

The Emergence of Agricultural Marketing Boards Revisited: A Case Study in Canada

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Canadian milk marketing boards are agricultural institutions tightly linked to the administration of dairy programs and supply management. Using insights from the New Institutional Economics (NIE) literature this paper investigates the factors influencing the emergence of these self-regulated, "hybrid" institutions that are managed by producers but necessitate governmental intervention to be operational. Our analysis focuses on the case of the Québec milk marketing board. It shows that the Québec milk board ensured transactional security among trading partners, where neither pure private ordering contract enforcement institutions, nor pure public ordering institutions would have succeeded to do so. The empirical case of the Québec milk board thus suggests that marketing boards in Canada may have historically assumed a broader function than merely increasing producers' rents.

Au Canada, les offices de mise en marché du lait sont des institutions agricoles étroitement liées à l'administration de programmes laitiers et à la gestion de l'offre. À l'aide de la documentation sur la nouvelle économie institutionnelle, le présent article examine les facteurs qui influencent l'émergence de ces institutions hybrides et autoréglementées, qui sont administrées par les producteurs mais nécessitent l'intervention gouvernementale pour être opérationnelles. Notre analyse s'est penchée sur le cas de l'office de commercialisation du lait du Québec. Notre analyse a montré que l'office de commercialisation du Québec assurait une sécurité transactionnelle entre les partenaires commerciaux, ce qu'aucune institution privée ou publique n'aurait réussi à faire. Le cas empirique de l'office de commercialisation du lait du Québec autorise à penser que les offices de mise en marché au Canada ont peut-être assumé une fonction plus large que celle d'avoir accru la rente économique des producteurs.

INTRODUCTION

Intervention of the Canadian government to raise the income of farmers has taken on various forms, including price and income support programs and supply management programs (Schmitz 2008). Another category of government intervention concerns the approval of programs establishing "self-regulated" institutions, such as cooperatives and marketing boards. In Canada marketing boards have known their apogee during the 1960s and 1970s. They are generally 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, p. 992). The creation of marketing boards necessitates a legislation to be operational and thus the involvement of politicians. The 2007 Charter case against the Canadian Wheat Board (CWB) to enable barley producers to sell their barley directly to any domestic or foreign buyer has demonstrated that changes to the CWB Act can only be made through the legislative process.

This paper focuses on the dairy sector. It analyzes the conditions that led to the emergence of the industrial milk marketing board in the province of Québec. Soon after the enactment of the Agricultural Marketing Act in 1956, the law enabling marketing boards, numerous local industrial milk boards emerged to coordinate contractual relations between milk producers and their buyers in specific areas. In 1966, all local boards of the province of Québec merged to become a provincial board. The introduction of a supply management policy at the federal level in 1971 modified the functions and powers of provincial milk boards, which then became part of Canadian agricultural policy. Since that time supply management in Canada is tightly linked to marketing boards at both the federal and the provincial level (see Schmitz 2008). At the federal level, the Canadian Dairy Commission is involved in the industrial milk price setting and in various dairy programs. At the provincial level, marketing boards assign quotas and negotiate the price of fluid milk.

An understanding of marketing boards' origin and their role in the coordination of commercial transactions between farmers and buyers are essential to assess their merit and evaluate their performance. To reach this goal, we adopt a New Institutional Economics (NIE) perspective. Two main research programs have developed from the theory's founding concept of "transaction cost." The *transactional approach* is concerned with organizations and has generated an important literature on modes of governance (see, e.g., Williamson 1985). This paper falls within the framework of the *institutional approach* (North 1990; Greif 2005). This approach focuses on the study of institutions, institutional changes, and the effect of institutions on the performance of markets and the economy. Throughout the paper we employ the following definitions of *organizations* and *institutions*. Institutions are to be seen as "the rules of the game in a society," while organizations are the players.¹ According to this definition marketing boards are institutions (since they set the rules of the marketing game between farmers and processors) but also organizations (since they are the players of their own game). In this article, we limit our analysis on the institutional role of marketing boards.

The institutional literature mentions that trading agents wishing to reduce uncertainty and frame their exchanges can put in place (i) institutions that arise from cooperative interactions among private agents (private ordering) or (ii) institutions that derive from the coercive power of the state (public ordering). These solutions have given birth to different trends in the literature. The public ordering trend focuses on public enforcement, legal systems, and contract law (Schwartz and Scott 2003; Hadfield 2005; Rubin 2005). Private ordering concentrates on explaining how agents develop private mechanisms in the absence or failure of public enforcement (Milgrom et al 1990; Bernstein 1992; Greif 1993; Clay 1997). The literature emphasises that repeated interactions among traders and symmetric distribution of gains from efficient trading rules enforce reciprocity, which is essential for the success of cooperative behavior and consequently on the emergence of private enforcement mechanisms (North 1990; Ellickson 1991; Pirrong 1995).

This article expands on the insights of North (1990), Ellickson (1991), and Pirrong (1995). It adds evidence that an even bargaining power between trading partners is also a critical factor for cooperative behavior and private ordering institution to emerge. The case study of the Québec milk board analyzed in this paper demonstrates that the oligopsonistic market structure translated into unbalanced bargaining positions, which, combined

with the presence of asset specificities, generated a high potential for the occurrence of opportunistic behavior of the buyer. Under these circumstances, it shall be argued, trust and cooperation between are more likely to be undermined, even in a situation of repeated commercial interactions. One would, thus, expect to observe the resort to public institutions to be more probable when this situation prevails. But when recourse to public courts turns out to be too costly or potentially inefficient, and when the development of organizational mechanisms, such as vertical integration or cooperatives is problematic, the emergence of a “hybrid institution” combining private and public ordering features might prove to be an efficient contract-enforcement alternative.

This paper, thus, suggests that one function of marketing boards, and more generally, “hybrid institutions,” is to guarantee transactional security among commercial partners when neither pure private-order contract enforcement institutions, nor pure public-order institutions succeed to do so. A second point that this paper makes is that marketing boards, as institutions in the NIE perspective, have historically assumed a broader function than merely increasing producers’ rents.

The paper is organized as follows. The next section provides an introduction of producer-controlled marketing boards. The section afterward summarizes the relevant theoretical insights from the NIE literature. The empirical investigation of the Québec industrial milk marketing board follows. The last two sections discuss the findings and conclude the paper.

MARKETING BOARDS

There is no unified typology of marketing boards in the economic literature but scholars distinguish two broad categories, namely producer-controlled and government-controlled marketing boards. The motivation to establish government-controlled marketing boards may be, for example, to protect the interests of (urban) consumers or to promote exports. They are mostly found in developing economies. Producer-controlled boards, by contrast, benefit from statutory coercive powers delegated by public authorities and are usually said to aim at improving producers’ bargaining position. There are various types of producer-controlled marketing boards with producers having different powers over marketing and prices. Some boards have the power to restrict supply or have a monopoly over exports whereas others only assume promotional activities. The Québec milk board and most other Canadian marketing boards are producer-controlled, so our analysis has potential relevance to this category of marketing boards.

Figure 1 presents a diagram of the organizational structure of a typical Canadian provincial producer-controlled marketing board. The regulatory framework of a producer-controlled marketing board consists of a law enabling its creation, a statutory marketing scheme specific to the board, and a public regulatory authority, or regulator. Agricultural products delivery contracts between farmers and buyers framed by a marketing board setting are whether approved (generally in promotional and negotiation boards) or hold (in single desk selling and supply management boards) by boards. The regulator provides a safeguard against boards acting contrary to the public interest, and it acts as a quasi-judicial appeal body when disputes over delivery contracts or interpretation of legislation should arise. Boards usually became effective with a sufficient majority among producers concerned and the regulatory authority’s approval.

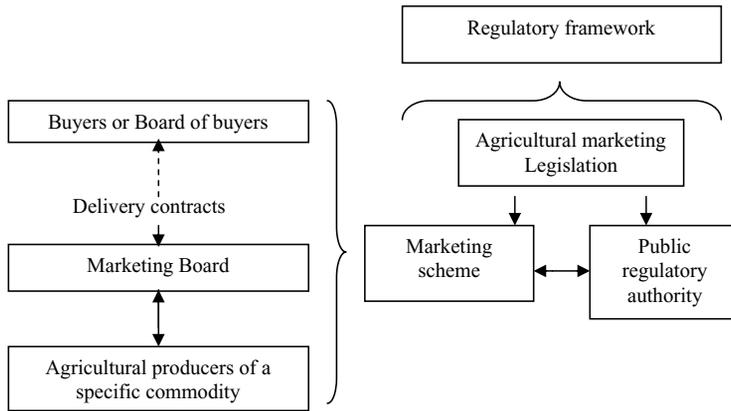


Figure 1. Organizational structure of a marketing board

THEORETICAL FRAMEWORK

Information Asymmetry, Property Rights, and Contract Enforcement

In the NIE perspective, institutions reduce uncertainty by setting the rules of the game and hence creating a stable structure to human interaction (North 1990). At the commercial transactions level, institutions can reduce transaction costs in several ways.² First, they reduce the costs of information production and collection costs as well as transaction costs caused by information asymmetries. Second, institutions define and enforce property rights. They provide measurement methods that economize on transaction costs related to the attributes' measurement of exchanged goods and create monitoring procedures to protect property rights (Barzel 1982). Finally, they enforce contractual arrangements through private or public mechanisms.

Marketing boards, as institutions, have historically exhibited a wide range of services intended to reduce transaction costs. They disseminated information on markets, employed supervisors that participated to sampling and grading operations in downstream firms, determined quality standards, set trading rules, and provided dispute resolution mechanisms. All these functions were operated within a hybrid institutional setting; all enforced by delegated legal powers to an essentially self-regulated producer controlled institution. Why did such hybrid institutions develop? To answer the question, we first look at the factors that according to the literature influence the emergence of private and public enforcement institutions, we then introduce the concept of hybrid institution and relate it to marketing boards.

Private or Public Enforcement?

The basic difference between private and public ordering lies in the enforcement of transactions. Public enforcement basically applies to all disputes. In contrast, private enforcement requires the voluntary cooperation of contracting partners to be effective (Richman 2004). Another important difference is the nature of their "persuading tools." Legal enforcement of transactions governed by a public ordering employs the coercive power of the state and is based on contract law and litigation rules. Punishment translates in financial

compensations and an increased cost of doing future business on the reneging party by demanding more favorable contractual terms (Gow et al 2000). On the other hand, private ordering relies on specialized rules and procedures. Sanctions include the future losses that result from the termination of the relationship, damage to the partner's reputation in the market and diverse mechanisms such as side payments or hostage exchange (Hadfield 2005).

The literature on private ordering distinguishes various factors explaining the resort to private enforcement. Private institutions emerge either because (i) public enforcement is not available (Clay 1997), or (ii) private institutions have superior cost effectiveness over public ordering (Greif 2005). Since private ordering leads to more efficient outcomes than legal mechanisms, why are not all transactions regulated by private institutions? The literature partly answers the question. Specific conditions are necessary for private ordering to develop. Whenever cooperative behavior cannot be achieved, private ordering has great difficulties to materialize and public institutions are more likely to be created to protect exchanges. Some studies argue that repeated interaction enforces reciprocity, which in turn has a positive influence on cooperation (North 1990; Ellickson 1991). Pironi (1995) adds that a symmetric distribution of gains from changes in property rights between partners is essential for the success of cooperative behavior and private enforcement.

Hybrid Institutions

Hybrid institutions did not receive much attention in the literature so far. Greif is among the first scholars to refer to such institutions as a combination of "elements of private and public-order" (Greif 2005, p. 746). If we consider private and public institutions as polar orders, hybrid institutions would lie in a range of possibilities in between as Figure 2 suggests.

Some hybrids are referred to as *quasi-private* and would lie close to pure private ordering institutions in the continuum of hybrid institutions. They show a private ordering core but critically depend on public ordering institutions to be effective. Examples of such hybrid institutions are credit rating agencies that depend on public institutions that increase the cost of falsifying one's identity, and reputation-based or technology enterprises that depend on public protection of their registered trade-marks or patents. Other types of hybrids are found in the legal literature in the form of *self-regulated* institutions which were created by a deliberate delegation of the state's power. These institutions differ according to their various degrees of legislative constraints, enforcement, and external control and accountability (Ogus 1999). The intervention of public ordering is likely to be more intense in a self-regulatory organization than in the case of

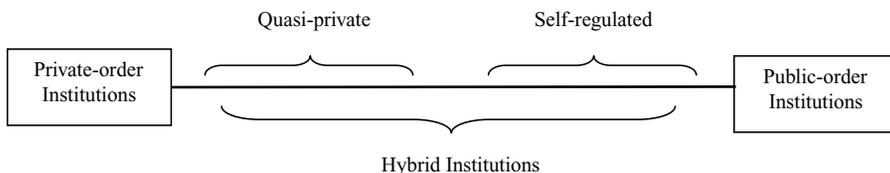


Figure 2. The nature of institutions and their continuum of possibilities

a credit rating agency so they should position closer to public ordering institutions in the continuum.

Similar to Williamson's (1985) reasoning about the contrast between efficiency and market power reasons for vertical integration, the literature on self-regulation mentions that self-regulation with delegation of public power can minimize some transaction costs, such as information, monitoring and enforcing costs, which may influence the state's choice when granting its power to a private organization (Williamson 1985; Ogus 1999).

Producer-controlled marketing boards exhibit a dual institutional nature combining elements of private and public ordering institutions. Their enforcement boundaries are a blend of private enforcement mechanisms, but disputes arising among partners can be solved through the quasi-judicial appeal body as a last resort. Private mechanisms translate generally into damages to reputation. By structuring cooperation among farmers, marketing boards improve communication and allow geographically dispersed farmers to act collectively against a buyer through reputation effects or commercial damages.³ Resort to this enforcement mechanisms is however more the exception than the rule. As for persuading tools, marketing boards exhibit elements of both private and public contract enforcement institutions. Delivery contracts made under their supervision or control are subject to litigations rules as in public institutions, but these rules and procedures are specific to boards' agreements in order to improve enforcement efficiency, as in private institutions.

Emergence of Marketing Boards

The widespread economic explanation for the creation of marketing boards is that periods of low agricultural prices raised farmers' suspicion about the proper functioning of the market (Veeman 1987). Cooperatives were then settled but free-riding occurrence led producers to create marketing boards which could provide a substantial countervailing negotiating power with agro industrials. This explanation thus assumes the hypothesis coming from political sciences explaining that farmers, as a lobbying group, were able to use their political clout to create institutions to improve their bargaining power (Ledoux 1971). In other words, government involvement in agricultural marketing was an effort to raise producers' profits by allowing the creation of producers' monopolies.

This explanation is plausible but partial. This story does not explain the inclusion, in marketing boards' contracts, of clauses aimed at attenuating information asymmetry and solving commitment problems. Using insights from NIE, the foregoing analysis proposes a more complete explanation by bringing an answer for the presence of such clauses. This paper suggests that government involvement in agricultural marketing was also a response to contractual enforcement failures arising with the development of oligopsonistic food processing industry and agricultural asset specificities.⁴ Absence of cooperative behavior among trading partners and among farmers seemed to have prevented any private ordering enforcement mechanism to emerge. The low value of products traded and the temporal specificities of transactions discouraged expensive and long recourse to public courts. Enforcement of contractual relationships between farmers and buyers through a hybrid self-regulated institution may therefore have arisen as a low-cost alternative to regulate contractual relationships in that specific economic sector.

THE QUÉBEC INDUSTRIAL MILK MARKETING BOARD

The empirical analysis focuses on the case of the emergence of the industrial milk marketing board in the province of Québec.⁵ Empirical data and evidences used have been drawn from historical records, two major governmental inquiries (Héon Report 1955; April Report 1967), documents available from the milk marketing board (UCC 1955) and academic thesis (Forgue 1971; Ledoux 1971; Morisset 1982). The first marketing board contracts written between 1967 and 1980 were also analyzed. We finally interviewed former milk producers when written documentation to understand relevant historical conditions was lacking.

The Rise of Contractual Hazards

The rise of market-oriented agricultural production during the first half of the 20th century translated in new possibilities but also new difficulties for agricultural producers. Within a few decades, the dairy sector underwent an irreversible shift from a subsistence model to a specialized and commercial one. Farmers could either sell their production to agricultural cooperatives or private processing firms. Most contracts with the downstream firms were verbal and were taking place in an oligopsonistic market structure.⁶ These first commercial transactions implied many operations, such as transport, classification, price fixation, and payment mode, that constituted many potential litigious situations between market participants. Although it is mentioned in historical documents that commercial disputes arose between cooperatives and their members, most disagreements emanated from farmers and private firms' relations (Forgue 1971).

The development of contractual agreements in such circumstances presented three major challenges to trade. First, there subsisted an important information asymmetry between the contract parties, hereafter called the producer and the buyer, relative to the sampling, weighting and classification of milk at the plant. All these operations were the buyer's responsibility but were critical in the determination of producers' returns. Since no or very few external controls were performed to monitor the manipulation of milk during the different tasks, producers suspected opportunist behavior over sampling and grading of product from the part of buyers (Héon Report 1955). There is no direct empirical evidence that buyers were opportunistic, however, the information asymmetry strongly affected the producers' perception of the possibility of opportunistic behavior by the other party.

Second, buyers faced imperfect incentives to minimize transport's costs and to care for milk owned by producers during transport. The producer carried the transportation costs from the farm's gate to the plant, however, the trucker's choice, itinerary, collection schedule and transport prices were decided by the buyers (Héon Report 1955, p. 273). This organization of the milk transport did not provide any cost-reducing incentives to buyers and created conflicting situations. Producers contested any increase in transport price. Moreover, producers claimed that milk transport schedules were irregular and that it affected the quality of the milk. Concerns over transport's costs and damage to milk quality emerged among farmers and numerous conflicts with buyers are reported (Héon Report 1955).

Last, there were numerous allegations of contractual commitment problems among buyers. Being able to bank on competition among many producers, buyers enjoyed a

considerable bargaining power that could be used to settle prices and selling conditions at their advantage (Ledoux 1971). For instance, buyers could refuse deliveries, change selling conditions or change transport prices without giving any justification or warning (Forgue 1971). There is considerable evidence that buyers had all rights over the producer's delivery. A specific case mentioned in a governmental report reveals that producers' contentions were discouraged by the buyer's threat of not buying their milk anymore (Héon Report 1955, p. 274).

The presence of site and temporal asset specificities in the milk production sector could create high transaction costs and hence, enhanced the vulnerability of this industry to potential opportunistic behavior. Dairy farms are linked to a given geographical area. Changing production site implies selling land and buying elsewhere which involves non-negligible costs. Continuing production on the same site but selling to a buyer located further afield also entailed costs. The proximity of buyers and producers makes the transaction of the contractual relationship site specific. The temporal specificity of milk, due to its perishable nature, is also often mentioned in historical documents. If agreement cannot be reached rapidly in case of a dispute, the product quality decreases and causes a value loss. This situation does not affect both partners in the same manner. Contractual breach could significantly change the producer's income since most producers sold their whole production to a unique buyer. Breach also created high transaction costs. Searching for a new partner involved search costs and loss of product's value incurred during the search's time. On the buyer side, the loss of one producer's delivery was not that critical since it meant a relatively small share of the total processed production.⁷

In sum, the development of market-oriented farming presented numerous occasion for contractual hazards and misperceptions. Beginning in 1952 in Québec, an overproduction crisis following the economical recovery in Europe greatly exacerbated these problems. The prolonged period of low prices increased farmers' suspicion regarding the fairness of the whole marketing system (Veeman 1987).

Contract Enforcement Failures

We will now demonstrate that neither pure public nor pure private contract enforcement mechanisms were sufficient to guarantee producers' transactional security. Many private mechanisms can be used to enforce contracts. Agents may use reputation effects to alter future transactions potentiality of a faulty partner. They may want to self-enforce their arrangements through exchange of hostages, the posting of bonds or specific asset investment sharing. They may also simply trust each other or integrate internally problematic transactions, which translate in our case to the development of farmer cooperatives. The first attempt to address the producers' weaker bargaining power and related contractual hazards seemed to be this last option.

During the first half of the 20th century, cooperatives were encouraged by federal and provincial governments through the adoption of various laws that allowed farmers to collude through them, benefit from income tax exemptions and direct injected capital (Doyon 2002). Following these measures, many important agricultural cooperatives developed. Cooperatives had however a major flaw: their slow development prevented them to compete efficiently with private enterprises and become an effective widespread contract enforcement mechanism. Reasons for this slow development are numerous. Besides capital access problems and the common free-riding curse usually encountered by

cooperatives, Québec dairy cooperatives, which in most cases owned processing plants for butter and cheese faced increased competition from the introduction of margarine in the Canadian market in 1949 (Morisset 1982, p. 282). As a result, even after decades of cooperatives' developments, most milk producers had to sell their product to private processing enterprises. For instance, cooperatives processed 45.7% of the industrial milk production and 2.2% of the lucrative fresh milk market for the 1951–1954 periods (Ledoux 1971). As mentioned in a governmental report, “*although a noteworthy progress, it seems that Québec cooperatives, at least at present, cannot be accepted as a system enough influential, effective and widespread to solely assure an efficient marketing of Québec agricultural products*” (Héon Report 1955, free translation).

Besides cooperatives, the use of verbal contracts should have favored the emergence of an informal mechanism to enforce trading arrangements. Such institutions based on mutual cooperation did not develop, probably because the critical conditions for private ordering to develop were missing. To be successful, private ordering relies on private sanctions. While a condition for private sanctions, namely the fact that trading partners had frequent interactions, the cost of applying sanctions seemed nevertheless high for producers. In the empirical case presented here, sanctions would have turned to be hard to apply by agents evolving in a spatial dispersion and having different bargaining power. Some buyers did not fear much about losses of future trade since the supply of one producer did not alter substantially their processing activity. Damage to the buyer's reputation was limited by the temporal and site specificity of milk. Historical documents specified a case where a buyer behaved faultily with many producers but still did not suffer reputation damages (Héon Report 1955; Forgue 1971). Cheated producers argued that the very few outlet alternatives would increase substantially their transport cost and thus they preferred a status quo position. As it is mentioned in a document written by a producers' association: “*It is not rare that a producer is in a geographic or economic situation that does not allow him to choose his outlets. He does not have a choice or, if there is, it is very limited and involves an increase of product delivery expenditures*” (UCC 1955).

Contractual hazards could have also led to litigations. Nonetheless, this alternative is not much tackled in historical documents. From a theoretical point of view, this situation can be explained by the fact that the legal system is inefficient to resolve disputes in particular cases. Its efficiency depends notably on characteristics of transactions, nature of contracts and resorting costs. First, observation problems due to the perishable nature of milk and lack of technical expertise on the industry impose serious limitations on the time and competence's effectiveness of courts in solving this kind of disputes. Second, agreements between producers and buyers being mostly informal, an efficient enforcement through legal courts was by definition very hard to realize. Finally, the small amount and low value of products in a transaction could hardly justify a costly resort to courts by individual milk producer.

To sum up, pure private and public enforcement mechanisms were not efficient enough to guarantee producers' transactional security with buyers. The only viable alternative was to sell to cooperatives but as we have seen, this was not a possible option for most producers located in the province of Québec. This situation could have lasted and income or price support could have been settled to counteract weak bargaining power and low milk prices. However, the government did not go in that direction and preferred

to give the production sector the option to self-regulate their commercial relationship with the downstream processing sector.

Institutional Response

Contractual hazards and low prices affecting the Québec agricultural production sector gave rise to concerns among farmers and some agricultural observers. It is mentioned in a governmental report that this situation impaired the development of an efficient and competitive agriculture in the province. The enactment of the *Québec Agricultural Marketing Act* in 1956 sealed the debate: producer-controlled marketing boards obtained the legal basis to operate. The first milk boards were local, that is, they were implemented to regulate the trading relationships between one processing firm and its producers. In 1966, the industrial milk provincial marketing board emerged and local boards were abolished.

Considering the low price crisis and the emergency of the situation, why did the government prefer to deliberately delegate its power to a group of private agents rather than assist the agricultural sector through income and price supports? The answer to this question is not obvious and important political aspects not analyzed in this paper must be taken into account. However, one of the reasons may lie in the broader problem encountered by producers in the marketing of their products as we just analyzed. The government's concern at that time was mainly to favor the development of a stable and progressive agriculture. This objective could be reached through a strong support to market-oriented producers, best able to take up the challenge of feeding the growing population. The survival of this type of producers was dependant upon market prices and transactional security. Marketing boards represent a dual solution in that sense.

Beyond Rent-Seeking

From the content of the milk marketing board's contracts signed between 1967 and 1980, we observe that most clauses aimed at promoting an ordered marketing of milk with improved coordination through the mitigation of information asymmetry between commercial partners, creation of proper incentives, information sharing, establishment of trading rules and enforcement of contractual arrangements. The first milk marketing board's contracts provided solutions for information asymmetry in a clause that stipulated that an expert representing the board may be present or participate to sampling and testing of delivered milk at the plant.

Clauses that aimed at mitigating the commitment problems were also included. They encompassed clauses that gave a sufficiently long delay to producers to adapt if changes in reception modalities occurred, if higher quality norms requirement were modified, and if a plant considered shutting down. Producers were also subjected to some contractual rules and incentives. If milk supplied did not meet norm requirements, penalties were defined and milk was returned to the producer at her own expense. The imperfect incentive problem over transport was not tackled in the first contract because it implied a third agent, transport firms.

DISCUSSION AND CONCLUSION

One of the conclusions our case study is that the role of the Québec milk marketing board extended beyond pure rent seeking. The evidence of a broader role for marketing

boards is not limited to the Québec milk marketing board. In an article written in the first years of most Canadian marketing boards' implementations, Farrell enumerates general provincial boards' power and duties. He observes that "*the boards have power to investigate, arbitrate [...] or otherwise settle any dispute between producers, processors, distributors or transporters of farm products [...] They may investigate the costs of producing [...], trade practices, methods of financing, management, grading [...]. They may require the furnishing of security or proof of financial responsibility by any person engaged in marketing of the product*" (Farrell 1949, p. 616). Farrell's remark indicates that Canadian marketing boards did more than just settle prices, which is still true today as examination of actual Canadian boards' functions suggests.

The other conclusion is that cooperative behavior, necessary to establish efficient private ordering contract-enforcement mechanisms, is sometimes hard to achieve even in the presence of repeated interactions. Our paper suggests that an uneven distribution of the bargaining power between trading partners reduces the likelihood of the emergence of private ordering institutions. The literature indicates that this situation should favor the resort to public ordering to enforce trading arrangements. However, as we have argued in our analysis, there were significant limitations to resorting to public institutions. In such specific circumstance, a hybrid institution, such as the Québec milk marketing board, may emerge. What about the potential generalization of our findings? Although an investigation of other marketing boards' and other hybrid institutions is needed in order to test our propositions, there are some facts that suggest our findings may well generalize.

The case of the emergence of milk marketing boards in England is worth mentioning since it has many similarities with the Québec case. Both constituencies were dominated by the development of a highly concentrated fluid milk processing industry and characterized by verbal agreements between producers and purchasers. It is mentioned in the literature that temporal specificity of milk exacerbated partners' interdependence: "*Not only were there no alternative outlets for farmers' perishable product, but powerful wholesalers controlled the fluid markets of the cities*" (Barnes 2001, p. 385). Also, the slow development of large-scale butter and cheese manufacturing due to imports limited producers' exit options (Barnes 2001, p. 385). Most marketing boards were implemented in Great Britain in the postwar period. They framed contractual relations and determined general marketing conditions (grading, marking, packing, transport) (Currie and Rayner 1979, p. 35). Milk boards were specifically involved in the negotiation of prices, but also in product payment and organization of the collection of milk. These functions set the rules of the marketing game and hence have the capacity to mitigate contractual hazards.

Finally, our case study suggests that an uneven division of the bargaining power between the trading partners is not enough: asset specificities which tie the buyer and the seller together play an important role as well. In the case study the perishable nature of fluid milk created asset specificities. However, non-perishable or easily storable agricultural commodities do not satisfy this criterion as storage gives farmers more time to find a buyer than was the case for Québec milk farmers. The absence of a sufficient degree of asset specificity may explain why on March 2007 in a barley plebiscite organized by the Canadian federal government, 60% of the farmers voted to abolish the CWBs monopoly on barley. Barley is more easily storable so that producers have time to look for an

alternative buyers. This, in turn may render the Wheat Board less efficient than some other private ordering enforcement mechanism.

Marketing boards might constitute efficient contract-enforcement institutions in the context of Canadian agricultural policy. However changes in the business and institutional environment constantly challenge their viability (Schmitz and Furtan 2000). As more specific and niche outlets emerge, marketing boards may need to revisit their lack of contractual flexibility imposed on trading partners. More generally, the function of marketing boards in the Agrifood supply chain, and the merits of their monopoly position, deserve careful periodic investigation.

NOTES

¹These are the most customary definitions—see, e.g., North (1990, p. 3). Note, however, that the literature does not always adopt the same definitions (Ménard 1995).

²Transaction costs are the costs associated with property rights transfers between agents.

³Cases of processors' entrances blockades by producers have happened in the past. In Québec, the last barricade episode occurred in November 2004 during the mad cow crisis and concerned a slaughterhouse.

⁴Asset specificity refers to “durable investments that are undertaken in support of particular transactions, the opportunity cost of which investments is much lower in best alternative uses or by alternative users should the original transaction be prematurely terminated” (Williamson 1975, p. 55).

⁵Until 1980, there have been two types of milk sectors in Québec: the fresh milk and the industrial milk sector. The fresh milk dairy sector is concerned with the processing and conditioning of fresh liquid milk whereas the industrial dairy sector is concerned with the processing of butter, cheese, milk powder and concentrate, and other processed dairy products.

⁶No data were available to verify the oligopsonistic market structure hypothesis. However, the behavior of processing firms in trade indicates that they had a substantial bargaining power when negotiating with milk producers.

⁷In a governmental report, it is mentioned that there existed situations where a thousand producers were selling to one processing firm (Héon Report 1955).

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