AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

American Agricultural Economists Association
July 23-26, 2006
Long Beach, California, USA

Multilateral-reputation mechanisms and contract law in agriculture : complements or substitutes ?

Armelle Mazé[1]
(INRA SAD-APT & ATOM (Université Paris I)

Selected paper prepared for presentation at the American Agricultural Economics Association, Annual Meeting, Long beach, July 23-26, 2006, USA.

Abstract : The enforcement of contracts is necessary for efficient exchange in economic activities. The predominance in agriculture of informal contracts leads in many countries to the implementation of specific legal rules for contract law. This article emphasises the complementarities between public and private ordering when contracts are informal. We analyse the role of private contract-enforcement institution (CEI) as a support for multilateral reputation mechanisms. Our case study is focusing on interprofessional organisations, which are usually analysed as cartels having a negative impact on welfare. We demonstrate that under specific conditions, they can improve contract enforcement and thus efficiency.

Key-Words : cartel, private enforcement, transaction costs, collective organization, marketing orders, transaction costs, new institutional economics

JEL : K12, D23, D74, L14, Q13, L44

Copyright 2006 by A. Mazé. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

[1] Dr Armelle Mazé, Adresse : INRA SAD-APT, 16 rue Claude Bernard, 75231 Paris cedex 05. E-mail : maze@inapg.inra.fr, Tel : 33 (0) 1 44 08 16 96, Fax : 33 (0) 1 44 08 16 57.

Introduction

The enforcement of contracts is necessary for efficient exchange in economic activities. Many legal institutions are today supporting contractual commitment (Hadfield, 2005). A large part of the economic literature on contract enforcement focuses in the past on the role of judge and the design of judicial institutions, including public court and more recently alternative private arbitration systems (Schwarz, 2003, 2004). The role of legal systems as a framework for market exchange is receiving more attention by academic scholars (Rubin 2005). Another trend in research emphasise the role of private micro-institutions in contract enforcement for the development of market exchanges (Milgrom, North, Weingast, 1990, Greif, 1993, 2005). These studies mostly focus on historical situation where the absence of formal law or state enforcement leads economic agents to develop other guarantees, like private multilateral reputation mechanisms, as a support for contract enforcement. However, these reputation-based mechanisms can be as well activated in the presence of a legal system.

The aim of this article is to analyse, based on the theoretical framework of transaction costs economics, possible complementarities between the existence of contract law and the implementation of reputation based mechanisms for private contract enforcement. Our main assumption is that contract law may also support private ordering mechanisms and reinforce contract enforcement. These complementarities were first emphasised by Klein (1992, 1996) on bilateral contracts. We extend here the analysis to the role of contract law a support for the implementation of multilateral reputation-based mechanisms and private contract-enforcement institutions (CEI).

Such institutions are pervasive in agriculture where collective organization of producers has been extensively used in the past in order to organize the development of agricultural markets (Pirrong, 1995). Moreover, contract law in agriculture includes some specificities which take into account these dimensions i) the specific legal statute of integration contracts especially used for poultry and pig production, ii) the recognition of a special statute to collective organisations in agriculture. Both of these adjustments in contract law designed in the 60's and 70's were mainly motivated for the legislator towards the protection of small and scattered farmers facing a drastic horizontal consolidation of agro-food industries. These collective organisations are not restricted to cooperatives, but may also include other private technical or marketing associations and as well private interprofesionnal associations. Our analysis focuses here on the role of these interprofesional organizations.

Contrasting with other forms of collective organization in agriculture, they are not based on intra-profesionnal disciplines among farmers, like in the case of cooperatives, for

example. Their underlying philosophy is oriented towards the promotion of dialogues among economic actors in a same agricultural sector. This includes representatives of farmer trade-unions, but also of cooperatives, private middlemen, agro-food firms, and even representatives of small and large retailers. Since 1975, these specific organizations can benefit of the special prerogatives and the delegation of coercive power of the state with the 1975's law on interprofesionnal organization in agriculture. However, some lawyers were questioning the utility of such legal framework (Danet, 1982). Their argument was based on effective use of this law by a large number of agricultural sectors and its level of generality to be included in the law. In another hand, some economists suspected in the 90's, these collective organizations to promote economic behaviours prohibited by competition law, like collusion on market price determination, restrictions on production level that can have a negative effect on net surplus and consumer welfare (Crespi, Sexton, 2004). We emphasise here their role of private ordering institutions and in economising on transaction costs.

Our analytical perspective is then based on a positive rather than normative approach to law and economics. As a matter of fact, this legal framework is in any way compulsory, and their development has been very variable depending of agricultural sectors. Its adoption in some agricultural sectors may then, based on a natural experiment, clue us on the constraints and the benefits expected from the effective implementation of this legal framework. The question is then why this diversity regarding the use of this legal framework that appears at first sight to support stakeholders interests and the economic efficiency? What are the underlying mechanisms that can explain their ability to facilitate contract enforcement and prevent potential sources of litigations ? What is the role of contract law and its attractiveness in term of costs/benefits ?

Empirical data is based in a first step on a diachronic and historical analysis of the institutional environment that leads to the creation of this dedicated legal framework. A second step of our research focuses on a case study covering a specific agricultural sector, the French beef industry, which decides to benefit from this legal system to support the creation of a national private interprofesionnal association. In order to understand the implicit motivations to the creation of this interprofesionnal organization, we analyse the nature of contractual arrangements existing in this sector and their evolution over time, and as well of regional market structure and competitive environment among regions in France. In this sector, only little contractual litigation is produced to the court. However, some studies on the determination of pricing rules identify this dimension of contract term as a major source of litigations and distrust between farmers and agro-food firms (Feusti, Feuz, 1993, Hobbs,

1997). Moreover, incomplete specifications of what is exchanged and problems of transfer of property rights among contracting parties is identified as another major sources of litigations. For these dimensions, verifiability by courts is often limited by their technical dimensions, and as well the short delays required in food process for safety reasons. We show then that one of the major functions of this interprofesional organizational was to improve the rules governing the transfer of property rights and their implementation and enforcement. However, as a professional organization based on voluntary commitment of members, this interprofession do not benefit of the coercive power of the state. Other mechanisms should then be at stake that may explain its success and potential difficulties in some circumstances.

When considering the role of these private institutions and reputation-based mechanisms in contract enforcement, one should consider the analysis of Klein (1992, 1996) in the case of bilateral formal contracts. He shows that the efficiency of reputation mechanisms is improved through the introduction of specific contractual clauses that can be enforced by court (penalties, clauses of exclusivity, hostages). In his model, these contractual clauses are extending the "self-enforcing range of contracts", i.e. the incentives for the contractor to commit to contract terms and not to deviate. Moreover, Klein (1996) demonstrates the existence of possible complementarities between public and private ordering mechanisms due to a reduction of the amount of reputation capital required by the contractor to implement these private mechanisms. The implementation of multilateral reputation-based mechanisms involved more complex rules (Greif, 2005). Contrasting with bilateral mechanisms, the sanctions are not applied by the contractors themselves, but by third parties to the exchange through collective sanctions that requires a minimum of coordination.

In an earlier article, Clay (1997) identifies several types of possible organisations for the implementation of these multilateral reputation based mechanisms: decentralized one such as informal *coalitions* of economic agents, like family members, where ostracism is easier to implement (Greif 1994, Clay, 1997) or centralized ones based on formal private institutions, like guilds, clubs (Milgrom, North, Weingast, 1990). The latter is based on a central authority which identifies cheaters and may punish who do not punish cheaters according. The larger is the community of traders, the stronger will be the need for a formal contract-enforcement institution (CEI). One central issue for the efficiency of these CEI is then their stability over time and regarding their membership. And as a matter of fact, Clay (1997) suggests that barriers to entry and exit from coalition were a necessary condition for them to work.

First, the barriers by ensuring stable membership in the coalition, enabled the information network to provide a principal with information on agents past behaviour and to mitigate information asymmetries between an agent and a principal.

Second, as suggested by Kenney, Klein (1983), barriers preserved the differential between what members could earn inside and outside the coalition (Clay, 1997). These barriers can become more or less porous enough to allow the gradual expansion of the coalition. However, instability can lead to the collapse of the coalition.

In these studies, the development of the formal legal system for contract enforcement is presented as another reason to stop using informal reputation-based mechanisms. However, as suggested by Klein (1996), both of them can also be considered more as complementary mechanisms than pure substitutes. That is our assumption regarding the role of this interprofesionnal organization in agriculture. The interesting point regarding this agricultural sector is twice. First, it contrasts with the situation of other agricultural sectors (especially the pork industry) which choose not to use this legal framework. Second, when initially designed, the functions of this interprofesionnal association in the beef sector have never included any role in the determination of centralized negotiated prices or production quantities that have been condemned regarding competition law and competitive market functioning.

As noticed by Clay (1997), one striking thing about this type of private institutions is the infrequent use of collective punishment and private ordering. Other methods are required to access their role in the observed contractual arrangements. Based on our study, we demonstrate first that the creation of these private institutions act as a way to reduce bilateral private enforcement capital of contractors, especially when considering the adoption of new pricing rules by firms and the move from negotiated prices to posted price by buyers. Second, the legal recognition allows a reduction of governance costs of this interprofesionnal organization. However, this is not necessarily a sufficient condition to ensure the complete convergence of conflicting interests of its members. This situation could explain why other sectors do not choose to adopt such legal framework. Third, we propose an extension of previous bilateral models to the analysis of *multilateral* mechanisms of sanctions against violators by an organised coalition of producers, as well as the role of the legal framework to reinforce the stability and the legitimacy of these coalitions, and then their efficiency. We derive general propositions regarding under which conditions it is working and when other institutional arrangements can be more efficient in preventing contractual sources of litigations and in ensuring effective contract enforcement.

Empirical data is based in a first step on a diachronic and historical analysis of the evolution and specific dimensions of contract law in agriculture, especially regarding the support of collective organization of producers **(section I).** In a second step, we will demonstrate that the shift from the bilateral paradigm to the multilateral reputation models requires a distinctly different application of the transaction cost model help to understand the role of contract law in improving the functioning of the collective organization of producers as contract enforcement mechanisms **(section II).** Empirical evidence are then provided using the example of the cattle industry which decide to use this legal interprofesional framework compared to other agricultural sectors which do not **(section III).** A more general predictive model is then provided to explain the adoption or not of these legal frameworks **(section IV).** This paper formulates a positive model that predicts when parties will employ private ordering to enforce their agreements.

I – SPECIFIC DIMENSIONS OF CONTRACT LAW IN AGRICULTURE

Contract law in agriculture includes specificities into two main directions: i) the specific legal statute of *integration* contracts to be distinguished from the category of labor contracts involving a complete subordination of the employees; ii) the recognition of a special statute to collective organisations in agriculture[2]. Both of these adjustments in contract law designed in the 60's and 70's were mainly motivated for the legislator towards the protection of small and scattered farmers facing a drastic market concentration and horizontal consolidation of agro-food industries (Danet, 1982).

1.1 – The rule-of-law for contract regulation

Such institutions are nowadays pervasive in agriculture where collective organization of producers has been extensively used in the past in order to organize the development of agricultural markets (Pirrong, 1995). The role of collective organisation, like cooperatives, marketing association, producer's groups, marketing board, and so on has been widely recognized and promoted in agriculture since the beginning of the 20th century. First, build up to facilitate the development of food production and the organization of marketing channels, they play a central role in modern agriculture. As well, the rapid modernization of agriculture involves higher uncertainty regarding technology, and the introduction of contractual innovations defining new risk sharing rules among contractual parties (Ménard, 1996).

[2] This legal framework includes in the case of the French context: Law n°60-808 of 05/08/1960 on contract-types, Law of 8/08/1962 on collective organisation of producers and producer groups, Law n064-678 of 6/07/1964 regulating integration contracts and defining campaign contracts, and more recently Law n°75-600 of 10 july 1975 supporting the creation of interprofessional association in agriculture.

Facing these rapid changes and modernization processes, the legislator introduces in the early 60's several legal improvement regarding contract regulation:

- a better legal framing of *integration contracts*, used in situations where small farmers were completely dependant of the agro-food firms, both in term of technology used for animal buildings, the supply of feeding stuffs, medications in intensive farming systems… The main concerned agricultural sectors were indoor pig, veal and poultry productions. They aim to protect small farmers against possible *abuse of power* and "*unfair"* contractual agreements.

- the possibility to use *contract-type* and *campaign contracts* which were negotiated between farmer's unions and agro-food firms, especially regarding the prices to be applied and quality specifications, at the beginning of each production campaign and serve as a reference for the definition of all individual contracts[3]. These collective agreements were initiated first within production contracts for the production of processed vegetables. These agreements were guaranteeing an *equality* of treatment among all farmers, and as well a reduction of total negotiation costs for all individual contracts.

The other part of the legislative innovation regarding contract law in agriculture relies on the importance of collective organisations as a support for contract regulation. These collective organisations are not restricted to cooperatives, but may also include other private producers associations, also called "producer's groups, achieving technical and marketing support, and as well private interprofessionnal associations involving all representatives economic agents involved in a specific agricultural sector. The legal recognition and framing of producer's group took place in the early 60's, but we will have to wait fifteen years to have a dedicated legal framework to interprofessional agreements and associations in agriculture.

1.2 – Balancing bargaining powers through collective organisations

One of the problems met with the implementation of *contract-types* or *campaign contracts* is the absence of a formal administrative authority responsible for supporting *ex ante* negotiations and monitoring *ex post* the effective implementation of these agreements (Danet, 1982). One specific critical dimensions was the definition of quality standards and their measurement for the determination of the prices to be paid to farmers, as most of potential cheating and opportunistic behaviour either of farmers or agro-food firms were taking place at this step of the contracting process (see Chalfant, Sexton, 2004).

[3] This approach to contract design is then contrasting with theoretical results of agency theory focusing on the optimization of individual incentives contracts. This means that the gains in term of reduction of negotiation costs are larger than the loss of incentive intensity (Allen, Lueck, 2002).

It is only in 1975 that the legislator finally decides finally to introduce this dedicated legal framework to support interprofessional organization in agriculture. This law was grounded to the experience carried out in a specific agricultural sector, processed vegetable, where production contrats by which farmers commit to sell all their production at the end of the production campaign are dominant. But the law of 1964 did not include any specifications on rules of renegociation and control of the effective compliance to contract-types, and more over the funding of the organization in charge of these activities (UNILET). Each agricultural sector remains free whether to use or not this legal framework. It endows the beneficiary of special prerogatives and, by delegation, on part of the normative and coercive power of the state regarding contract regulation in their own agricultural sector**.** Three major benefits were expected from the implementation of this legal framework :

First, the use of this legal framework is reinforcing its legitimacy as it is formalizing a process of agreements among all representative professional organizations of one specific sector, including farmer's union, cooperatives, large and small retailers, middlemen, agro-industries and manufacturers.

Second, they benefits of special funding rules through compulsory tax contribution for all firms involved in one dedicated agricultural sector. The main advantage is here, as we will see later, to reduce the costs of collecting money. As well, it is covering the administrative costs of functioning for these interprofessional organization supervising the implementation of interprofessional agreements.

Third, these interprofessional associations can define "*interprofessionnal agreements*", which benefits of "a *clause of extension* » by law which mean that these agreements are compulsory for all the firms involved in this sector. Nevertheless, the enforcement of these "interprofessional agreements" remains under the sole responsibility of this interprofessional organization, and not by state services[4].

In return, beneficiaries have to comply with very restrictive conditions warranting the concerns of lawyers regarding its attractiveness to economic agents and its effective large implementation in many agricultural sectors (Danet, 1982). One of these limitations is linked to the possibility of creating only one interprofessional association for each specific agricultural production at the national (Danet, 1982). A central issue is then related to the delineation of the appropriate perimeter of what is a dedicated agricultural sector; For

[4] In this case, interprofessional associations are providing all the functions identified by Schwarz (2000) associated with contract regulation : i) enforcing a contract verifiable terms, ii) supplying vocabularies, iii) interpreting agreements, iv) supplying default rules and regulating the contracting process.

example, can organic producers, involved in several productions, and all be organized in a representative interprofessional association supporting this sector? For this reason, some heterogeneity remains among sectors which adopt and those which do not.

1. 3 – From legal enforcement to collective self-regulation

In part of the literature on private ordering, the development of the formal legal system for contract enforcement is presented as another reason to stop using informal reputation-based mechanisms (Clay, 1997). Another perspective is proposed then with this legal framework on interprofessional organization in agriculture (Danet, 1982). For many agricultural products, the small value of goods at stake, time sensitive activities observation problems when products are highly perishable or that fraud has to be observed in situ, highly specialized or technical skills, limit the effectiveness of public court enforcement.

In the literature, several studies demonstrate that trade associations frequently rely on agreement among members to bring all contract disputes to arbitration conducted under "laws" and procedures established by the trade association by itself (Bernstein, 1992, Pirrong, 1995). There are transactions that public courts simply cannot efficiently enforce (substantial procedure delays, time for dispute solving, overload,…). Private dispute resolution holds out the potential to contracting parties of reducing the cost and increasing the efficacy of contractual commitments, by overcoming failures of the institutions that support public contract law regime or even public regulation by administrative authorities.

The major and most elaborate argument supporting this complementarity view is based on the idea that (incomplete) formal contracts can facilitate the self-enforcement of informal agreements. Self-enforcement models depart from the premise that informal dealings are only stable when the long term pay-off conditional on cooperation exceeds gains from short term defection (Klein, 1992, Lazzarini et al. 2004, Greif, 2005). The specific dimension is here that the focus is equally to *ex ante* prevention of litigations than their *ex post* resolution which imply most of the time the complete termination of the contractual relationship. The operation of the reputation mechanism enable members not to cheat ex post. The creation of formal institution means that administrative costs incurred are compensate by the expected total collective gains allowed by a reduction of commercial conflicts and dis-trust among parties. This especially supposes that all parties have an advantage to the change of trading rules and that behaviours converge towards a solution « winner-winner » (Pirrong, 1995)[5].

[5] In his analysis of private enforcement mechanisms and rules designed by the Chicago Board of Trade, Pirrong (1995) shows that the implementation of new rules which could have increase the total activity and quantities traded by the board, the legal intervention of the state was still needed to was still to impose them, as some of

Analysing their legal foundations and judicial implications, Danet (1982) introduces a distinction between these two forms of collective organizations in agriculture relying on alternative principle of discipline and self-regulation among members:

- the one's based on *intra-professionnal* discipline or self-regulation, like producer's groups or cooperatives,… where members are only farmers guaranteeing some relative *homogeneity* among stakeholders (see Hendrikse, 2004, for a possible discussion of this point);
- The one's based on *inter-professionnal* discipline or self-regulation, like interprofessionnal associations where representatives of farmer trade-unions, but also of cooperatives, private middlemen, agro-food firms, and even representatives of small and large retailers can be involved depending of the objectives of the association.

Both of these two types of collective organization of producers are based on self-regulation, but the underlying rationale is different. For the development of producer's group, the expected benefits of this type of collective organization is to enhance the bargaining power of individual farmers in *bilateral* negotiations with large agro-food firms, but as well improving possible market power, i.e. the ability to influence market prices, by rounding up larger quantities of agricultural products[6]. On the opposite, promoting the creation of interprofessional associations was based on a different philosophy oriented towards the promotion of dialogues among economic actors in a same agricultural sector. Our analysis will be focusing in a first step primarily on the role of these interprofessionnal organizations.

II- PRIVATE INSTITUTIONS AS A SUPPORT FOR MULTILATERAL REPUTATION MECHANISMS

When considering the specific dimensions of contract regulation in agriculture, and especially the role of interprofessional organisations in contract regulation, two dimensions need then to be taken into account their influence in reducing transaction costs. First, a change in the self-enforcing range of contracts improving private enforcement mechanisms. Second, the reduction of administration costs for the functioning of formal organization needed to implement appropriate information systems and multilateral reputation mechanisms.

---

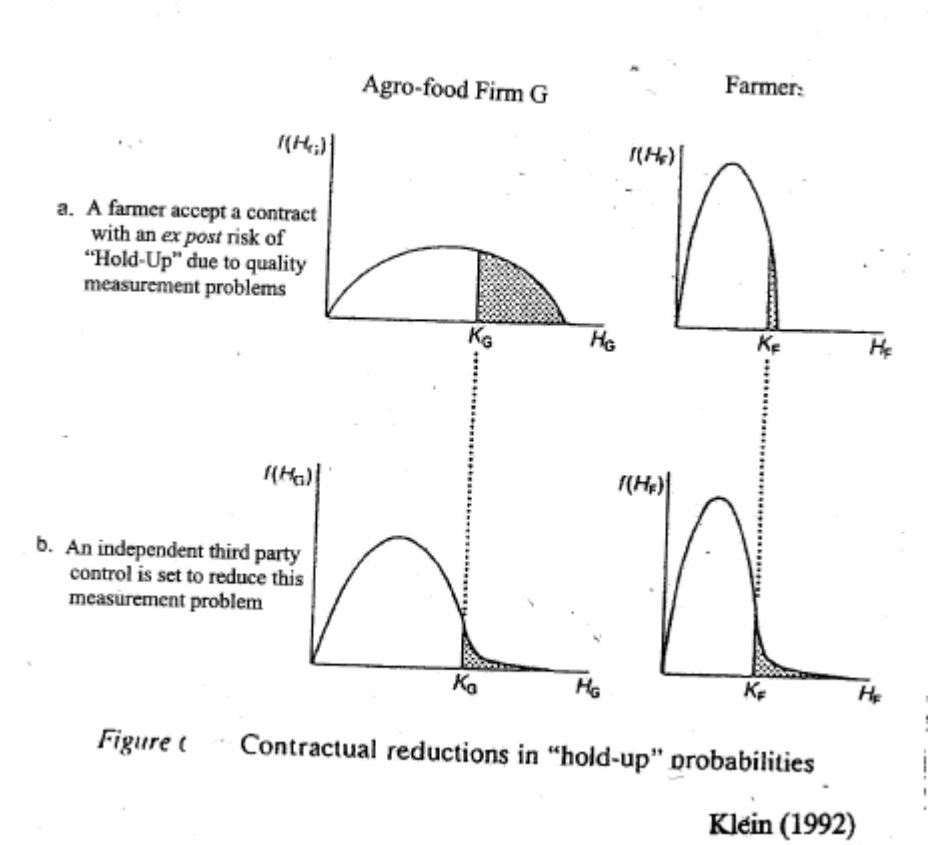
participants were loosing part of bargaining power and profits due to an improved delineation of property rights and transparency of transactions.

[6] In return, farmers had to accept some restrictions on their commercial freedom: to follow technical rules and requirements defined by their producer's groups, to commit to an "*exclusivity rule*" by delivering all their production for a specific product, and finally, to accept delegating price determination to the producer's group. On their own side, producer's groups benefit of a partial **"** *territorial* ***exclusivity*** " in prospecting farmers and for their own member, which aim to provide to a minimum level of activity allowing the producer's group to get more bargaining power and reduce destructive competition between competing producer's group, but still maintaining it with private middlemen in a very competitive market, which is the case in the French context.

2.1 – Optimizing the self-enforcing range of contracts

The analytical framework of Klein (1992, 1996) has been first developed in the case of bilateral formal contracts. The nature of contract terms is influencing directly the self-enforcing range of contracts, i.e. the incentives for the contractor to commit to contract terms and not to deviate. In this case, the self-enforcing range of the contract is defined by the difference between H , the expected gains of cheating or adopting an opportunistic behavior, and K the private sanction imposed by the other party if cheating is discovered or contract terms not applied. Contracts are self-enforcing only if $K > H$.[7] In this model, K, is a capital cost, i.e. the discounted value of future returns on specific investments that will be lost upon termination of the relationship , but as well the increased costs of purchasing inputs or supplying services in the market place after the termination of the relationship that can be imposed upon the transactors that violates the contractual understanding.

Schema 1 – contract law and the efficiency of self-enforcing mechanisms



[7]The area in the hold-up probability distribution where the expected gains are greater than the private enforcement capital. Regarding the respective hold-up gains of agro-food firm (*Hr*) and those of the suppliers (*Hs*), it will be equivalent to : $[1 - F_s (Ks)] + [1 - F_r (K_r)]$.

The global objective for the contracting parties is, once the contract terms are set, to minimize the value of the expected "hold-up" probability, or the sum of the areas in the tails of the two "hold-up" probability distributions where each transactor's hold-up potential is greater than its private enforcement capital. This self-enforcing range of contractual arrangements can be modified by including some specific clauses in formal contracts which can be enforced by public courts which either increase sanctions through penalties, or by increasing expected future streams of quasi-rents or creating bilateral dependence (Williamson, 1996). The formalization of contracts allows then to economize on the level of reputation capital Kw_1 required to assure the self-enforcing range of contractual arrangements in the absence of appropriate contract law [8]. Private reputation-based mechanisms can be as well activated in the presence of a legal system.

2.2 - From bilateral to multilateral reputation mechanisms

The implementation of multilateral reputation-based mechanisms involved more complex rules (Greif, 2005). In a similar way, in the case of multilateral reputation mechanisms, the amount of sanctions are equal to the sum of individual sanctions, and defined by the loss of expected future streams of revenue W_1 which could have been obtained through the maintaining of commercial relationships applied with all N group members. However, punishing a specific trader by not is also a costly process for individuals. Then the overall system relies on the effectiveness of incentives to those to apply these sanctions (Greif, 1993). This also means that the net collective expected gains of reducing transactions costs at a bilateral level are covering the administrative costs linked to the implementation of these multilateral-reputation mechanisms. The literature is replete with instances of such coordinated and collective punishment.

One of the main result of these models is first to demonstrate that even in the absence of repeated interactions or observability/verifiability problems of individual behaviours, reputation mechanisms may still be working and provide appropriate *ex ante* incentives to economic agents not to cheat *ex post*. In a recent article, Clay (1997) identifies several types of possible organisations for the implementation of these repeated multilateral reputation based mechanisms:

- a decentralized one such as informal *coalitions* of economic agents, like family members, where ostracism is easier to implement (Greif 1994, Clay, 1997). The central feature of a coalition was the reputation mechanism that linked agents past conduct and their

[8] Klein (1996) includes also in his analysis possible strategic behaviour of contractors asking to public courts the complete execution of contract term while contract equilibrium between parties has changed.

future payoffs. In many cases, merchants addressed this issue by using family members as agents or ostracism among a small community (Greif, 1994). The typical enforcement mechanism is here when, for example, a merchant community punishes parties in breach of contracts by denying them future business.

- a centralized ones based on formal private institutions, like guilds, clubs (Milgrom, North, Weingast, 1990). The latter is based on a central authority which identifies cheaters and may punish who do not punish cheaters according. This centralized organization allows a better coordination of member actions, centralization and diffusion information and as well, for some of them applying directly these sanctions.

When informal coalitions of agents involved in a sufficiently small community, ostracism among group members, but as well shared social norms (Kandori, 1992) may be enough to ensure effectiveness of multilateral punishment and the implementation of economic or social sanctions (Greif, 1993). For larger communities, these mechanisms may become rapidly ineffective and may require the creation of formal administrative structures to support them (North et al. 1990, Greif et al. 1993, Greif 2005). They especially require de design of dedicated information and communication systems among members. However, high fixed costs associated with *designed* private institutions imply that *organic* ones would be more efficient when there is little gain from expanding the number of exchanging individuals or when loss due to bilateral repeated interactions is very small (Greif, 2005)[9]. The multilateral setting sees a changing landscape of differently paired relationships in a system that organizes a multitude of transactions.

2.3 – Contract law and the stability of private institutions

The existence of legal framework supporting such designed private institutions may improve its functioning and reduce transaction costs by creating a more favourable climate for commercial exchanges. One central issue for the efficiency of these CEI is their stability over time and regarding their membership (Clay, 1997, Greif, 2005). In this case, Richman (2005) suggest that private law is only limited to long term players and is associated with sizable entry barriers, which may cerate new incentives for collusive behaviour which in return may impose some costs and affect negatively the total surplus. And as a matter of fact, Clay (1997) suggests that barriers to entry and exit from coalition were a necessary condition for them to work. First, the barriers by ensuring stable membership in the coalition, enabled the information network to provide a principal with information on agents past behaviour and to

[9] These activities are taking place among self-interested individuals interacting with varying frequency in an environment characterized by uncertainty and limited ability to observe one another's action.

mitigate information asymmetries between an agent and a principal. Second, as suggested by Kenney, Klein (1983), barriers preserved the differential between what members could earn inside and outside the coalition (Clay, 1997). These barriers could be define by ethnic, language, … and endogenous reasons of being officially part of the coalition.

These barriers may in fact become more or less porous enough to allow the gradual expansion of the coalition. And as well, instability can lead to the collapse of the coalition, especially when members do not have strong enough convergence of interests among them. Open networks may enjoy lower entry barriers, but assume corresponding costs of one-time cheaters. The larger the number of individuals that can benefit from this public good, and as information about the individual value of this good is private, the probability of finding an agreements extending the coercive power of these private institutions is lower (Pirrong 1995).

When members are not homogenous and not pure substitutes, or that they are competing to each other, the possibility of common actions are reduced, as free rider problems may arise and the incentives to comply to the collective discipline lower. The incentives for some agents to adopt a "*free-riding*" behaviour are large enough to take advantage of this service while not contributing financially to its furniture. In order to be effective, the functioning of these private ordering institutions need to meet two conditions :

- Ensure a sufficient degree of « *cohesiveness* » among members in order to implement a collective self-regulation and improve the efficiency of collective sanctions. In the literature, the main identified factors is the *homogeneity* of members in a group, or the strength of social links in a professional community (Clay, 1997, Greif et al. 1994).
- Benefit of a sufficient level of *acceptability* and legitimacy for a voluntary adhesion of its members, as those will have to accept to voluntary comply to possible sanctions and may be asked to impose sanctions to others even if it is costly for them.

In this situation, Pirrong (1995) demonstrate that the support of the state through a specific law enforcement was then supporting the legitimacy that can be expected from the support of the normative and coercive power of the state, improving then their efficiency (Barzel, 2002). They do not substitute the action of public courts which remain the ultimate court of appeal in case of litigations among parties[10]. In another hand, when economic gains are shared fairly, this equity principle is enough to guarantee the cooperation of the parties (Libecap, 1989, Pirrong, 1995). Its implementation may fail because one category of agents are in a worst situation after a change of rules. If not, the creation of these private institutions

[10] Arbitration agreements have still to be enforced and public courts must cooperate by refusing to hear the dispute that has been solved through arbitration (Hadfield, 2005). Similar issues exist for mediation.

relies, either on the normative and coercive power of the state to impose a solution to all the parties (Pirrong, 1995), or the granting of compensations or the credible threat of massive retaliations, which could be more costly than the acceptance by the concerned parties of a partial loss of their bargaining or market power (Williamson, 1968, Greif et al. 1994).

III – A CASE STUDY : THE ROLE OF INTERPROFESIONAL ASSOCIATION IN AGRICULTURE

In the literature, the diversity of information and communication mechanisms used for the implementation of multilateral-reputation mechanisms is beginning to be well documented (Greif, 2005). It is then important to understand the specific features underlying the action of these interprofessional associations regarding contract regulation and enforcement. Due to the diversity of situations observed among agricultural sectors, we have chosen to focus on a specific case study of the cattle industry.

3.1 – Motivation for the creation of a CEI : a brief historical perspective

The interesting point with this sector is that the interprofessional organization created in 1980 is not subject to usual criticism of collusive behaviour on centralized price determination, nor quantity restrictions through production quotas all practices prohibited by competition law (See Chalfant and Sexton, 2004, Zago 1999, Ménard, 1998)[11]. Data used for this case study were collected by interviewing the administrators of the national interprofession and of the three main and leading Local interprofessional Committes in western France (Brittany, Normandie and the Loire Vallée), by analysing legal and historical documentations (statutes, meeting minutes, decrees, interprofessional agreements, …).

The formal and legal creation of the national interprofessional association in the cattle industry took place only in 1980 (decree of November 18th, 1980). This creation was motivated by regional experiences implemented since the beginning of the 70's in the three main producing areas in France, which are all located in western France : Brittany, Normandy and the Loire's Vallée. These three regions are representing about 40 % of the total French production, both in term of breeding farms and total activity of slaughtering houses located in these regions. All French regions did not follow immediately this trend, some of them being reluctant to such organization. The motivations for the creation of a formal organisation came from the difficulties met by the region Loire's Vallée in implementing interprofessional

[11] As a consequence in the 90's some competition between legal orders emerge creating some new sources of possible legal insecurities for the institutional architecture build aside to regulate agricultural markets. Among the condemned practices regarding competition law were : centralized price determination by interprofessional association , restrictions on production level through production quotas, statistical information systems on production and price (Ménard, 1998, Raynaud, Valceschini, 2005). This situation is also questioning the doctrinal coherence and categorizations within competition law, and especially the separation in one hand, laws on cartel regulation and on the other side, consolidation regulations, the former applying to collective organization of small farmers, the latter to the consolidation process of large agro-food firms or retailing sectors.

agreements among all parties without any formal organization. Compared to the two other regions, Brittany and Normandie, which created first an administrative organization under a legal statute of an union in Normandy in 1970 (called CIRVIANDE) and a non-profit-making association in Brittany in 1977 (called INTERBOVI), professional representative organizations in the region of Loire's Vallée have chosen first to develop interprofessional agreements on contract regulation and enforcement without in a first step having any administrative support. The first interprofessional agreement was in fact signed in this region in 1976 (see table) without any formal organization to enforce it. The Local Interprofessional Committee (LIC), *Boviloire*, will only be created after the creation and acknowledgement y-the-law of the national interprofessional association in 1980. The choice to adopt this legal solution was motivated for the economic operators of this region by three major limitations met during this 4 years period of experiments:

- from a legal perspective, the formal agreement of all interested in the sector regarding the authority and functions of the interprofessional association would have required the signature of more than 300 bilateral contracts with all slaughtering firms, individual merchants or cooperatives involving extra negotiation and administration costs, without being sure that all of them will accept and comply effectively these new rules, even if it is improving total welfare This legal solution appears not workable.
- the (relatively small) initial administrative costs were covered by some funding given by the representative professional organisations and farmer's unions of the region, those having themselves limited amount of financial resources. Moreover, free riding by some small operators emerge rapidly even if collective contract enforcement is public good benefiting to all. This financial constraint is a major issue both locally and at the national level. After its formal creation in 1980, the national interprofession began its activity only in 1984, when tax collection was effectively implemented allowing to hire employees and to cover other administrative costs.
- The development of inter-regional trade between Brittany and the Loire's Vallée was creating distortions among slaughtering firms, one regions applying more strict rules than the other leading some individual farmers to refuse to sell their animals if they knew that they will be slaughtered in the other region, and as well between slaughtering firms. A national harmonization appears then as a better solution.

The official functions of interprofessional associations are in general related to : i) the definition and enforcement of interprofessional agreements; it may also include depending of the sectors, mediations and prevention of dispute litigations;; ii) collective R & D funding,

including applied researches on quality problems, improvement of production systems,…, and iii) developing collective consumer information and communication campaign.

In the case of the cattle industry, this last function took a specific importance during the BSE crisis in 1996, when its advertising and communication subsidiary became actively involved in the crisis management and in collecting scientific information to communicate it to the general public. Nevertheless, the role of the interprofessional association in contract regulation remains, from our perspective, a central issue as it is promoting more *transparency* in the organization of transactions and the sharing of quasi-rents. The first formal interprofessional agreement in the cattle sector was signed in 1988 and was related to the marketing conditions of cattle over 6th months of age, rules of access to life market places in order to provide added security of payments, and more recently after the BSE crisis on dedicated labelling rules of beef meat in order to improve consumer's information on the origin, breed and types of the animals. They provides then more precise rule regarding property rights allocation and transfer, even if most contracts are informal in this sector[12].

Encadré 2: Content of the Interprofessional agreement on the marketing of cattle above 6 months of age.

a- Rules regarding property rights transfer : delays between sale agreement and animals removal at the farm, lenght of the waiting period for animals after removal of the farm and before slaughter, rules for carcass presentation and weighting after slaughter.

b- Transfer of risks : this includes establishing responsabilities in case of mortal accident of the animal during transportation or transfer to the slaughter house**,** and as well for sanitary seizures by vetrerinary public authorities. Local Interprofessional Committee are providing a mdediation service using veterinary experts in a short delay as product are very perishable.

c- Indidvidual Animal identification : standards for traceability systems into slaughter house which are central for sanitary purposes, but as well for the payment to the farmers (who have to be paid for their onwn animal, and not for the one of another farmer (mistakes that are sometimes very common).

d- Payment delays to the farmers :no more than three weeks

e – Standardization of Information provided on weight tickets delivered to the seller: these informations allow the farmer to verify if all is correct and is corresponding to their own animals, and if necessary to make a claim if something seems to be wrong in a appropriate short delays in order to ask the interprofession to verify the situation. Some interprofession requires the slaughter house to keep in place carcasses at minima 24h in order

[12] Due to dramatic changes in R&D funding in agriculture since 2002, most of agricultural sectors are nowadays adopting interprofessionnal organizations, but most of the new one are not necessarily involved in contract enforcement. One of the R&D project funded by the interprofession in the beef industry is the design and building of an automatic grading systems for beef carcasses, with the expected result of a more objective measurement than the one realized by specialized employees of slaughtering firms.

to operate such verification before the sending of carcasses to customers. Communication of these weight tickets to farmers in a short delays is another issue regarding verification.

f- les conditions de pesée des animaux à l'abattoir. L'accord définit les normes de réfaction à appliquer en fonction de la présentation des carcasses, ainsi que les délais à respecter entre l'abattage et la pesée.

3.2 – The main source of contract litigation and its resolution

Incomplete specifications of what is exchanged and problems of transfer of property rights among contracting parties is identified as another major sources of litigations (Pirrong, 1995). Agents have therefore to make individual efforts to delimit and make their (exclusive) rights of use of enforceable and to transfer them (Barzel, 1989).One specific issue in the case of agricultural products is that contracts, even when they are informal, involve complex issues of quality that are either difficult to measure or verify, particularly when the timeliness of compliance is critical. For these dimensions, verifiability by courts is often limited by their technical dimensions, and as well the short delays required in food process for safety reasons.

The creation of these interprofessional associations took place in fact in a process transformation in the organization of transaction between slaughtering firms and their suppliers in a sector where most contracts remains informal. The major change is related to the adoption of new pricing rules and the move from negotiated prices in bilateral transactions taking place in life traditional markets places to posted prices set directly by slaughtering firms actually used for more than two/third of transactions (Mazé, 2000). The economic expected trade-off for this change was a reduction of search costs of animals in small and geographically scattered farms, and as well of bargaining costs and measurements costs for highly variable quality attributes of animals. Nevertheless, this new pricing rule involves that quality measurement, which is central for price determination, is realized *ex post* when animals are already at the slaughter house, allowing possible opportunistic behaviours of slaughtering firms.

This dimension is one of the major documented sources of litigations and distrust between farmers and agro-food firms (Feusti, Feuz, 1993, Hobbs, 1997). Quality measurement problem are a major source of quasi-rent appropriation (Barzel, 1982). Hence, even if standardized carcass grading[13], rather than animal life sales, present the advantages of

[13] A decree by-law of 1977 (modified) is defining dressing and weighing rules of cattle carcasses (used to define the European regulation du 12/08/81. Nevertheless, the existence of this standard (mainly motivated by the implementation of european statistical system for market regulation) does not mean its effective use in contracts by economic agents, even if carcass grading is realized by slaughterhouses. From a strict legal point of view, the slaughter house is legally the only one responsible for the realization of carcass grading and cannot be realized by other firms or institutions. Slaughter houses are private property where access can be restricted.

reducing measurement's errors in value and price determination, this price rule way also facilitate possible *ex post* opportunistic behaviour and down-grading of animal by slaughtering firms. Measurement error's on grading can lead to a loss of final value of 15-20% for an animal paid to the breeder. Even if such errors are not necessarily statically significant on a large number of animals (error's can go either low or high), they are still affecting the perception of fairness and the possibility of opportunistic behaviour by the other party. Apart the problem of direct observability of possible frauds by farmers, reputation mechanisms and the activation of bilateral sanctions by individual farmers has no chance to deter such abuses and to discourage slaughtering firms to engage in such behaviors.

An official control is performed by a quasi-public administration (the french Meat and Lifestock Commission, OFIVAL) to the benefit of a formal delegation of this prerogative by the state. Moreover, a second level of controls is exceptionally performed by the administration (*répression des fraudes*). Nevertheless, many breeders were considering these controls as insufficient and some Local Interprofessional Committee, especially in the three pioneering regions get rapidly involved in the provision of inspection services. These inspection services aim to control the implementation of these interprofessional agreements and to provide a professional expertise by trained professionals on grading and quality measurement of animals, a main source of possible frauds.

This inspection service by Local Inteprofessional Committees is taking, for example in Brittany, the form of an unexpected visit in each slaughter house once a week, with a review process with the manager of the slaughter line of carcasses recently graded and to realise a counter evaluation. If differences are identified, a correction can be asked by the expert and has to be applied by the slaughterhouse for the payment to the farmer. Such action could be more difficult to realize for individual farmers who do not necessarily have the appropriate skills and professional legitimacy in carcass grading. Nevertheless, this type of inspection service is not provided in all regions, this activity being then realized by a quasi-public agency (OFIVAL). Problems arising for the transfer of property rights are a major motivation for requesting the arbitrage of this private institution, which is providing an independent expertise in case of litigations or uncertainty regarding the respective liability of the parties in the problem. (table below).

Table : Requested mediations to the Local Interprofessional Committee in Brittany.

Motif de l'intervention	Litigations on carcass weights	Litigations on carcass grading	Liability sharing in case of animal mortality or sanitary seizures	Litigations on animal identification or loss of official weight tickets
256 interventions Part (en %)	31%	15%	33%	16%

Source : Original data computed from phone records of CIR Bretagne over a period of 18 months in 1994-95

Even if the total number of requested mediations (here 256 over a period of 18 months) is relatively low compared to the total number of transactions in this region (over 4 millions animals are annually slaughtered), the existence of such service is contributing to improve mutual trust among parties, and then play a dissuasive role. The action of this interprofessional organization is then more preventive than strictly coercive. These features minimized the number of potential disputes and economized on transaction costs.

3.3 – The threat of collective boycott as an economic sanction

Another dimension of the role of interprofessional association as a private contract enforcement institution is the activation of multilateral reputation mechanisms to punish repeated and established opportunistic behaviours. The activation of multilateral reputation mechanisms is relying on dedicated information and communication systems implemented by the formal private institution (Greif, 2005). These mechanisms in the case of cattle industry are taking two forms: i) a *procedural and formal* one coordinated directly by the interprofession itself, ii) an *informal* one taking the form of *extra-legal* boycott actions. As noticed by Clay (1997), one striking thing about this type of private institutions is the infrequent use of collective punishment and private ordering. In this case, details matter to identify the *modus operandi* of the activation of these multilateral reputation mechanisms. Crisis situations are thus revealing the needs for adjustments and changes in equilibrium.

The procedural and formal way that can be implemented by the interprofessional association is the following form. If repeated non compliances to interprofessional agreements are observed, the Local Interprofessional Committee can introduce a formal procedure of information, leading if it is proceed completely, to the publication in specialized professional newspapers of appropriate information. This publication can then alter the reputation of ….. In between, a first step is the writing of formal report on deviant behaviours to the board of directors of the interprofessional association. In case of another repeated offences, a written injunction is sent to the offender. Without any appropriate change in behaviour or commercial practices, an official information letter is sent to the chairman of the professional union to

which the offender belongs to, this one being free to engage disciplinary sanctions possibly leading to a banning. Such sanctions remains exceptional and the above complete procedure for sanctioning opportunistic behaviours have still never been applied.

In this procedure, the banning is nevertheless here of more limited impact than the one generally described in the literature on private ordering (Milgrom et al, 1990) due to the fact that the offender may still be able to continue its commercial activity. Nevertheless, one may expect that slaughtering firms had no incentives to accept the intrusion into their business of a private contract enforcement institution[14]. Such contract enforcement institutions impose restrictions on the use of their bargaining power to extract larger part of quasi-rents generated by this activity from farmers. The question is then why they accept to comply even partially with the authority of such private institution?

The creation of interprofessional organisation participate to the pacification and the institutionalisation of contractual regulations and dialogues among parties which present the advantage to reduce other forms of collective actions, especially violent actions, i.e the ability to impose a costs even by illegal means (Barzel, 2002). Nevertheless it does not exclude any possibility of such event, even more their implementation is often the result of the anticipation of more costly enforcement mechanisms, especially the threat of massive sanctions like boycotts or economic blockade (North et al. 1990). In one of his historical study, Greif (1993) give an illustration the way such private ordering institutions were coordinating collective boycotts or economic blockade of cities. In this type of situation, it becomes less costly for the other parties to accept a third party neutral verification. The implementation of these sanctions requires specific mechanisms that allow the cohesion of the group and the effective implementation of these sanctions by all group members, even if these sanctions are costly for individual members due to the temporary loss of incomes (Greif, 1993, Clay, 1997).

Regarding their implementation in agricultural sectors, political farmer's unions rather than interprofessional association which need to remain neutral in the conflict are taking the active role in the coordination of the collective boycott action (Duclos, 1998). Boycotts and temporary economic blockade of agro-food firms or general infrastructures have been common in agricultural sectors as a mode of political influence despite their decrease since

[14] In 1994, a complete physical blockade of the entrance of main slaughtering firms located in the region of the Loire vallée was implemented by coordinated groups of farmers. This blockade stopped after the accidental death of an employee of one of this slaughtering firms, three weeks after its start.

the 60's[15]. The advantage of this strategy is to involve a limited number of persons (and trucks, tractors,…) but organized in a commando-type of organization. Defections and free-riding behavior in larger groups of participants and group member may compromise its effectiveness. This type of collective sanction needs nevertheless to remain exceptional, even if their episodic activation, even sometimes without any specific reason, has been reported in order to maintain a credible threat to deter possible abuse of power or opportunistic behaviour (Greif et al. 1994). Procedural conflict resolution is preferred in the case of interprofessions.

IV – A PREDICTIVE MODEL FOR OTHER AGRICULTURAL SECTORS.

The use of this legal framework on interprofessional organization in agriculture cannot be imposed to a specific agricultural sector. It remains under the sole initiative of private economic actors of each individual sector. The observation of its adoption or not stands then like a *natural experiment* and clue us on constraints and benefits expected from the effective implementation of this legal framework.

4.2- The gains of cooperation through interprofessional action

The creation of private contract-enforcement institutions is one option among others alternatives. When effective public-order institution exists, economic agent can respond to their limitations for fostering contract enforcement by appropriately structuring their contractual relationships, property rights distribution and organizational forms (Greif, 2005). In a first step, bilateral arrangements among contractors may be enough to narrow possible sources of contractual hazards through hostage-taking, vertical integration and corporate governance (Williamson, 1985, Klein, 1992). Such option has been investigated with the initial development of producer's groups and their involvement in modernization and above all privatisation of slaughtering houses. This privatisation was motivated by large investments and financial capital required to meet European sanitary standards[16]. Half slaughtering firms in the beef sector are still cooperatives. Nevertheless, the involvement of producer's groups creates ambiguities in their ability to achieve what for they have been created.

The creation of a dedicated legal statute for producer's groups was first motivated by the will to reinforce collective bargaining power of farmers by gathering together their production and implementing collective self-regulation will become at an equal position to agro-food firms (Danet, 1982). Nevertheless, their action reveals itself partly inadequate

[15] In the case of cattle breeders, raising a blockade is easier compared to other more perishable agricultural products as they can keep their life animal at the farm for a longer period of time with a marginal loss in term of animal's quality downgrading and added costs of animal feeding during this period (like f.e one month).

[16] In 2000, 25% of slaughter activity for cattle is still performed by public slaughter houses directly managed by local public administration *(régie)* or through a delegation to a semi-public firms or through concession contracts. After a reduction of 35% in number during the last ten years, there are 291 slaughter houses in France.

regarding repeated verifiability problems on quality measurement and price determination. In a competitive context with other private slaughtering firms, cooperatives subject to equity rules with their members suffered competitive distortions in their disfavour due to these differences in the implementation of grading systems[17].

The combination of these two factors explains the limitations of producer's groups in offering the same level of guarantees regarding their independence towards agro-food firms. In such context, the creation of an interprofessional association was providing a solution to these enforcement problems, and as a way to facilitate the adoption by farmers of new pricing rules (Hobbs, 1997). One of the major changes in contract used in this sector is the move from bilateral negotiation taking places in traditional market places to posted price by slaughtering firms to a set of selected suppliers (Mazé, 2003). Nevertheless, the gains obtained by a reduction of information and bargaining costs can be ruled out by *ex post* measurement and enforcement costs (Barzel, 1982, Wang, 1993). The ability to supply effective designed-private or public-order contract enforcement institutions is thus central (Greif, 2005).

The ability to supply effective designed-private or public-order contract enforcement institutions is thus central (Greif, 2005). In a sequential Prisoner Dilemma game with imperfect monitoring, where contractors choose first the pricing rules, and the buyers decide in a second step to cheat or not to cheat, equilibrium stage without appropriate institutional setting is always cheat. The trade-off is then the following: $\text{Gains}_{\text{adopting a new pricing rules}} > \text{Costs}_{\text{collective retaliation}} > \text{Costs}_{\text{third party monitoring}}$[18].

Under certain condition, the fear of risking a costly retaliation by the commercial sector would induce those with the coercive power to prefer consulting it rather than taking unilateral actions effecting property rights (Greif, 2005). In this perspective, the creation of an interprofessional association is providing an alternative to other violent coercive means. A formal organisation is helping to reduce coordination costs, but its action is in some occasion limited by the fact that it needs to remain *neutral* regarding conflicting interests, but not

[17] In France cattle marketing is mainly organized through market intermediaries: producer's group (32%), private middlemen (34%), traditional market places (19%) and direct relationship with slaughtering firms (10-15%) Less than 2-3% of transactions are taking place in auction markets. Nevertheless, producer's group play a central role in the privatization of slaughtering houses, by supporting the involvement of cooperatives in the slaughter and meat packing activities, these one representing today half total quantities. Nevertheless, the consolidation process of slaughtering firms has been slower than in other sectors. .

[18] The total budget of the french national interprofessional association was, in 1995 before implementing an automation of carcass grading, around 10, 5 millions of Euros, with 35% of this budget coming back to the Local Interprofessional Committee (LIC) for their own functioning. In 1995, the tax was based on a per-unit of carcass weight amount, and move only in 2000 to a lump sum amount for each slaughtered animal.

necessarily *independent* as it requires a fine understanding of political issues related to the performance of economic activities in a dedicated sector.

4.2- The changing nature of coalitions: limitations to interprofessional action

Other intrinsic rules governing the organisation of interprofessional association are at stake when considering their effectiveness. Lorvellec (1993) identified three foundation principles which are: representativeness, parity, and unanimity. This especially means that, following a democratic logic, a specific decision cannot be taken without the agreement of all participating professional representative organizations. Actions taken by interprofessional associations have to be oriented towards the common interest of all the economic parties involved. Hence, the effectiveness of this type of private institution relies less on coercion than voluntary commitment and shared consensus among parties which may have at first sight opposite economic interests. In most studies on private ordering, the homogeneity or cohesiveness of a group is evaluated by one main criterion, the membership to an ethnic community or to a professional group (Greif, 1993, 2005).

The national interprofessional association dedicated to the cattle industry involves 11 representatives professional organizations, including large and small retailers representatives, farmers's unions, cooperatives, cattle middlemen, private slaughtering firms, public slaughter houses,…. When considering the total number of parties involved, the expected benefits of the use of the legal framework supporting interprofessional organization (1975's Law) is first to establish its legitimacy and its acceptance by all parties, and as well its stability over time while facing members with divergent interests. This is a major constraint as the law of 1975 on interprofessional organization in agriculture requires that only one national interprofession can receive a formal agreement for each agricultural sector.

In fact, the structure of coalitions in such complex setting is not stable and may vary in many other dimensions when agents are not homogeneous in their objectives and strategies even in a same professional group. Such situations where coalition's members are not homogeneous have been emphasised in the case of agricultural cooperatives by Hendrikse, Bijman (2000) by distinguishing adverse selection effects among farmers. The question is either not only on influence ability and between minority and majority voting rules as it is assessed in the literature (Zago, 1999). In the case of interprofessional organization, coalitions may change depending of the combination of two dimensions and the nature of temporary strategic alliances among professional family <u>and</u> also across regions where specialisation and concentration of production systems creates also interdependencies between local farmers and agro-food firms located in the same region.

With the modernization and privatization of slaughtering firms, large infrastructure investments have been realized, increasing in return the interdependence between local farmers and agro-food firms which have developed specific assets requiring an optimization of the supply process. As suggested by transaction costs economics, the development of specific assets is a major source of bilateral dependence (Williamson, 1985). The quality of contractual relationships, i.e. the reduction of explicit conflicts, may also enhance economic competitiveness of a specific region. Thus, this regional link can be very strong and supersede professional identity as a major driver in the formation of coalitions[19]. The equilibrium between intra and interregional competitions is here central. This equilibrium may influence directly the effectiveness of interprofessional action as it involves the delegation to a national level rather than keeping decision making and collected taxes at the local level.

One good example of such conflicts between national and locals level is illustrated in the cattle industry by the negotiations which took place with some region (here Brittany) to define the financial channels for collecting interprofessional taxes with two options : the money being sent directly to the national which is the usual norm, or this money passing first in the local interprofessional committee before sending appropriate portion to the national level, solution adopted in the case of Britanny contrasting thus with the situation of other regions. The second option is in a way an impairment to general principles defined by the law of 1975 on interprofessional organization in agriculture.

As a matter of fact, the choice of one of these solutions is changing the balance of powers between the national and the local level and the ability to use it as a financial leverage. This is especially the case when some regions have a significant leadership either in term of political or economic power. This economic power is taking here the shape of market shares and production levels. In this case, Greif et al. (1994) were suggesting that it is more valuable for a ruler to commit to the rights of groups that are well organized and having a large influence, than those of groups less organized and less efficient to apply sanctions in case of opportunistic behaviours.

4.3 – Complementarities between intra and interprofessional self-regulations?

The interesting point regarding this agricultural cattle sector is twice. First, it departs from with the situation of other agricultural sectors which choose not to use the law of 1975 to

[19] In private commercial arbitration systems, the delegation is realized to an independent third party for solving *ex post* dispute litigations (Hadfield, 1995). In the case of interprofessional, *impartiality* or *neutrality* is more important in *ex ante* prevention and mediation as its legitimacy and acceptance by all parties to voluntary submit themselves to its authority is central. Moreover, as noticed by Greif (2005), representative bodies are populated of those who balance each other's coercive and economic powers.

support their own activity (especially for quality inteprofessional association supporting PDO wines -Protected Denomination Origin- considering too restrictive internal decision rules imposed by the law). Second, in other sector, this structure has been formally recognized, but has long no real activity (especially, for example, the pork industry which is using since 1975 in the main production area since a professional association (with only farmers in the board) to directly monitor the implementation of grading systems in slaughter houses). Thus, despite some evident advantages, the use of such legal framework on interprofessional organisation is not necessarily solving all contract enforcement problems.

In modern economies, the effectiveness of these private institutions in achieving contract enforcement also depend of the legitimacy and the normative and coercive powers bestowed by the law (Pirrong, 1995, Barzel, 2002). Complementarities between public and private ordering mechanisms emerge here due to a reduction of the amount of reputation capital required by the contractor to implement these private mechanisms. In this case, this is more valuable for agro-food firms to accept a formal collective organisation of farmers and a formal negotiation with them rather than to experience retaliations and non-cooperative behaviour of their suppliers. But considering the role of law in contract regulation, Danet (1982) is addressing another question related to the connection between interprofessional self-regulation and pure professional self-regulation implemented by producer's groups. In the literature, there are in general considered separately (Gow et al. 2000, Hendrikse, Bijman, 2000). From his perspective, the formal separation in the law between these two modes of governance was not necessarily serving the global project of more efficient contract regulation in agriculture, i.e. achieving a better equity in negotiation between small farmers and large agro-food firms, and as a consequence "*to be heading for a better parity of farmer's revenue with other social categories*" (p. 311-312).

The objective assigned to contract regulation is here to accompany the modernization process and competitiveness of agriculture and agro-food industries. The monopsonistic structure of most agricultural sectors is nowadays well documented in many countries with a situation facing highly concentrated agri-food sectors. Nevertheless, differences across agricultural sectors remain both regarding the dynamic of vertical and horizontal consolidation concentration process and the localization and degree of specialisation of agricultural productions and processing industries. When considering the nature of connexions between professional and interprofessional self-regulation and their consequence on contract regulation, several situations can be identified :

- When firms are numerous and market structure is not concentrated, the implementation of an interprofessional organization may be valuable for two main reasons: First, it is reducing information search and negotiation costs by implementation a collective negotiation between a large number of economic agents. Second, it is regulating the free access of many agro-food firms it is regulation and reducing unfair contractual arrangements with farmers as well for agro-food firms as it is regulating unfair competition among firms.

- When agro-food firms are fewer, the expected benefits of a collective negotiation are reduced. Thus, an interprofessional organization is less likely to emerge as it is less costly for a firm to manage directly with local producer's groups. This situation happen, for example, in the industry of processed vegetable which was the first agricultural sector to adopt an interprofessional organisation in the 60's, and after a drastic concentration process of firms redefine in the 90's the role of the interprofession with lower prerogatives in contract regulation. Professional self-regulation and decentralized collective negotiation remains as it is still allowing a reduction of bilateral negotiation costs.

- A third situation can appear where a strong regional concentration (more than 50% of national production concentrated in one region) allows this region to be in a dominant position on the market and to impose its own standards for regulating transactions to other regions. Such situation was observed in the pork industry, where a professional association is supervising grading systems, organizational setting imposed in the years 1974-75 to slaughtering firms through actions resorting to violence and blockades of economic activities.

Both consolidation of agro-food firms and geographical concentration of agricultural productions have created some regional specialization. In this case, this is not only the agro-food firms which are competing towards each over, but rather inter-regional competition. In this case, the coalition structure brings together agro-food firms and the farmers belonging to the same region. Competition arises also between agricultural regions comparative advantage and the development of specific assets. Nevertheless, some conditions attached to the use of the legal framework on the interprofessional organization in agriculture have also bound its spreading, especially among those supporting collective quality strategies based on PDO system (*Protected Denomination of Origin*) which are functioning more like clubs where membership is subject to restriction and selection.

In the literature on private ordering, these barriers to entry have been identified as a major condition to sustain coalition stability and effectiveness regarding contract enforcement (Bernstein 1992, Clay, 1997, Richman 2005). While strong enough to maintain stability, the

barriers need also to be porous enough to allow the gradual expansion of the coalition over time which is a condition to capture the gains that arose from a better matching of agents to tasks or market opportunities (Clay, 1997). These barriers to entry may nevertheless at some point crystallize and membership in it is defined imposing entry restrictions which can affect negatively total welfare. When analysing the underlying principles to interprofessional organization as defined by the law of 1975, the opposite situation is expected as once created, all economic actors of one specific sector have to comply with its rules.

CONCLUSION

Private institutions play a central role in the efficient organization of economic exchange and the functioning of market by improving contractual performances and reducing transaction costs through the definition of quality classification and codifications. In standard contract economics, models rely in general on an implicit hypothesis that information is fully verifiable by an independent third party and court enforcement perfect, i.e. without any costs or delays for contracting parties. We attempt in this article to fix the gap with another trend in literature focusing on private enforcement mechanisms without law. Several recent studies tend to illustrate the importance of the legal background institutions necessary to support private contracting mechanisms and their potential benefits. First, private enforcement institutions may enjoy industry expertise and specialized knowledge regarding industry transactions. Second, private law can be tailored to idiosyncratic needs. Third, private systems are able to act at lower costs than overload and procedure laden public courts. It leads as well to more predictable legal outcomes. Our analytical perspective is based on a positive rather than normative approach to law and economics.

We demonstrate first that the creation of these private institutions act as a way to reduce bilateral private enforcement capital of contractors, especially when considering the adoption of new pricing rules by firms and the move from negotiated prices to posted price by buyers. Second, the legal recognition allows a reduction of governance costs of this interprofesionnal organization. However, this is not necessarily a sufficient condition to ensure the complete convergence of conflicting interests of its members, and extra-legal action may subsist as a credible threat of retaliation. This situation could explain why other sectors do not choose to adopt such legal framework. Third, we propose an extension of previous bilateral models to the analysis of *multilateral* mechanisms of sanctions against violators by an organised coalition of producers, as well as the role of the legal framework to reinforce the stability and the legitimacy of these coalitions, and then their efficiency. We derive general propositions regarding under which conditions it is working and when other

institutional arrangements can be more efficient in preventing contractual sources of litigations and in ensuring effective contract enforcement.

REFERENCES

Allen D., Lueck D. (2002) *The Nature of the Farm*, MIT press.

Alston L., Libecap G., B. Mueller (1999) "A model of Rural conflict: violence and Land reform Policy in Brazil", *Environmental and development Economics*, 4, 135-160.

Barzel Y. (1982) " Measurement cost and the organization of markets *", Journal of Law and Economics*, 25, 27-48.

Barzel Y. (1989) *Economic Analysis of Property Rights*, Cambridge University Press.

Chalfant J., Sexton R. (2002) Marketing Orders, Grading Errors and price discrimination, American Journal of Agricultural Economics, 84, 1, 53-66.

Clay (1997) « Trade without law : private-order institutions in Mexican California », *Journal of Law, Economics and Organization*, 13, 1, 202-231.

Crespi J., Sexton R. (2003) Concurrence, coopératives de producteurs et Marketing Orders aux Etats-Unis, *Economie Rurale*, 277-279, 135-151.

Danet J. (1982) *Droit et Disciplines de production et de commercialisation en agriculture*. Thèse de doctorat d'état en droit, Université Paris I Panthéon-Sorbonne.

Duclos N. (1998) *Les violences paysannes sous la Vème République*, Economica, Paris.

Ellickson R. (1989) "A Hypothesis of wealth-maximising norms : evidence from the whaling industry", Journal of Law, Economics and Organization, 5, 83.

Fausti S., Feuz D. (1995) "Production Uncertainty and Factor Price Disparity in the Slaughter Cattle Market: Theory and Evidence", *American Journal of Agricultural Economics*, 77, 533-540.

Feuz D., Fausti S., Wagner J. (1993) Analysis of the efficiency of four marketing methods for slaughter cattle, *Agribusiness*, 9, 5, 453-463.

Gallick (1984) "Exclusive Dealing and Vertical Integration: the efficiency of contracts in the tuna industry", in *Case Studies in Contracting and Organization*, ed. by S.Masten, (1996) Oxford University Press, p3-25.

Gow H., Streeter D., Swinnen J. (2000) "How private enforcement mechanisms can succeed where public institutions fail : the case of Juhocukor a.s.", *Agricultural Economics*, 23, 253-265.

Hadfield G. (2005) The many legal institutions that support contractual commitment, in Ménard C., Shirley M. (eds) Handbook of New Institutional Economics, Springer, p.175-204.

Greif A. (1989) “Reputation and coalitions in Medieval Trade: evidence on Maghribi traders”, *Journal of Economic History*, 49, 857-882.

Greif A. (1993) “Contract enforceability and Economic institutions in Early Trade : the maghribi trader’s coalition, American Economic review, 83, 3, 230-253.

Greif A. Milgrom P. North D. (1990) “Coordination, Commitment and Enforcement : the case of merchant guild”, *Journal of Political Economy*, 102, 4, 745-776.

Greif A. (2005) “Commitment, Coercion, and Markets: The nature and Dynamics of Institutions supporting exchange”, in C. Ménard, M. Shirley (eds) *Handbook of New Institutional Analysis*, 727-786. Springer.

Hendrikse G., Bijman, J. (2002) “On the Emergence of new Growers’ Association: Self-selection versus countervailing power". Eur. Rev of agricultural Economics. 29, 2, 255-269.

Hobbs J. (1997) “Measuring the importance of transaction cost in cattle marketing”, *American Journal of Agricultural Economics*, 77, 1083-1095.

Johnson R., Libecap G. 2003 Transaction Costs and Coalition Stability under majority rules, Economic Inquiry, 41, 193-207.

Klein B., Crawford R., Alchian A. (1978) “Vertical Integration, Appropriable Rents and competitive contracts, Journal of Law and Economics, 21, 2, 297-326.

Klein B. (1980) “Transaction Costs Determinants of “unfair” contractual arrangements”, American Economic Review, 70, 356-362.

Klein B. (1996) “Why Hold-Up occur: the self-enforcing range of contractual relationships”, *Economic Inquiry*, 34, 444-463.

Lazzarini S., Miller G., Zenger T. (2004) Order with some Law: complementarity versus substitution of formal and informal arrangements, *Journal of Law, Economics and Organization*, 20, 2, 261-294.

Leffler K., Rucker R., Munn I. (2000) „Transaction costs and the collection of information: presale-measurement on private timber sales“, *Journal of Law, Economics and Organization*, 16, 1, 166-188.

Libecap G. (1992) The rise of Chicago meat packers and the origin of meat inspection and antitrust, Economic inquiry, 30, 2, 242-262.

Libecap G., Smith J. (1999) “The self-enforcing provision of oil and gas unit operating agreements : Theory and Evidence”, *Journal of Law, Economics and Organization*,

Lorvellec L. (1993) « Organisations et Accords Interprofessionnels », Juri-Classeurs Agro-Alimentaire, Editions Techniques, fascicule 830, 1, 2.

Mazé A. (2002) “Retailer’s branding strategies : contract design, organizational change and learning”, *Journal on Chain and Network Science*, 2, 1, 33-45.

Mazé A. (2003) Negotiated versus Posted price. Theory and empirical evidence, Mimeo.

Ménard C. (1996) “The Economics of Hybrid Organizations”, *Journal of Institutional and Theoretical Economics*, 160, 1-32.

Ménard C. (1998) “The Maladaptation of Regulation to Hybrid Organizational Forms”, *International Review of Law and economics*, 18, 4, 403-417.
McMillan J., Woodruf C. (1999) « Dispute Prevention Without Courts in Vietnam », *Journal of Law, Economics and Organisation*, 15, 3, 637-657.

McMillan J., Woodruff C., (2000) “Private Ordering Under Dysfunctional Public order, 98, Michigan Law Review, 2421.
Milgrom P., North D., Weingast (1990) “The role of institutions in the revival of trade: tle Law Merchant, private judges and the Champagne Fairs”, *Economics and Politics*, 2, 1, 1-23.

North D. (1990) *Institutions, Institutional Change and Economic Performance*, Cambridge University Press.

North D Institutions and a transaction cost theory of exchange in J.E Alt, K.A. Shepsle, Perspectives on positive political economyCmabridgeuniversity Press

Pirrong G. (1995) The Efficient Scope of private transaction-cost-reducing institutions : the successes and failure of commodity exchange, *Journal of Legal Studies*, 24, 229-255.

Richman B. (2005) Firms, courts and reputation mechanism : towards a positive theory of private ordering, Working Paper, Duke university college

Rubin P. (2005) Legal systems as framework for market exchange, in Ménard C., Shirley M. (eds) Handbook of New Institutional Economics, Springer, p. 205-228

Schwartz A. (1992) Legal contracts theories and incomplete contracts, in Werin L., Wijkander H. contracts economics, 76-108

Schwartz A. (2000) “Contract Theory and Theories of contract regulation”, Revue d’Economie Industrielle,

Schwartz A, Scott R. (2003) “Contract Theory and the Limit of Contract Law”, Yale Law Journal , 113, 541.

Schwartz A., Watson J. (2004) “The Law and Economics of Costly Contracting”, Journal of Law, Economics and Organization, 2, …v

Wang R. (1993) « Bargaining versus Posted-Price selling », European economic Review, 39, 1747-1764.

Williamson O. (1996) *The Mechanisms of Governance*, Oxford University Press.

Zago A. (1999) “Quality and self-regulation in agricultural markets: how do producer organizations make the rules?”, *European Review of Agricultural Economics*, 26, 2, 199-218.