrifood sector has explored for decades alternative arrangements, which correspond neither to pure markets nor integration. Following Williamson (1991/ 1996, chap. 6), we identify these alternative arrangements as hybrids. By hybrids, we understand arrangements in which several partners pool strategic decision rights as well as some property rights while simultaneously keeping distinct ownership over key assets, so that they require specific devices to coordinate their joint activities and arbitrate the allocation of payoffs (Ménard, 2011).

In the agrifood industry, the recent period has registered substantial evolution in devices of this type, intended to provide vertical coordination among the various agents of value chains. The most noticeable evolution might be the progressive dismantlement of collective organizations in favor of a contractual approach that would be more compatible with the requirements of a market-oriented policy. Impersonal market coordination, when it still exists in the agrifood sector, and above all collective organizations, would then be replaced by arrangements such as contracts, alliances, or even vertical integration that intend to guarantee the required vertical coordination while remaining compatible with the role of market forces (Hobbs and Young 2001; Boehlje and Schrader 1998; Royer, 2009).

One mode of organization that has been particularly challenged by this now prevailing contractual approach is the coordination and control operated through marketing boards (MBs), or variations on this form, e.g., 'marketing orders' in the US, 'interprofessions' in France, and so on. Marketing boards, once a dominating arrangement in Australia, New Zealand, the UK, and still prevalent in Canada, can be defined as "*legislatively specified compulsory marketing institutions which perform any of the functions of marketing on behalf of the producers of a particular agricultural commodity*" (Veeman 1987: 992). These arrangements were widely used in developed as well as developing countries in the 1960s and 70s, before experiencing extensive dismantlement during the 1980s and 90s. The rationale behind this shift in public policies is that marketing boards and similar arrangements are considered to behave as monopolies, interfering negatively with the efficient allocation of resource in developed countries, and serving as umbrellas to state organs of patronage and taxation in developing countries (Dorward *et al.* 2005).

In this paper, we revisit the role of marketing boards, mainly through the Canadian experience, more specifically in the Province of Quebec. The reason for doing so is that critics or even hostility, often legitimate, towards these arrangements tend to blur or even distort their role, and particularly the many organizational and institutional challenges marketing boards were set up to address and their successes in overcoming them. The Canadian lasting experience with marketing boards is intriguing in that respect. Often criticized as a supply management mechanism that favors coalition and anti-competitive behavior, they have nevertheless persisted for reasons that exceed the lobbying power of the parties involved.

In what follows, we endorse a non-normative approach to these arrangements. Examining their nature and their role, which goes beyond supply management, we intend to better understand the type of problems they were trying to face and still do, and their success and failures in terms of an efficient organization of complex transactions with strong asymmetries among partners. We shall argue that their occurrence in very different contexts as well as their resilience is rooted in a relatively successful combination of organizational properties, embedded in their hybrid nature, and institutional legitimacy, thanks to the guarantees they provide. Our arguments are developed along a new institutional economics perspective. We substantiate our analysis mainly through the case of marketing boards in the Province of Quebec, although we also refer to other and somewhat similar experiences.

The paper is organized as follows. Section 2 explores with more details marketing boards as alternative solutions implemented, beyond the standard polar cases of markets and integration, to face problems of coordination and control in the agrifood sector. Section 3 summarizes our theoretical framework, with an emphasis on the role of non-standard modes of governance in organizing complex transactions with high uncertainty and high risks of opportunistic behavior. Section 4 revisits the role of marketing boards with the tools provided by our model. Section 5 presents some results and discusses their interpretation, particularly with respect to the advantages and flaws of marketing boards as instruments for efficiently organizing transactions at stake. Section 6 concludes, raising some public policy issues.

2. Governing vertical coordination: Boards and similar arrangements.

Vertical coordination plays a particularly important role in the agrifood chains because of some specific characteristics of that sector. First, the nature of the activity (perishable products, storage etc.) often requires a tight coordination among actors in the supply chain to preserve quality and allow a smooth and safe flow of products from farmers to consumers. Second, some organizational factors (increasing concentration of the distribution and processing sectors, use of contracts, increasing importance of credence attributes) often create information asymmetries among parties that can be reduced by tighter vertical links. Third, institutional dimensions (food regulations on quality and safety, consumers demanding more guarantees) impose the need for signaling and monitoring quality in agrifood chains. Again, tighter coordination may alleviate this new set of problems (Menard and Klein 2004).

This vertical coordination along value chains can take various forms and imply different modes of organization intended to regulate marketing coordination. In this context, marketing is understood as the sequence of transactions required to transfer goods from producers to distributors and, ultimately, consumers. Marketing boards in Canada, marketing orders in the United States, and the interprofessions in France are examples of organizations strongly involved in the coordination of agrifood products. Notwithstanding their differences, these organizations share important features, notably their functions, the hybrid characteristics of their governance, and their reliance on a legal framework to be effective. This section reviews briefly the nature of these organizations. We first examine the role they are assigned. We then recollect some factors that have pushed towards their creation. We thereafter look at the reasons for their partial dismantlement and modifications.

Main functions

Formerly, the main objectives of marketing boards and similar arrangements have been from the very beginning to improve producers' bargaining power and promote an orderly marketing of agrifood products, smoothening coordination of supply and demand in highly cyclical activities. These arrangements display a variety of forms along the vertical chains of transactions, ranging from negotiation between producers and transformers or distributors to centralized sales, supply management, or even generic advertisement activities.

Because of the properties of goods at stake, all types of agricultural products can be concerned by a marketing board. However, these arrangements are usually initiated by the producers of a specific product, or family of products. Since risks of free-riding are very high if the organization remains based on purely voluntary producers participation, as it is the case for cooperatives, in most countries pressures have been strong to make these organizations mandatory. In Québec, marketing boards become mandatory to all agents involved in the product marketed, once approved by relevant authorities and two-third of voting producers. What makes boards fully operational is their embeddedness in an institutional framework combining legislation, tailored differently among provinces since this is a federal regime, and a semi-public regulator that acts as a specialized court that administers marketing-related programs and is in charge of solving disputes that might arise among partners.

The American marketing orders share many characteristics with Quebec marketing boards. They are also initiated by producers and become effective when approved by related authorities and two-third of voting producers. Their effectiveness rely on a specific institutional framework, the Agricultural Marketing Agreement Act (1933; amended in 1937 to allow marketing orders), implemented under the authority of the Secretary of Agriculture. The main objectives of marketing orders are to stabilize market conditions for producers while guaranteeing adequate supply of food products to consumers. Their functions fall into three broad categories: quality control, quantity control, and market support (Anderson 1982). To reach these goals, Orders are allowed to set minimum quality standards, control volume marketed, and carry out research and development activities. Marketing orders are mostly found in the milk, fruits and vegetables industries.

In France, interprofession is defined as a private organization, recognised by the State, that gathers all segments of an agrifood chain with the objective of elaborating contractual policies guaranteeing equity among partners and allowing the enhancement of chain performance (Coronel and Liagre 2006). Two emergence periods of the French interprofessions must be distinguished. The first interprofession was settled in 1936 in the wheat sector (Office national interprofessionel du blé) as a tool to reduce price and supply variations. The second wave of emergence took place in the 1960s with the enactment of a series of agricultural laws ('loi d'orientation agricole' of 1960 and 1962). These "second generation" interprofessions do not put as much emphasis on producers' bargaining power as the marketing boards and orders but rather on the improvement of coordination along the chain by increasing partners' cooperative behavior and on carrying out actions of collective interest such as research and development and commercial advertising (Valceschini 2001). This motivation, distinct from the one that prevailed in the creation of boards and orders, correspond to a very different time: the sixties are not a period of economic crisis, as the 1930s, but a period of economic expansion. However, and somewhat paradoxically, it confronted some similar problems, e.g., problems of coordination in the chain of transactions to meet a rapidly changing demand, problems of asymmetries among partners with the rapid concentration of processors and distributors, and the need to adapt to deep changes in the technology. The interprofessions are embedded in a legal framework that institutes a centralized and compulsory negotiation between partners and that imposes various conditions regarding product distribution and supply management. As a result, interprofessions have legitimacy in adopting and implementing measures that determine how the quasi-rent will be shared among partners as well as closely monitoring supply. Similar to marketing boards and orders, once decisions have been approved by an interprofession, all producers and industrials must comply with them.

One common feature that these collective modes of organization share, and on which we will come back, is that they exhibit hybrid properties. By hybrid, in this context, we mean an arrangement mixing public and private interests in a very specific way, since it combines self-regulation mechanisms operated by private partners in the chain of transactions, and a legal framework supervising and enforcing these mechanisms.

Why have they been put in place?

The creation of collective marketing organizations has at least two origins: (1) to improve producers bargaining power, so as to create a flat field for players acting in a symmetrical position, and (2) to better coordinate products along the transaction chains, in order to improve quality and quantity delivered while simultaneously generating extra value. Most collective marketing organizations emerged in the 1920s and 1930s, at a time of major tensions in the supply chains, of technological transformation of agriculture, and of rapid changes in the market structure of transformation and distribution[4]. They were first intended to be a response to the low farmer bargaining power and to supplement for dramatic market failures, notably highly unstable production flow and prices (Erba and Novakovic 1995). French (1982) explains *ex-post* the economic rationale behind conceding such powers to producers: "*the incompleteness of information, the uncertainty of prices and outputs, and the failure of the private sector to develop stabilizing institutions* [resulted in] *sub-optimal resource allocations, highly variable returns, average returns to growers of perennial crops that are depressed for extended periods, and occasional devastating losses*" (French 1982: 918).

Royer (2008) emphasizes the role of marketing boards as organizational means for assuring farmer transactional security in the presence of perishable products (temporal specificity) and unbalanced bargaining power. Perishability and cyclicality of the products on the one hand, asymmetries among parties on the two sides of the market on the other hand generate a high potential for the occurrence of opportunistic behaviour, particularly on the 'strong' side of the market, that of buyers. It is so because in a modern agricultural economy, buyers are much more concentrated than producers. Such a market structure increases the risk of opportunistic behaviour, which undermines trust and cooperation that could otherwise enforce agreements. This is the well-known argument of moral hazard, in a context in which markets cannot fully reveal the adequate information or provide adequate tools to coordinate.

In all these cases and notwithstanding differences, the emergence of "hybrid" arrangements" combining private and public institutional features intended to respond to similar problems and were viewed as efficient modes of organizing the supply chain and coordinating parties in order to face a changing environment with substantial uncertainties. These arrangements were also

[4] Marketing boards first appeared in New Zealand (1921) and then spread to Australia (1926), Britain (1931) and Canada (1927; Québec in 1956) . Most marketing orders (17) were established within the five years following the amendment of the Agricultural Marketing Agreement Act in 1937. Interprofessions first appeared in France in 1936.

considered from the very beginning as costs minimizing contract-enforcement devices in comparison to costly legal courts or contextually inefficient cooperatives[5] (Royer 2008).

Why have they been dismantled?

In the 1980s, changes in the economic and institutional environments have forced adjustments on many of these organizations. The main change in that respect is the build-up of a liberal paradigm embraced by many countries that concretely translated into the inclusion of the agricultural sector in the GATT negotiations in 1986[6]. In the early 1980's many countries were facing national deficits, fast growing public debts, high inflation and increasing unemployment rate. Failing to improve the situation with Keynesians tools, many governments turned to market-oriented remedies. The capacity of public authorities to interfere adequately in the economy, especially the highly subsidized agricultural sector, became challenged. When the Uruguay Round started, many countries had already started reforms advocating the deregulation of the economy, and the inclusion of agriculture in the GATT negotiation was a pretext to start or accelerate reforms. The alleged end of the "agricultural exception", combined to a desire to reduce public intervention, pushed towards in-depth reforms of the organization of the agrifood sector generally, and of the existing arrangements structuring marketing of products more specifically.

Starting in the 1990s, massive dismantlement of marketing boards and the like in various countries, notably those that first introduced them, Australia and New Zealand, is perceived as the result of the new economic paradigm promoting the restoration of more active market forces in all sectors of the economy. In New Zealand, three areas of production (milk, eggs, and human consumption wheat) mainly supplying the domestic market have been fully deregulated after the implementation of various economic reforms in the mid 1980s. For example, the milk sector has been deregulated progressively and became a complete free market in 1993 (Gouin1994). The Australian dairy sector experienced the same faith in July 2000 after a long deregulation process that started in 1986 in order to improve the sector competitiveness. In both countries, the abolishment of marketing boards results from a long deregulation process that affected all sectors

[5] For example, in the province of Québec (Canada), because of (i) capital access problems, (ii) competition from the introduction of margarine in the Canadian market in 1949, and (iii) free-riding problems, milk cooperatives experienced a slow development that prevented them to compete efficiently against private enterprises.

[6]Since the creation of the GATT in 1949, agriculture had been deliberately tucked away on the basis of economic, social and political specificities.

of the economy. In the case of the dismantlement of the marketing boards in the United Kingdom, external forces played a more important role in changes, which reshaped the organization of the agricultural sector over a period of more than 20 years (1973-1994). It is generally agreed that the inadequacy of the British milk marketing boards' rules with the Common Agricultural Policy (CAP) when entering the European Union in 1973 and the introduction of European quotas in 1984 were the leading factors that finally ended the 60 years old institutions in 1994 (Doyon *et al.* 1999; Franks 2001). Therefore, exogenously initiated institutional changes forced a modification of milk marketing boards' internal rules since these changes created a misalignment of their traditional objective with the new sector policies, thus severely affecting their performance. It must be added that the elimination of the boards found very favorable ground in the pro-market environment of the Thatcher era.

The recent evolution of marketing orders in United States is not as extreme as that of marketing boards. The American government considered eliminating marketing orders in the mid-1990s as a move towards a more market-oriented policy. However, in the 1996 Farm Bill, authorities finally opted for relatively minor revisions, notably a consolidation from 31 to 11 Federal Milk Marketing Orders and a few modifications in the pricing system (Stuckenberg *et al.* 2006). These changes became effective in October 1998. Although slightly altered until now, the future of marketing orders is far from being certain. Similar to marketing boards, they experience increasing pressures from international market liberalization and are regularly challenged by farmers and processors on the basis of the freedom of speech[7].

In Europe, institutional changes imposed severe modifications on the interprofessions. The European Community Merger Regulation 4064/89, which became a law in 1990, made price fixing illegal in interprofessions, so that they lost an important element of their *raison d'être*[8]. The new rule somehow destabilized interprofessions, calling their utility into question. However, most of them recovered and maintained some power by reorienting their objectives and strategies towards product traceability management and promotion (Coronel and Liagre 2006).

[7]One of the most famous lawsuits on this issue is the Glickman *versus* Wileman Brothers and Elliot on generic advertising (Schoen*et al.*, 2000).
[8]Regulations at the European level become law in all member states the moment they come into force, without the intervention of national authorities and automatically override conflicting domestic provisions (http://ec.europa.eu/eu_law/introduction/what_regulation_en.htm, consulted February 2011).

The planned elimination of milk supply management in Europe, scheduled for 2015, is triggering a major interest in contracting, currently viewed as the most adequate regulatory tool for the industry (European Commission 2010). However, the relative instability of dairy and agricultural markets and the weak bargaining power of producers will likely require contracts between producers and industrials and/or large distribution chains to incorporate adaptation mechanisms exceeding what bilateral contracts as well as markets can offer, in order to allow a better coordination along value chains. In that respect, interventions through public regulatory policies remain high on the agenda of policy makers, so that the case for marketing boards, marketing orders and interprofessions is far from being closed.[9] Boards and similar arrangements promoting self-regulation might well help framing products marketing in a way that reduces opportunistic behaviors, enforces contractual arrangements, and improves coordination along supply chains.

Indeed, there are theoretical as well as empirical arguments [10] about how these hybrid arrangements could outperform command-and-control types of regulation by public authorities while avoiding the negative impacts of markets' cyclical evolution, thanks to the capacity of parties to these arrangements, particularly their knowledge of the industry, to better adapt supply to demand in the long run. First, these governance mechanisms could mitigate transaction costs that would otherwise be carried by central governments (Johnson 2000). Second, they could also mitigate risks associated with contractual agreements. This is substantiated by the report from a high level group set up by the European Commission on the future of the European dairy policy, which emphasized precautions required in using contracts to regulate the agricultural sector (European Commission, 2010). The group especially puts forward the creation of guidelines or of a legislative proposal that would specify the content of contracts, as well as the need for a legislation that would exceptionally infringes the European competition law in order to allow farmers to negotiate contracts collectively (including prices) so as to strengthen producers' weak bargaining power.

[9] Explaining the persistence of these arrangements solely by the existence of powerful lobbies falls short of being satisfactory for at least two reasons: (1) Lobbies of industrials or distributors interested in dismantling these organizations are at least as powerful; and (2) Rent seeking strategies require significant rents to be expected, an assumption that remains to be demonstrated in these sectors.

[10] See our next section.

To sum up, although many of the arrangements implemented over half a century ago were progressively dismantled or modified, many of them still remain active under various forms, including the traditional one, and /or are revisited as possible solutions to ongoing problems. This resilience tends to demonstrate that market failures characterizing agrifood supply chains remain significant and call out the attention of public authorities. They also suggest the difficulty of avoiding the need for hybrid modes of governance in the agrifood sector, relying on a legal framework that would allow organizations of value chains that minimize transaction costs and optimize coordination. In that respect these issues are in line with some recent development in organization theory.

3. Marketing Boards as Hybrids: some theoretical considerations

In our overview of the emergence and transformation of marketing boards and the like, we have referred repeatedly to these arrangements as hybrids, without any more specification. We now turn to this concept and its underlying model in order to better understand their nature and properties. We do so in two steps. We first qualify what is meant by hybrids in organization theory. We then discuss the relevance of this concept to capture some central characteristics of marketing boards.

The logic of hybrids

In first approximation, hybrids can be defined as arrangements in which partners pool strategic decision rights while keeping simultaneously distinct ownership over key assets, so that they require specific devices to coordinate their joint activities and arbitrate the allocation of the resulting payoffs (Menard, 2004; 2011). The term ‘hybrid’ was introduced in economics by Rubin (1978) in a pioneering paper about franchising and, more generally, modes of organization offering an alternative to the polar cases of markets and firms as a way to organize transactions. Initially viewed as ‘non-standard agreements’ that would tend to be unstable and transitory, ‘hybrids’ progressively became acknowledged as a class of organizations of its own (Williamson, 1985; 1991). There is now a booming literature in economics, managerial sciences, or sociology, about various forms of hybrids, such as strategic alliances, joint ventures, and networks. Through this diversity of arrangements, some regularity has been identified that might help understanding what marketing boards and the like are.

The starting point is that such arrangements exist as a specific way to organize transactions. Transactions in this context are understood as the transfer across technologically separable activities of rights to use goods or services. These transfers can be operated with the help of different supports, e.g., prices, contracts, command, which are associated to different modes of organization. In a simplified approach, we can model these alternatives as follows.[11] Let us consider two firms, 1 and 2, and four assets {A,a; B,b}, with A and B related to the core activity of 1 and 2, respectively, and remaining within their boundaries, while a and b are assets valuable only if used jointly. Each firm holds full decision rights, D_A and D_B, while rights d_a and d_b require coordination since linked to the joint usage of a and b. The resulting payoffs are therefore Π_A, Π_B, π_a, and π_b, with the last two generated if and only if the corresponding assets are jointly used (profits are zero otherwise). Last, we identify the governing entity monitoring the joint use of assets, if this entity exists and whatever the form it takes, as the Strategic Center (SC). The three resulting "ideal types" identified in modern organization theory (markets, hierarchies, hybrids) are summarized in Figure 1.

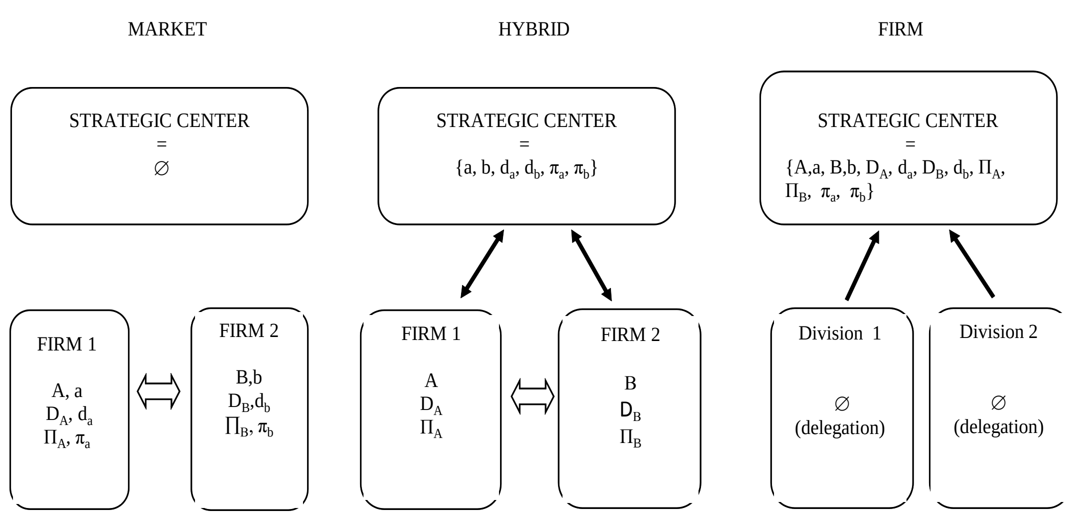


Figure 1: Modes of organization contrasted

[11] This model is from Ménard (2011), and is derived from Baker et al. (2008).

On markets, rights are allocated distinctly and partners process transactions through the price system, without interference of a joint strategic center. Cooperation that might be required to value some assets is monitored through contracts that do not encroach on rights of the parties. In firms, divisions hold rights under delegation: in last resort, they remain submitted to the control of their strategic center (the 'headquarter'). In hybrids, key rights are in the hands of autonomous partners keeping title as residual claimants, while subsets of assets, rights, and associated payoffs are shared and monitored jointly.

What this suggests is that there are alternative ways to organize transactions, beyond purely competitive markets or integrated firms. We shall argue that marketing boards and the like fall into this category. Before going further in their characterization, there is one more important step, which is the explanation of why one type of arrangement would be preferred to others. The leading explanation to this trade-off in the existing literature is provided by transaction costs economics. Indeed, from an economic point of view these alternative modes of organizing transactions likely involve the consumption of different resources, therefore different costs. A major contribution of Williamson, as acknowledged by the attribution of the Nobel Prize in Economics in 2009, has been to identify the sources of these costs and of their variations across arrangements. Three main sources of transaction costs have been identified, opening the way to innumerable empirical tests. (1) The **uncertainty** surrounding a transaction, which can be generated by the institutional or physical environment or can emerge from the relationship among partners. The higher the uncertainty, the more safeguards parties to a transaction will look for, thus pushing transaction costs upward. (2) The **frequency** at which a transaction happens, with the hypothesis that more frequent transactions make parties involved more familiar with the characteristics of these transactions, thus facilitating their organization and lowering costs. (3) Last, the **specificity of assets** (e.g., physical investments, human competences, etc.) required by the transaction at stake can also induce variable costs. The more specific the asset, the more risky it is for partners to get engaged so that they will require more safeguards, thus pushing transaction costs upward.

These different determinants and their impact on alternative modes of organization through their effect on transaction costs can be encapsulated as follows (the underlying signs being that of the derivatives). If *U* stands for uncertainty, *F* for frequency, *AS* for asset specificity, *TC* for transaction costs and *MO* for modes of organization, the relationship between modes of organization and sources of transaction costs becomes:

$$
\begin{tikzcd}
\boldsymbol{(U, F, AS)} \arrow[r] \arrow[rr, bend right] & \boldsymbol{TC=f\,\underset{+\ \ -\ \ +}{(U, F, AS)}} \arrow[r] & \boldsymbol{MO}
\end{tikzcd}
$$

Figure 2: Relationships linking determinants to modes of organization

The underlying assumption here is what Williamson has defined as the ‘discriminating alignment principle’ (1996, p. 378), according to which ‘the assignment of least-cost *governance structures* to manage *transactions*’ is what governs choices between making a product within an integrated firm, acquiring it on the markets, or producing it through interfirm agreements (the ‘hybrid’ arrangement). If we assume that agents are ‘calculative’, yet with limited capacities, the model logically considers that under competitive pressures, agents will continuously look for the most adapted governance structure, which is the structure that fits the determinants of transaction costs in a way that minimizes these costs. Therefore, *the discrete alignment principle hypothesizes that in a competitive environment agents have a strong incentive to choose the structure that minimizes their transaction costs*.

Until the mid 1990s, this model was applied essentially to the explanation of the trade-off between “markets” and integration within a “firm.” Notwithstanding some pioneering studies in the 1980s, it is only quite recently that economists and other social scientists became increasingly concerned by the possibility of a third class of organizations that could outperform “markets” and “hierarchies.” Termed ‘hybrids’ by Williamson in 1991 (see 1996, chap. 4), these arrangements were initially understood as ‘intermediate forms’, squeezed between these two polar cases. Progressively, more accurate factors were identified, underlying the variety of arrangements grouped under the umbrella of ‘hybrids’ (e.g. interfirm agreements as varied as franchising, strategic alliances, joint ventures, producers’ organizations), making them part of a class of organizations with specific properties (see Ménard, 2004 and 2011, and Lafontaine and Slade, 2007, for reviews on this issue). It is these properties that might be relevant for the analysis of marketing boards and the like.

Marketing Boards as Hybrids?

Among the three determinants identified by Williamson and his followers as forces pushing towards the adoption of a specific mode of governance among the set of possible alternatives, we argue that uncertainty is central to the existence of hybrids. While the specificity of assets embedded in a transaction is crucial in the trade-off between processing that transaction through markets and organizing it within an integrated firm, the separation of ownership that characterizes parties to a hybrid as well as their maintained autonomy over key decision rights signal a relative independence of their strategic assets. However, as suggested in our model (Fig. 1), some of these assets can be a source of value if, and only if, they are used jointly by different parties, so that strategic resources might need being pooled. The resulting exposure to free riding and, more generally, opportunistic strategies, may also put partners at risk. Finding the right governance structure becomes crucial to face uncertainty.

By uncertainty, we mean contingencies that are difficult or impossible to predict and that generate adaptation problems. Uncertainty may be due to “the rate and unpredictability of change in an environment over time”, because of exogenous shocks, to “perceptions of the environment state irrespective of its change over time” (Carson et al., 2006, p. 1059), and/or to behavior of partners when operating under these conditions. Such uncertainties might affect inputs, outputs, or process, and often result in distorted market structures.

With respect to inputs, a key factor in the agrifood industry concerns their quality and the associated problems of observability. For example, the dairy industry depends on the quality of milk delivered by farmers, which in turn may push them or their suppliers (e.g., cooperatives) to develop joint assets to control inputs. In determining standards of quality and controlling their compliance, marketing boards and the like intend to reduce the variability in the quality of inputs.

Outputs might also be subject to high variability, with similar problems of observability, and to tight constraints on their delivery, because of the perishable character of products at stake. If parties have an incentive to pool resources so as to create extra value, the outcome is conditional to their capacity of jointly guaranteeing the quality of output delivered. This is clearly a key role for marketing boards and the like. Uncertainty may also come out of the technology involved and/or of technological change (for example, the development of ultra-high temperature processes in the dairy industry). Risks of opportunistic behavior in adopting an adequate technology or in its usage might command agreements that mitigate these hazards while preserving the autonomy of partners with respect to the way they organize their activities. In that respect marketing boards and the like share many properties of coordination with other supply chain systems. One last source of uncertainty that must be mentioned, because it played an important role in the emergence and resilience of marketing boards, has to do with market structures and, more precisely, the asymmetry between producers, processors and distributors that has been exacerbated by the concentration of the later. In Québec, the three largest dairy processing companies buy 80% of the total milk production, and in the pork sector the biggest slaughterhouse/processor has 55% of market shares. Also, the food distribution sector is largely controlled by three companies, which had 93% of market shares in 2004 (MAPAQ, 2007).

In developing joint strategies over the use of shared assets or newly created assets thanks to their pooled resources (e.g., a traceability system, research and development partnerships), in sharing knowledge and risks associated with observability problems, in implementing common standards, hybrid arrangements might provide solutions not available to alternative arrangements or available only at higher costs, thus outperforming markets as well as hierarchies. This could explain preferences for socially embedded relationships rather than arms' length relationships when uncertainty is high, when high adaptability is required, or when it is difficult to differentiate between poor performance and bad luck (Ménard, 2011). However, the success or failure of the arrangement is conditional to its governance. Hybrid arrangements persist and succeed if (i) they can take advantage of an adequate governance structure; (ii) they find adequate support in their institutional environment; (iii) they can adapt to their changing economic environment.

As a result, hybrids often mix private interests embedded in public rules, which makes them particularly sensitive to policy issues. This is another dimension of hybrids regularly observed (with marketing boards, of course, but also with many other arrangements involving several partners, as with certification systems etc.). It also illustrates the dual face of many hybrids, which are simultaneously arrangements among private partners and arrangements involving public authorities, particularly in the agricultural sector.

It might be so because the simultaneous combination of pooled rights and of autonomy over strategic decisions increases the risk of free-riding, with negative spillover effects on the entire arrangement. Private order might be a solution, as illustrated by the creation of an internal 'court' for judging and penalizing deviants in a successful hybrid arrangement among 35 partners in the French milling industry (Ménard and Raynaud, 2011). However, there are often high costs in implementing private order and imposing decisions to partners who remain autonomous with respect to strategic decisions as well as property rights. And going to courts to solve problems is even more costly, with additional negative side effects since its signals poor adaptation capacities among partners, not to mention the uncertainty it generates about the issue, that is, about what the court will decide. Under these circumstances, backing the arrangement with institutionally defined rules of the game might represent significant economies on transaction costs. Thus understood, the mix of private interests and public support through the definition of rules of the game might be less the result of lobbying strategies to implement market power, as often argue against hybrid arrangements, than the search for cost minimizing arrangements.

4. Revisiting the role of Marketing Boards

The evolution of the role of marketing boards in Canada illustrates the tensions when resources gain being pooled among partners who remain autonomous with respect to most of their strategic decisions and are facing market conditions that could exacerbate competition among them. To better understand this 'coopetition' (Nalebuff and Brandenburger, 1997) and the gains expected from the embeddedness of the underlying arrangement in rules of the game defined and partially enforced by public authorities, we come back to the development of these arrangements in

Canada, with a special attention to the hog industry in one of its provinces, Quebec, where almost 90% of the agricultural production value is marketed through marketing boards.

An institutional arrangement...

Marketing boards appeared in Quebec with the enactment in 1956 of the law on the marketing of agricultural products. This Act originated from recommendations from a public commission[12] established by the Quebec Government in 1951. This Commission was the result of several years of lobbying from the main farmer union asking the government for a legislative framework that could allow "*collective schemes for the sale of agricultural products with mandatory arbitration, compulsory arbitration sentence and legal extension"* (Poulin 1953:11). Marketing boards are one of many constituents of a marketing board setting. Indeed, in order to be operational, Québec marketing boards need being backed by an important institutional framework composed of four main constituents: (i) a marketing scheme; (ii) a marketing board; (iii) a law on the marketing of agricultural products; and (iv) a regulatory authority. The marketing scheme (MS) is the heart of the marketing board system and is defined as "*a legal, democratic and constraining tool that farmers use to ensure an effective and as beneficial as possible marketing of their products*" (Prégent 1979: 10). This scheme constitutes a legally-sanctioned plan that determines the rules of the game between the producers and their board, but also between the buyers and the board. In other words, marketing schemes define the rules of exchanging raw agricultural products from the farm to the processing/packaging segment of the agrifood chain. It includes provisions on the territory and producers concerned by its application, its objectives, its legal power, the producer board's powers and duties, and its funding mode.

In the arrangement adopted in Quebec, marketing schemes must first be designed by a group of producers and then proposed to the regulatory body for approval. To become effective, a MS must collect two thirds of favorable votes among concerned producers, with at least half of the eligible producers voting (RMAAQ 2010, Articles 52-55). Once approved, the MS becomes mandatory to all producers of the specified products and is managed by a board of producers, the marketing board. By extension, the wholesale buyers of the product concerned are also constrained by the implementation of a MS. Buyers are not 'partners' to a MS since they have no

[12]Called the Héon Commission named after its president.

decision-making or management rights, but they are required to negotiate with the marketing board "*any conditions and terms of production and marketing*" of the product, "*held by the requirements of* (...) *the law*" (RMAAQ 2010, Articles 112 and 58). Symmetrically to producers, buyers are allowed to form a board that represents them when dealing with the producers' board. Although they are not partners to the latter, buyers often coordinate with marketing boards to improve quality and invest in partnerships, mainly in advertising and research and development.

The regulatory body that oversees the implementation of MSs in the province of Québec is called the *Régie des Marchés agricoles et alimentaires du Québec* (RMAAQ). Its objectives are "*to foster effective marketing and orderly agricultural products and food* [...] *and to resolve difficulties arising with the production and marketing of products* [...]" (RMAAQ 2010, Article 5). The regulator performs various functions of economic regulation: it supervises the implementation of MSs, approves regulations related to collective marketing, and resolves disputes between parties bound by a MS (Royer 2009). At the request of either party to the negotiation, the regulator may appoint a mediator to reach an agreement. If no agreement can be obtained, either party may request the regulator to arbitrate the dispute, similarly to what a court would perform. The outcome of this arbitration process is binding and therefore applies to all stakeholders in the production and marketing of the product for the territory concerned (RMAAQ 2010, Articles 115-118).

...taking various forms.

The legislation enabling marketing schemes provides a toolbox that boards can use. The literature generally distinguishes four types of boards according to the degree of power they hold. At the most elementary level, *promotional* boards provide producers with information on markets, collect funds necessary to develop research programs, and pool funds to finance generic advertising campaigns. At a second level, *bargaining* boards allow farmers to negotiate collectively prices and sales conditions (classification, payment conditions, transportation costs, inspection costs, etc.). Bargaining boards can also provide payment guarantees, collective transport organization, inventories management and financing, product classification, and packaging. At the third level of intervention, we find single-desk selling boards. They can oblige producers to sell their products through the board, which makes the latter the unique supplier of a specific agricultural product. This type of board generally provides a guaranteed outlet, centralized supply, price pooling, and a centralized producer payment scheme. Last, the type of marketing boards with the highest level of intervention is basically a single-desk selling board paired with supply management powers. Supply management boards can control the supply of their members, assign individual quotas, and fix prices through collective negotiation and/or based on production costs. All boards, except the promotional one, imply a collective negotiation of marketing contracts between the marketing board and the buyers. These contracts are called marketing agreements and must be approved by the regulatory body to become effective.

The various types of marketing boards imply different allocation of rights as well as different relationships between property rights and decision rights among stakeholders. This leads to a variety of hybrid arrangements. At one end of the spectrum, close to market transactions, we find promotional boards that separate most property and decision rights. In such a board, producers only delegate their decision rights over the financing of generic advertising and research. Buyers are usually not involved in such boards. At the other end of the spectrum, close to a hierarchical mode of governance, supply management boards oblige producers to delegate all of their marketing and some of their production decision rights. Buyers are also constrained to buy through this type of board at a given price and product quality, which captures many of their buying decision rights. In between these two 'extremes' we find bargaining and single-desk selling marketing boards.

If we consider uncertainty as the determinant, in the context described in section 2, in deciding to go hybrid, the intensity of that uncertainty is likely a key factor in choosing a specific arrangement among the four types described above, with the associated costs of governance increasing for each of them when uncertainty increases. This is summarized in the following figure[13]:

[13] This is a variation on Williamson, 1996, chap. 4. See also Menard, 2006.

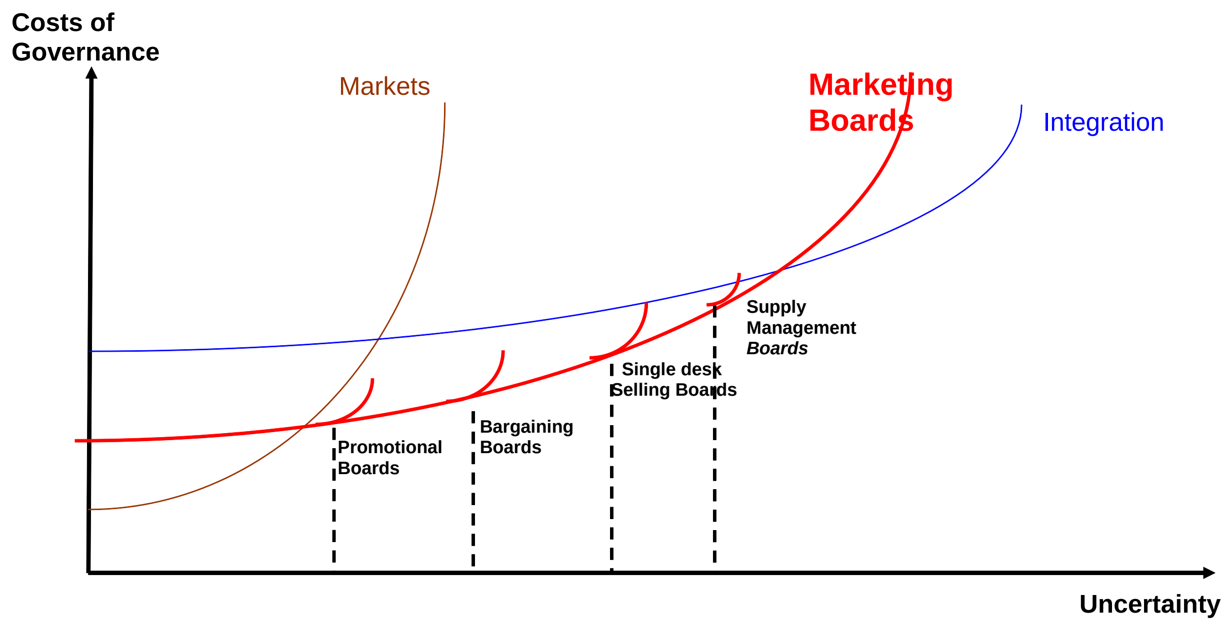


Figure 3: Types of Marketing Boards

In an environment in which competitive pressures remain powerful, which is the case in the agrifood sector, parties will have an incentive to choose the arrangement that minimizes their costs of governance, conditional to the degree of uncertainty that determines these costs. Cost-minimizers parties will have an incentive to remain on the inferior frontier, thus choosing the corresponding arrangement.

This brief description of the marketing board setting and types highlights the importance of the legal framework needed for boards to be operational. Marketing contracts must be approved by the regulatory authority to become enforceable; disputes among buyers and the boards are settled within a specialized court (the regulator); and marketing rules are set within a legislative framework composed of a law and marketing schemes. If our assumption that marketing boards are selected by cost-minimisers parties, the key question then becomes how this marketing system that combines hybrid organizational properties with legally defined rules performs with respect to coordination and costs? We now turn to this issue.

5. Mixing public and private interests: strength and limits

The economic literature has identified several strengths and limits of marketing boards. The most often cited advantages for producers are to increase their bargaining power and to provide all of them with the same marketing conditions. From a chain perspective, MBs would rationalize marketing costs by gathering thousands of transactions and reducing the number of intermediaries (Westgren 1994). Some scholars have argued that MBs could reduce overall uncertainty in agricultural marketing such as uncertainty over the supply of agricultural products and uncertainty over agricultural product quality and prices, which could possibly lead to reduced transaction costs (Hobbs and Young 2001). On the other hand, flaws in this collective organization would mainly come out of their negative effect on consumers' surpluses (Beck *et al.* 1994) and their cumbersome and costly regulatory procedures (Veeman 1997).

A case in point: the Québec hog marketing board.

In what follows, we revisit flaws and strengths of marketing board settings viewed as hybrid arrangements mixing organizational and institutional components. We substantiate our analysis with information and data on the Québec hog marketing board. The reason for choosing this specific board is that it is a single-desk selling board, without supply management power and that has undergone many institutional changes over the past 20 years. Therefore, it allows us to examine a case that is not submitted to the highly regulated environment that supports supply management, thus facilitating the observation of the effects of institutional changes on the organizational arrangement. We first review the recent history of these changes and then continue with an analysis of the advantages and flaws of such a collective marketing system from a new institutional perspective.

The Québec hog producer board was adopted as an arrangement in 1981 and first implemented as a single-desk selling board with an electronic auction in 1989. The objective of the auction was to increase the competition among slaughterhouses/packers so as to increase the prices paid to producers. Between 1989 and 1994, the board used a Dutch auction in which bids were descending until a bidder signalled its intention to buy. Hog producers however complained that prices from the auction were too low while slaughterhouses/processors complained that they faced much uncertainty on their supply of hogs (Larue et al. 2000). In January 1994, the marketing board opted for a mixed system for determining prices. In that system, a share of hogs was pre-attributed to buyers at a pre-determined price while the remaining hogs were sold through a descending/ascending auction. This auction was organized as follows: prices would go down every three seconds by $0.20/100kg until a bid was signalled. The other buyers had then 3 seconds to bid up the price by $0.10/100kg.. After a few years of operation, slaughterhouses adjusted their strategies and prices through the auction declined. Between 1994 and 2009, the board modified a few times the share of pre-attributed hogs in order to foster competition at the auction. Also, in 2000, the board introduced short-term contracts for specific products awarded through an auction in addition to the existing electronic auction and pre-attribution system.

Between 2005 and 2009, the economic environment started changing rapidly. First, the adoption of labelling requirements in the United States (US) and the appreciation of the Canadian dollar relative to the US currency weakened the competitiveness of Canadian hog exports. Second, the most important slaughterhouse in Québec merged with two other processors in May 2005, increasing considerably the concentration of that segment of the chain. Third, in other Canadian provinces, chain partners had started moving away from spot market transactions towards bilateral contracting in order to lower transaction costs and respond to the new demand in specific products (Gervais and Lambert 2010).

This new economic environment put a lot of pressure on the Québec auction mixed system, making both producers and buyers unsatisfied. It pushed hog prices down, much below the board's reference price and prevented buyers from developing high-value niche products by cutting the direct link between them and producers. Finally, after long and arduous negotiations, buyers and the hog marketing board agreed to reform the marketing system so as to address each party's concerns. They sign a new marketing agreement in May 2009. Producers kept their marketing board and slaughterhouses/processors committed to buy all Québec hogs at the US price, reflecting the North American open market conditions. In return, the board allowed bilateral contracting between producers and buyers so that the quality of hogs as inputs could be tailored to buyers' requirements.

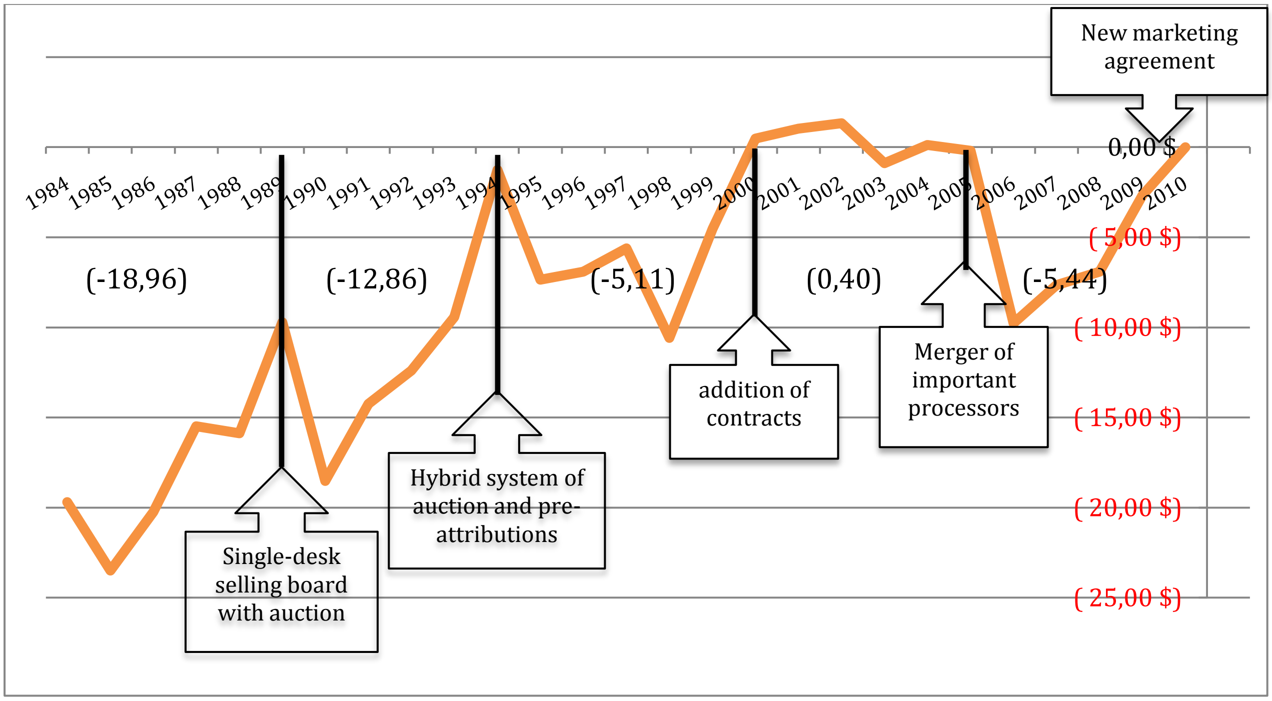
Comparing performance through prices.

As mentioned earlier, one of the central characteristics of hybrids is that they are arrangements in which partners pool decision rights while keeping distinct ownership rights over key assets. What does this imply for the Québec hog collective marketing and its performance?

The delegation of stakeholders' decisions rights to the marketing board has the objective of reducing the overall uncertainty surrounding hog transactions. This is the fundamental motivation for creating collective organizations: to provide producers with a better bargaining position and therefore, reduce uncertainty related to an imperfect market structure, notably buyers' stronger bargaining power and potential opportunistic behaviour. From that perspective, the marketing board should have an impact on either price's level, price's volatility and/or rent sharing among partners. Because of data reliability problems, we can only present Québec hog prices relative to US prices[14]. Graph 1 shows the evolution of the differences of hog prices in Québec and the United States (US) as a ratio of Québec minus US over the period 1982-2009. The graph also indicates the major institutional changes made to the hog board and the price difference for each institutional period.

[14] The use of the differential in prices instead of the prices themselves allows us to show the real evolution of Québec prices in North America. The use of prices only could not allow us to show the « improvement » of Québec prices.

Graph 1. Evolution of Québec and American hog prices (Québec – US), per carcass of 100 kg, Canadian dollars, 1984-2010*.



*1984-1994: US 1-2 with Bcost 51-52%; 1995-2002: Bcost 51-52%; January2003-March2004: CME constructed price x 0,989 %; From April 2004 and on: CME constructed price.

Source: Adapted from the Québec Hog Marketing Board, 2011.

Before the marketing board was actually implemented, from 1984 until 1989, the difference between the Québec and US price was -18,96 CAN$. In other words, the price received by Québec producers was 18,96 CAN$ lower than the price paid to US producers. With the electronic auction, between 1989 and 1994, this difference reduced to -12,86 CAN$. With the introduction of the hybrid auction and pre-attribution system, the difference decreased again at -5,11 CAN$. Between 2000 and 2004, the combination of an auction, pre-attribution and auctioned contracts increased the Québec price so that the 100 kg carcass price was 0,40 CAN$ higher in Québec. The merger of important buyers in the province in 2005 might have increased processors' market power: that could explain why in our graph prices in Québec dropped abruptly in 2005. This observation must however be interpreted with caution since the Canadian dollar started appreciating relative to the US dollar in 2005.The appreciation of the Canadian dollar puts a downward pressure on domestic prices, which might have accentuated the effect of the merger on prices. The decrease in price differential from mid-2006 until 2010 is likely due to a combination of the appreciation of the Canadian dollar, an important reduction in Québec hog supply due to porcine *circovirus,* and the intervention of the regulator, which periodically established a fix differential Québec minus US of -4$. All in all, hog producers received a negative price differential of -5,44 CAN$ on average over the 2005-2010 period.

What this graph basically tells us is that each institutional change had an impact on the price differential between Québec and the United States. In this case, changes have gradually led to a reduction of the gap in favor of Québec hog producers, except for the last period for reasons listed above. There is therefore empirical evidence that the marketing board and its mechanisms had a positive effect on Québec hog prices, reaching one of its primary goals of uncertainty reduction.

Related constraints.

However, the decrease in bargaining power and the reduction of uncertainties related to opportunistic behavior comes at a cost. As a recent governmental commission on the future of agriculture in Quebec[15] noted, "*the marketing board reduces or eliminates the link between producers and processors which limits or slows down the development of differentiated products*" (CAAAQ 2008: 2.26). Since marketing boards are primarily based on the balance of power among partners and are led by producers' interests, they are often supply-oriented. Agrifood chains all around the world have however started shifting towards a demand driven focus in recent years, which conflicts with boards' traditional orientation. This constraint imposed by marketing boards and more generally collective organisations has been addressed in the recent institutional reform of the Québec hog board. Buyers were complaining that the board prevented them from developing specific products. To cite the largest hog processor in the province,[the hog board offers]*"a homogeneous product for a differentiated demand*" (Olymel 2007: 21). Differentiated products necessitate control and traceability systems from farm input suppliers to the final consumer in order to guarantee the publicized product quality and characteristics. Until the 2009 marketing agreement, buyers could basically buy only "commodity quality" hogs. With the new collective marketing agreement, they can sign contracts directly with their hog suppliers and choose among three types of quality: packer-owned hogs, specialty hogs, and commodity

[15] Commission sur l'avenir de l'agriculture et de l'agroalimentaire au Québec (CAAAQ).

hogs. They can also put in place an individual punishment system for producers that don't deliver the required quality repeatedly. The role of the board in this new hybrid arrangement is to frame these contracts by making sure buyers do not abuse their bargaining power. For instance, the board must agree with the specialty hogs' specifications requested by the buyer (production method, grading grid, additional costs, input usage, premiums paid, mechanisms to adjust the premium in case of fluctuating input prices); it oversees the payment of the premium to the producer; and it obliges the buyer to accept the delivery of all hogs allocated to him.

Another type of uncertainty that marketing boards and the like intent to reduce is variability in quality. There is empirical evidence that the delegation of producers' and buyers' decision rights over quality to the Québec hog board has improved quality and reduce variability. The Québec hog board has been able to successfully enhance meat quality thanks to the pooling of resources from producers and buyers. Indeed, partners have decided to collectively implement cutting-edge regulations such as antibiotic access on prescription only, they have developed a salmonella monitoring and control plan; and they have endorsed a voluntary quality improvement program (Programme québécois d'amélioration de la qualité (PQAQ)). The success of these initiatives is strongly related to the control that a marketing board can impose on all partners, but also the private order and enforcement made possible by such an arrangement. Another example of pooled resources concerns research and development activities. The pooling of collective funds into the operation of a pig insemination center (Centre d'insémination du porc du Québec (CIPQ)) and a pig development center (Centre de développement du porc du Québec (CDPQ)) contributed to produce pork meat of very high quality and uniformity, which is internationally acknowledged.

The impact of the allocation of rights

The maintenance of distinct property rights among parties in the hog board also implies that the board cannot use command, as in the case of a hierarchy, but rather relies on authority, understood as the exercise of delegated decision rights based on mutual consent. The use of authority within hybrids can be a source of instability because authority does not display a mandatory character, so that one party cannot use fiat to decide the appropriate response to disturbances. In the case of the hog marketing board, authority is institutionally backed, which allows to overcome this limitation and to stabilize the arrangement by bringing authority close to a hierarchical relationship. This feature makes marketing boards very stable, as long as the institutional rules are not challenged. However, it might also engender rigidities that prevent quick adaptation.

According to numerous contributions on hybrids, pooling decision rights while keeping property rights distinct has important implications (See Ménard, 2011, for a survey and discussion of this issue). Williamson (1991) argued that hybrids generally mix the two types of adaptation found in polar modes of organization: autonomous adaptation, as in markets, and cooperative adaptation, as in hierarchies. Adaptation of the cooperative type would be more efficient to manage transactions involving bilateral dependency since it reduces the uncertainty of potential opportunistic behaviour. In a marketing board setting, the predominant type of adaptation is cooperative since contracting partners' consent is required to modify marketing agreements. There is however a major difference between hybrids of the purely private order type, to which the literature above refers, and hybrids of the public-private order type that we describe here. In a public-private order setting such as a marketing board, cooperative consent must be reached with the support of an institutionalized authority, which makes any changes to the rules particularly laborious. This characteristic of marketing boards involves some major drawbacks in terms of flexibility and responsiveness to environmental changes. Producers and buyers bonded by a marketing scheme cannot capture business opportunities as quickly and easily as a spot market or integrated firms could do since modifications to the marketing rules must be agreed upon by all partners and validated by the regulator. It is probably this aspect of marketing boards that Veeman criticized when she states: "*boards must seek to be more flexible and to foster rather than impede technical and pricing efficiency instead of focusing on regulatory processes and procedures*" (Veeman 1997: 419).

Last, the pooling of marketing rights paired with autonomous strategic decisions increases the risk of free-riding, which may affect the positive effects of the combination. To reduce this risk, partners can create a private order and an enforcement mechanism, but this comes at a high cost, as already mentioned. In a marketing board setting, private rules are backed with institutionally defined ones and enforced through a specialized semi-public court managed by a regulatory authority. The efficiency of this apparatus has never been assessed (?) before, but the theory predicts that it can have also a favourable impact on transaction costs. The recourse to a specialized private-public court allows a reduction of the uncertainty over the outcome of the dispute, increases the speed of conflict resolution, and reduces lawyers' fees. The ultimate question then becomes: do these economies offset the creation and operation costs of the legal framework? The answer to this question goes beyond the objective of this paper but research on the issue would certainly enlighten our knowledge on the overall efficiency of marketing boards.

6. Conclusion

A constraining institutional framework such as the one presented here cannot win unanimous approval from the parties involved and is submitted to complex forces. First, it is continually challenged from within. All producers do not easily endorse the collective discipline and some may think, wrong or right, that they would be better off on their own in a free market. Similarly, buyers, who have to deal with an organized collective marketing, may consider that it hinders the development of their business. Second, as Royer (2009) argued and as our example shows, marketing schemes can be a structure that lacks flexibility to adapt quickly to changing market conditions. Recent changes in the agrifood sector have contributed to the dismantlement of these collective arrangements. Among the most significant changes are: (1) a shift from activities coordinated through independent markets to tightly controlled supply chains paired with vertical coordination; (2) new patterns of consumption; (3) technological changes, particularly with the development of biotechnology and; (4) continuous changes of the international trade rules towards greater market liberalization[16]. Hence, it appears that the strengths of the hybrid arrangements of the type we have explored are closely linked to their weaknesses. How to protect partners that are bilaterally dependent from risks of opportunistic behaviour without sacrificing individual incentives? As part of a system based on collective action, this issue also questions the trade-off between equity, a key concept underlying the development of such collective organizations, and efficiency. Does the introduction of mechanisms promoting greater vertical

[16] See Menard and Vavra (2008) for a more detailed review of these factors and how they pushed towards a contractual approach.

coordination with increased efficiency, for example relying on market incentives and individual initiative, threaten the sustainability of these collective organizations?

If marketing boards are not willing to change their institutionalized rules as the economic environment changes, they are at risk of becoming rapidly inefficient. Depending on the agricultural sector, changes are more or less consequential. In the dairy industry for instance, the demand is less differentiated than in the meat sector. Pressure on marketing boards facing rapidly evolving demand should therefore be more important than sectors in which the demand is more homogeneous or in which products take a differentiated form at the processing level. This raises the issue of the differentiated adequacy of the mode of organization chosen on the supply side with what is happening on the demand side..

References

Andersson F. (2004). *Decoupling: the concept and past experiences*, Swedish Institute for food and Agricultural Economics, Sweden, 50 pages.

Anderson, J.E. (1982). Agricultural Marketing Orders and the Process and Politics of Self-regulation. *Policy Studies Review* 2(1): 97-111.

Baker, G., R. Gibbons, and K.J. Murphy (2008), "Strategic Alliances: Bridges between Islands of Conscious Power", *Journal of the Japanese and International Economies*, 22, 146-193.

Beck, R., C. Hoskins and G. Mumey, (1994). The Social Welfare Loss from Egg and Poultry Marketing Boards Revisited. *Canadian Journal of Agricultural Economics*, 42: 149-158.

Carson, S., A. Madhok and T. Wu. (2006). Uncertainty, Opportunism and Governance: The Effects of Volatility and Ambiguity on Formal and Relational Contracting. Academy of Management Journal, 49: 1058-1077.

Coronel, C. and L. Liagre (2006). Les interprofessions agroalimentaires en France. Ministère Français des Affaires Etrangères, Notes de synthèse, DGCID SCT/EPS/IRAM/REDEV, 47 pages.

Doyon, M., M. Frigon and D-M.Gouin (1999). *Impact des systèmes de régulation du marché du lait de consommation sur les prix à la production et à la consommation*: *étude comparative*. GREPA, Laval University, 123 p.

Erba, E. M. and A. M. Novakovik(1995). *The Evolution of Milk Pricing and Government Intervention in Dairy Markets*. Ithaca, NY: Cornell University, Department of Agricultural, Resource and Managerial Economics.

European Commission (2010).Report of the High Level Group in Milk. Final version June 2010.http://ec.europa.eu/agriculture/markets/milk/hlg/report_150610_en.pdf

Franks, Jeremy (2001). Developments in milk marketing in England and Wales during the 1990s. *British Food Journal*, 103(9): 631-643.

French, B. C. (1982). Fruit and Vegetable Marketing Orders: A Critique of the Issues and State of Analysis. *American Journal of Agricultural Economics*: 916-923.

Gervais, J-P. and R. Lambert (2010). The Simple Economics of Hog Marketing Reforms in Quebec. Réseau SPAA Network, working paper no. 2010-01.

Gouin D.-M., N. Jean and J.Fairweather (1994). *New Zealand Agricultural Policy Reform and Impacts on the FarmSector*. Agribusiness&EconomicsResearch Unit (AERU), Lincoln University, Canterbury, Lincoln, New Zealand, December, 138 p.

Groupe Agéco (2008). *Les faits saillants laitiers québécois, 2008*. Groupe Agéco, 128 pages.

Groupe Agéco (2009). *Les faits saillants laitiers québécois, 2009*.GroupeAgéco, 128 pages.

Hobbs, J. and L. M. Young, 2001. Vertical Linkages in Agri-Food Supply Chains in Canada and United States.Agriculture and Agri-Food Canada, Research and Analysis Directorate, Strategic Policy branch 2083/E, 84 p.

Jonhson, R. (2000). Institutions and Policy Analysis. *Agribusiness Perspectives Papers 2000*, University of Melbourne, paper 36.

Kohls, R. L. and J. N. Uhl (1990). *Marketing of Agricultural Products*, Seventh Edition. MacMillan Publishing, New York, 545 p.

Larue, B., R. Romain, J-P. Gervais and S. B.Salha (2000). The Collusion-deterring Effect of Pre-attributed Supplies and the Hog Auction in Quebec. *Canadian Journal of Agricultural Economics*, 48: 607-622.

MAPAQ (2007). Bioclips: La dynamique de la distribution alimentaire, d’hier à aujourd’hui. Direction des études économiques, volume 10 (2).

Ménard, C. (2004). “The Economics of Hybrid Organizations”, *Journal of Institutional and Theoretical Economics*, 160 (3): 345-376.

Ménard, C. (2011). Hybrid Modes of Organization. Alliances, Joint Ventures, Networks, and Other 'Strange' Animals". In R. Gibbons and J. Roberts, *The Handbook of Organizational Economics*, Princeton: Princeton University Press (forthcoming).

Olymel (2007). Pour la survie de l'industrie porcine au Québec. Summary of the report presented to the CAAAQ, Montréal.

Poulin, L. (1953). *La vente collective des produits de la ferme*, Année 1953-1954. Vint-huitième Cours à domicile de l'Union Catholique des Cultivateurs, Montréal, 143 p.

Prégent, G. (1979). Le cadre juridique et administratif des plans conjoints de mise en marché des produits agricoles du Québec. *Économie rurale*, numéro 2, 130 : 8-14.

Proulx Y., R. Saint-Louis and J. Dionne (1979). Plans conjoints et gestion de l'offre, un essai d'évaluation de leurs impacts. *Économie rurale*, numéro 2, 130 : 27-45.

RMAAQ (2010).*La RMAAQ / mission et mandat*. Consulté en ligne le 2 juillet 2010, http://www.rmaaq.gouv.qc.ca/index.php?id=16.

Royer, A. (2008).The Emergence of Agricultural Marketing Boards Revisited: a Case study in Canada. *Canadian Journal of Agricultural Economics* 56(4): 509-522.

Royer, A. (2009). *Analyse économique néo-institutionnelle de la mise en marché collective. Application au secteur laitier du Québec*. Thèse de doctorat en sciences économiques. Université de Paris 1 Panthéon-Sorbonne, 349 p.

Schoen, E. J., M.M. Hogan and J.S. Falchek (2000). Glickman versus Wileman Brothers and Elliot : California Fruit Marketing Orders prune the First Amendment. *Widener Journal of Public Law*, 10 : 21-82.

Stukenberg, D., D. Blayney and J. Miller (2006). Major Advances in Milk Marketing: Government and Industry Consolidation. *Journal of Dairy Science*, 89: 1195-1206.

Valceschini, E. (2001). Les transformations d'un modèle contractuel centralisé: L'interprofession des légumes transformés en France. *Economie et sociologie rurales* 2(1) : 13-32.

Westgren, R. E., 1994. Case Studies of Market Coordination in the Poultry Industries. *Canadian Journal of Agricultural Economics*, 42: 565-575.

Williamson, O. E. (1991). Comparative Economic Organization: The Analysis of Discrete Structural Alternatives. *Administrative Science Quarterly*, 36: 269-296.