Private Ordering, Collective Action, and the Self-Enforcing Range of Contracts. The Case of French Livestock Industry

Armelle Mazé, Claude Ménard

Private Ordering, Collective Action, and the Self-Enforcing Range of Contracts.

Armelle Mazé

INRA (SAD-APT)

Claude Ménard *

CES (University of Paris-Panthéon Sorbonne).

EUROPEAN JOURNAL OF LAW AND ECONOMICS

2010: vol. 29 (1): 131-153.

Abstract: Contract enforcement is acknowledged as a major issue in Law and in Economics. Contrasting substitution and complementary perspectives with respect to the role of private versus public enforcement institutions, this article analyses how contract law can support private institutions, and enhance economic efficiency. With multilateral agreements at stake, self-regulation and reputation mechanisms at the core of private ordering have limitations that collective organizations backed by the Law help to overcome. The analysis is substantiated by empirical data from the cattle industry. Our results suggest the need for a broader approach to contract regulation by legal scholars and antitrust-authorities.

Key-Words: Contract Law, Private Enforcement, Transaction Costs, Self-Regulation, Coalitions, Cartels, Collective Organization.

JEL : K12, D23, D74, L14, Q13

Corresponding author : Armelle Mazé,

Address : INRA SAD-APT, 16 rue Claude Bernard, 75231 Paris Cedex 05, FRANCE.

E-mail : maze@agroparistech.fr, Tel : 33 (0) 1 44 08 16 96

1. Introduction

Adequate devices for enforcing contracts condition the efficiency of economic exchanges. Modern economies are characterized by the existence of layers of legal institutions supporting contractual commitment, an aspect that has increasingly attracted the attention of scholars (Schwarz and Scott 2003; Schwartz and Watson 2004; Dixit 2004; Hadfield 2005; Rubin 2005). Most of the economic literature on this issue has focused on the role of judges and the optimal design of judicial institutions, with the objective of better delineating the class of problems over which public courts should have some discretionary power. More recently, Schwartz (2002) and Schwartz and Scott (2003) suggested broadening this perspective on contract law by taking into account other dimensions of contract regulation, namely legal terms that states should provide to firms in the contractual organization of their transactions. An economic theory of contract regulation would have a substantive as well as an institutional dimension; the former specifying what public authorities should do while the latter would determine which legal institutions should perform the required tasks.

However, there is another trend in recent research that emphasizes the role of private micro-institutions in contract enforcement (Milgrom, North and Weingast 1990; Clay 1997; Greif 1989, 1993). These studies have essentially examined situations in which the absence of formal laws or state-enforcing capabilities leads agents to develop private mechanisms for guaranteeing contracts. Greif (2005) tentatively captured the difference between the two approaches through a distinction between intentionally *designed* private institutions and spontaneous *organic* institutions[1]. He also noted that we do not yet have a much needed body of knowledge about the respective efficiency of these devices, especially with regards to the functioning of such *quasi-private* institutions.

In this paper we explore the possibility of bridging these two approaches. In doing so, we contrast the complementary perspective with the substitution perspective. The "substitution" perspective compares the efficiency of private (extra-legal) contract

enforcement with the traditional role of public law and state-run courts (Richman 2005). Comparing the respective costs of public and private systems, this perspective suggests that private enforcement mechanisms can be superior to public ones (Bernstein 1992, 1996, 2001; Rubin, 2005). McMillan and Woodruff (2000) substantiate this view, showing the key role of private ordering under dysfunctional public order, while Richman (2005) goes a step further, arguing that agents deliberately avoid relying on courts for enforcing agreements. It could be so because formal rules are at risk of undermining social norms that support most deals, which involve forms of reciprocity among participants (Clay 1997). Opposing this "substitution" perspective, the "complement" perspective rather view joint uses of formal/public and informal/private arrangements as guarantees of more efficient outcomes (Klein 1992, 1996; Lazzarini, Miller and Zenger 2004). The underlying assumption is that formal contract laws provide support to private ordering mechanisms, preventing *ex ante* potential sources of litigations and reducing *ex post* enforcement and litigation costs. In what follows, we suggest that in many situations, hybrid institutions prevail that combine both private and public ordering, so that complementarities dominate.

In order to substantiate our analysis, we start with a model proposed by Klein (1992, 1996) in which there are complementarities between formal contract laws and reputation-based mechanisms in enforcing private contracts. However, Klein's model was focusing on bilateral agreements when confronted to the risk of contractual hold up. We extend the analysis to multilateral agreements and to problems of private third party enforcement in the more general context of collective action (Greif 2005). We illustrate with an example from the agricultural sector, the cattle industry. We think that the agricultural sector provides particularly relevant examples. Contract regulation in this sector endorses various forms for which the support of law plays a crucial role, framing individual private contracts as well as collective organization of producers. Our choice of focusing on the cattle industry is

motivated by the coexistence of informal contracts and collective organizations that rely on a mix of formal contract laws framing these organizations and private rules guiding their interactions with agro-food firms. This heterogeneity of arrangements provides a nice opportunity to compare the respective role of public and private ordering.

The paper is organized as follows. Section 2 develops our analytical framework, extending Klein's model to multilateral agreements required in the context of collective action. Section 3 substantiates the analysis with data about the evolution of formal contract laws framing the French collective organization of producers with an important role left for private ordering. Our empirical data are essentially from the cattle industry. However we argue that the problem at stake is general and concerns all forms of collective action involving contractual relationships. Section 4 discusses the consequences of the extension of a bilateral approach to a multilateral reputation model in order to exhibit how collective organizations complement formal contract laws. Section 5 concludes in emphasizing how, when transactors are confronted to heterogeneous coalitions, a legal framework can support and improve the efficiency of private institutions, thus increasing the self-enforcing range of contracts.

2. Our analytical framework

The analytical background of our analysis is a blend of Klein reputation model and Greif model on how legal rules and private institutions frame collective action. Klein (1992, 1996) focused on the role of private reputation as a mechanism of self-enforcement that would significantly extend the range of contractual arrangements. However, in specific situations, this view has been challenged by several contributors who emphasized that the development of formal legal systems for enforcing contracts might challenge the role of informal reputation-based mechanisms (Clay 1997, Rubin 2005). The agricultural sector provides a good opportunity to confront these views since contracts in that sector are confronted to transactions that often have relatively small value while they are highly

sensitive to the perishable nature of the products traded and to the possibility of fraud because of severe quality measurement problems due to characteristics hardly observable (Barzel 1982). These properties challenge the role of individual reputation mechanisms as well as enforcement of contracts by public courts and are often used for legitimating collective organizations (Danet 1982). In that perspective, collective organizations would provide guarantees that neither bilateral reputation mechanisms nor public enforcement by courts could offer, at least with the same degree of efficiency.

2.1. Some Preliminary Observations

Indeed, a non negligible body of literature on enforcement has shown that collective organizations, e.g., trade associations, frequently rely on agreements among members to bring contract disputes under arbitration regulated by "laws" and procedures established by the trade association itself (Milgrom, North and Weingast 1990; Bernstein 1992; Pirrong 1995). This is so either because formal rules of the game are absent or cannot rely on credible public institutions to be enforced, or because public courts cannot efficiently play their role, due to substantial procedural delays, overload, and so on... Private dispute resolution mechanisms would provide complementary solutions for reducing contractual costs and increasing credible commitments by overcoming failures of public institutions.

One of the most elaborate argument supporting this perspective is based on the idea that (incomplete) formal contracts can significantly extend the self-enforcing range of informal agreements. This approach departs from the premise of many self-enforcement models that informal deals would be stable only when the long term pay-off associated to cooperative behavior would exceed gains from short term defection (Klein 1992, Lazzarini et al. 2004, Greif 2005). Under these conditions, private multilateral reputation mechanisms would provide *ex post* incentives to not cheat.

The "hybrid" perspective, which emphasizes complements between public and private institutions, takes another view, focusing as much on the *ex ante* prevention of litigations as on their *ex post* resolution. Formal private institutions generate administrative costs, but these costs can be compensated through collective gains made possible by the reduction of conflicts and distrust among parties, thus providing *ex ante* incentives to comply with contractual agreements. This cost-benefit equilibrium requires that all parties take advantage of formal trading rules complementing private agreements, with institutions that allow a « win-win» solution (Pirrong 1995)[2].

In a pioneering study focusing on the legal foundations of such formal institutions in the French agriculture, Danet (1982) introduced a distinction between two forms of collective organizations that could support such equilibrium. The two forms depend on the type of parties involved and whether they implement discipline through public rules or by private self-regulation among members. More specifically, he differentiated "*intra-professionnal"* from "*interprofession*" arrangements. The former are organizations which heavily rely on self-regulated discipline based on the relative homogeneity of stakeholders, like for example, cooperatives with farmers operating in the same area or developing similar activities.[3] In a sense, this is close to the operating mode of Maghrebi traders analyzed by Greif (1994). On the other hand, "*inter-professional"* arrangements involve more heterogeneity among their members, as they imply the participation of the many various firms and economic agents involved in specific vertical production chains. They usually require a more formal type of rules, often although not always backed by public authorities. Examples are large formal associations with representatives of farmers' unions, cooperatives, private middlemen, agro-food firms, and even representatives of retailers. Such complex arrangements need to be framed by formal rules going beyond bi- or multilateral agreements. The French system of quality certification provides a relevant illustration (Ménard 1996, Maxime and Mazé 2006).

Both types of arrangement require self-regulation. However, their underlying rationale is different. "Intra-professional" arrangements develop because parties expect increased benefits due to enhanced bargaining power in *bilateral* negotiations with large agro-food firms as well as to the possibility of increasing their market power by rounding up larger quantities.[4] Quite differently, the creation and sustainability of "inter-professional" associations is based on a more formal setting that focuses on coordination among otherwise competing actors in order to monitor adaptation through organized dialogues among parties. Obviously, reputation does not play the same role under these arrangements and tends to be superseded by formal rules. *Our central proposition is that formally embedded collective organizations such as these "inter-professions" are complementing private institutions of the "intra-profession" type, and that this combination extends the self enforcing range of contracts*. The next subsections substantiate this proposition.

2.2. What Multilateral Reputation Mechanisms?

Our starting point is the analytical framework developed by Klein (1992, 1996). This model intends to explore the self-enforcing range of contracts in the context of bilateral agreements, when parties are confronted to the risk of contractual hold-up. Its underlying idea is that formal contract terms should provide incentives for parties to the arrangement to commit and not deviate. Let H be the expected gains from cheating or behaving opportunistically and K the private sanction imposed by the other party if she discovers this mischief or if contractual clauses are not applied. The self-enforcing range of the contract is then defined by the difference between H and K: contracts are self-enforcing if and only if $K > H$. In the model, K can be interpreted as the discounted value of future returns on specific investments to be lost upon termination of the relationship, but also as the increased costs of purchasing inputs or supplying services through the market place once termination of the relationship has been imposed on the violator of the contractual agreement. Consider H_G and

H_S , respectively the hold up potential of a firm *G* and of its supplier *S*, and K_G and K_S, their respective private enforcement capital. Figure 1 illustrates adjustments that may be needed for extending the self-enforcing range of contracts.

< FIGURE 1: REDUCTION OF "HOLD-UP" PROBABILITIES>

Through formal contract terms, the objective of the two parties is to minimize the value of the expected probability of "hold-up", that is, the sum of the areas in the tail of the two distributions, in which potential hold-up for each transactor is greater than its private enforcement capital. In other terms these are the areas in which expected gains exceed the costs resulting from the loss of reputation. The self-enforcing range of contracts thus defined can be modified by introducing specific clauses enforceable by courts as well, for example through the imposition of higher penalties if mischief is observed (Klein, 1996). In other terms, formalizing contracts allow to economize on the level of private reputation capital required for providing an adequate self-enforcing range among parties. Therefore, the model opens the door to some complementarities between court enforcement and private enforcement.

Klein's approach is restricted to bilateral relationships. Implementing multilateral reputation-based mechanisms involves much more complex rules (Greif 2005). In multilateral reputation mechanisms, the amount of sanctions must equal the sum of individual penalties defined by the loss of expected future streams of revenue obtainable if the commercial relationships among *N* members could be maintained. However, punishing a specific trader becomes a very costly process since many participants are involved who must all be informed adequately and who must follow collective discipline. The overall system then relies on the effectiveness of incentives for those applying sanctions (Greif 1993). It requires that the net collective expected gains of reducing transactions costs covers the administrative costs of implementing these multilateral mechanisms.

One main result of the analyses proposed by Klein and Greif is to show that even in the absence of repeated interactions or lack of observability/verifiability of individual behaviors, private reputation mechanisms may still work and provide appropriate ex ante incentives for economic agents to not cheat ex post. However, a full answer depends on the identification and implementation of such adequate mechanisms. Clay (1997) identifies several possible candidates, with two polar cases. One is the existence of decentralized arrangements such as informal *coalitions* of agents, for example family members or religious groups in which control is easier to implement. The underlying logic is that reputation depends on links between past behavior and future payoffs. The typical enforcement mechanism is *ostracism*, such as a merchant community punishing opportunist parties by denying them future business. The other polar case is that of centralized arrangements, grounded in formal private institutions like guilds or clubs (Milgrom, North and Weingast 1990). In this case, reputation is monitored by a central authority, like private courts in Champagne's fairs, which identifies cheaters and has authority and enforcement capabilities to punish, for example by implementing boycott of cheaters at future fairs.

However, these private multilateral reputation mechanisms have flaws. Informal coalitions in relatively small communities make ostracism as well as shared social norms efficient (Ellickson 1989; Kandori 1992; Greif 1993; Aoki 2001). For larger communities, these mechanisms require the design and implementation of increasingly costly information and communication systems among members, with simultaneously increasing administrative burden that seriously challenges their effectiveness (Milgrom, North and Weingast 1990; Greif, Milgrom and North 1990; Greif 2005). This suggests that spontaneous *organic institutions* may have to leave way to intentionally *designed institutions* when the number of traders is large or when bilateral repeated interactions become rather rare (Greif 2005). In other terms, multilateral settings likely change the landscape.

2.3. Contract Law and the Stability of Private Institutions

Indeed, a central issue for the efficiency of multilateral reputation-based mechanisms is their stability over time and their capacity to apply to extensive membership. Richman (2005) suggests that mechanisms such as private laws are restricted to long term players and sizable entry barriers, which in turn may create incentives for collusion, generating costs that affect negatively the total surplus to be shared in the long run. This could explain phenomena such as the final failure of the Maghribi network (Greif 1994). Clay supports this view, showing that barriers to entry and exit are a necessary condition for coalitions to work, ensuring stable membership that supports the information network, mitigating asymmetries among parties and preserving the differential between earnings within or outside the coalition (Clay 1997; see also Kenney and Klein 1983).

These barriers are often implemented through non-economic factors such as ethnicity, language, and so on. They tend to become porous when the expansion of the coalition is desirable or needed. Indeed, expansion requires relaxing the homogeneity of utility functions of participants. Open networks may enjoy lower costs to entry and exit. However, they also confront higher costs from one-time cheaters. This is very much of a nature similar to that of public goods. The larger the number of individuals benefiting from private information about the individual value of a specific good, the lower the probability of finding agreements that maintain the capacity of private institutions to retaliate against deviants (Pirrong 1995).

With multiple and heterogeneous members the possibility of privately policing collective actions is reduced: free riding problems develop and incentives to comply with collective discipline decline. In order to face these classical problems, private ordering institutions must meet two conditions: (1) They must ensure a sufficient degree of « *cohesiveness* » to implement self-regulation and collective sanctions, which is usually obtained through homogenization of members; (2) They must benefit from a sufficient level

of *acceptability* to motivate voluntary adhesions, thus facilitating compliance to sanctions and willingness to impose sanctions on others. Still, the fulfillment of these two conditions is not easy and conflicting interests and coalitions among heterogeneous members may challenge the existence and the stability over time of such private ordering institutions.

One important consequence is that in situations of multilateral reputation-based mechanisms, law enforcement by a supportive state may improve the efficiency of private institutions by backing private contracts with public order, thus reinforcing their legal authority and legitimacy, as well as their ability to provide efficient private enforcement devices to their members (Pirrong 1995). Indeed, as suggested by Greif (1993), formal private enforcement institutions rely primarily on the balance between administrative costs and expected benefits from improved efficiency in the organization of transactions. The existence of a legal regime supporting private institutions might improve the functioning of the latter and reduce transaction costs through a more favorable trading environment. Therefore, *supervision by public institutions may extend the self-enforcing range of contracts.*

3. Empirical Evidence: The Role of Interprofession in the French Cattle Industry

The complementarities between private and public institutions play an important role in agricultural sectors. Because modern agriculture is almost everywhere organized as a chain system that involves forms of collective action and requires monitoring of heterogeneous parties, this sector offers an exceptionally rich field for studying the interaction between collective organizations regulated by private rules and legal systems intended to provide support. In what follows we analyze this interaction through the case of the French cattle industry[5].

3.1. The Legal Framework

In many European countries, the predominance in agriculture of relatively small and scattered farmers lead during the last century to the implementation of specific legal rules for

contract law. This contractual framework presents at least two specific legal features. **First**, a special legal status has been developed that differentiates '*production'* contracts from labor contracts.[6] **Second**, collective organizations in the sector have also benefited from a special status. Both aspects were introduced in contract laws in the 1960's and 1970's, mainly for protecting small farmers facing drastic market concentration and the consolidation of agro-food industries.[7]

This situation is not exclusive to Europe. Collective organization is pervasive in agriculture, where it represents a major tool for framing the development of markets (Pirrong 1995). Cooperatives, marketing associations, producers' groups, marketing boards… have been extensively used to organize production and marketing. Moreover, rapid modernization and changing technologies in agriculture have generated uncertainties among farmers. The simultaneous development of collective organizations and new contractual forms can be viewed as a way to implement new risk sharing rules in this context (Ménard 1996).

Legal changes in France regarding contract regulation provide some evidence. The so-called '*production contracts'* introduced in the 1960s intended to protect small farmers increasingly dependent on large agro-food firms for their technology, food and medication for animals, etc., from possible *abuse of power* and "*unfair"* contractual agreements. These formal production contracts are mostly used for indoor productions of pig, veal, and poultry, requiring large investments and the development of dedicated assets by individual farmers, making them subject to potential hold-up by agro-food firms. Similarly, legal incentives for farmers and agro-food firms to use *reference contracts ('contrat-type'),* for standard productions, and *campaign contracts*, which are contracts associated to seasonal production (essentially fruits and vegetables) and renegotiated periodically, intended to provide guarantees of equal treatment to farmers while simultaneously reducing negotiation costs. 'Campaign contracts' go further than 'reference contracts' in that they specify prices and

quality standards at the beginning of each production campaign, defining a benchmark for individual contracts.[8] The experience of the processed vegetable sector, in which prevail formal contracts with farmers committing to sell all their production at the end of the production campaign, served as benchmark for the future evolution of contract regulation in agro-food sectors. A major problem that the implementation of these new arrangements faced was the absence of a formal authority that would support negotiations among parties *ex ante* and monitor the agreements *ex post* (Danet 1982). The problem was particularly severe with respect to the definition of quality standards and their evaluation in the determination of prices to be paid to farmers. Indeed, potential cheating and opportunistic behavior on both sides mostly happen at this stage of the contractual process (see Chalfant and Sexton 2002).

In order to improve the effectiveness of such contractual arrangements, lawmakers provided a legal solution in 1975, with the adoption of the French Law nr. 75-600 on interprofessional organizations in agriculture, implementing legal support to the creation of collective private organizations identified as “interprofessions”. Establishing such legal rules was and remains a challenging issue for lawmakers. In this case, as in many others in Civil Law countries, the legal framework had to fulfill conditions that guarantee: i) the degree of generality pertaining to the object of the contract law; and ii) the degree of flexibility needed to facilitate its use in various agricultural sectors (Danet, 1982). This legal arrangement endows the beneficiaries with some prerogatives, particularly the transfer from public authorities of normative as well as coercive power regarding contract regulation in their specific sector. These collective organizations are at will, in the sense that creating them is left to partners and that access to interprofession remains open. However, once a specific organization has been set up, participation becomes compulsory.

The functions and organization of interprofessions may vary across agricultural sectors, depending of the nature of contractual arrangements and the special need for contract

regulation in each sector. Three major benefits were expected from this extension of contract law to interprofessional organization in agriculture. *First*, this legal framework reinforces the legitimacy of contractual arrangements at stake since it involves representatives of all organizations of a specific sector, including farmers' unions, cooperatives, large and small retailers, middlemen, agro-industries and manufacturers. *Second*, interprofessional organizations are funded by a compulsory tax laid down by the Law and paid by all economic actors involved in the sector. This significantly reduces the costs of collecting contributions while financing the administrative costs of supervising the implementation of agreements. *Third*, an "interprofession" can establish collective agreements with a *«clause of extension"* that makes them compulsory for all firms involved in the sector and provide the interprofession the legal authority for their enforcement. Hence, enforcement remains the sole responsibility of the interprofession, with no public bureaus involved.

The counterpart is that participants benefiting from this legal support must comply with very restrictive conditions, which may challenge its attractiveness for many agents and in many agricultural sectors. One major restriction imposes having only one interprofessional association defined at the national level for each specific agricultural production[9]. A central issue then becomes delineating the relevant perimeter of each "interprofession". As a result, there is a lot of heterogeneity among the various agricultural sectors that have adopted this mode of organization. At the same time, each interprofession can be viewed as performing all functions identified by Schwartz (2000) as characterizing contract regulation mechanisms, that is: i) enforcing verifiable terms, ii) providing vocabulary, iii) interpreting agreements, and iv) supplying default rules.

3.2. Collective Organizations in the Cattle Industry

In order to better understand the role and governance of collective organizations framed by this legal environment, we now focus on a specific sector, the cattle industry, in

which most contracts involving breeders remain highly informal so that they can hardly be enforced by public courts, although this remains theoretically possible. In agriculture, the role of collective organizations is an ongoing source of controversies, as repeatedly illustrated by recent administrative and judicial decisions (Ménard, 1998). In that respect, an interesting point is that the interprofessional mode of organization, as implemented in the French cattle industry, has not been submitted to the usual critics against anticompetitive arrangements based on collusive behaviour, centralized price determination, or quantity restrictions through production quotas, all practices that are prohibited by competition law[5].

We collected extensive data on this interprofession through structured interviews with the administrators of the National interprofession, as well as with three leading Local Committees, located in the West of France (Brittany, Normandy and the Loire Valley), an area which represents 40 % of the total French cattle breeding and slaughtering activities. We also analyzed all documents available either from these organizations or from public authorities: decrees, legal statutes, agreements signed by the interprofession, minutes of meetings and so forth.

Formally, the national interprofessional association in the cattle industry was created by a legal decree of November 18th, 1980, although it became effective only a few years later. At that time, the imposition of fees on all participants allowed the organization to reach a consensus among its members about the specific functions and missions of the national organization and its local committees, and to hire a staff for monitoring the arrangement. This legal birth followed less formal experiences developed in the 1970s in the three major leading production regions mentioned above. Normandy developed an administrative organization (CIRVIANDE) with the status of a union as early as 1970, while Brittany had created a nonprofit association (INTERBOVI) in 1977. In the Loire valley, representative organizations initially chose a different strategy, sticking to private individual formal agreements with each

economic actor involved in marketing or slaughtering, without specific organizational arrangement and related administrative support to enforce them. The creation of a Local Interprofessional Committee, BOVILOIRE, sharing characteristics with those already existing in Normandy and Brittany, was adopted only after the national interprofessional association that emerged in 1980 could provide a legal support.

Major difficulties with the private agreements experimented by these local interprofessional committees before they joined the national interprofession explain this decision. A *first* difficulty had to do with the size of multilateral agreements required under the previous arrangement. Over 300 bilateral contracts should have been signed between farmers, slaughtering firms, and individual merchants or cooperatives. This involved significant negotiation and administrative costs, without guarantee that all parties would accept and, even more important, would actually follow the rules. A *second* difficulty was financial. The costs mentioned above were funded by the regional professional organizations and farmers' unions. Their resources were limited and free riding developed rapidly, particularly among small operators and notwithstanding the benefits generated for all parties to the agreements. A *third* difficulty had to do with the inter-regional trade between Brittany and the Loire valley, which generated tensions and competition distortions since the former region was imposing stricter rules than the latter so that individual farmers and some slaughtering firms refused to sell or process animals that were coming from the more latitudinarian region. The legal framework defined by the 1975 Law on interprofessional organization in agriculture was therefore perceived as a solution to these difficulties through easier access to financial resources, the harmonization and stricter supervision of grading rules, and improved capacity to enforce collective agreements.

The main functions performed by the cattle interprofession since its creation are: (i) The definition and enforcement of interprofessional agreements, including dispute resolution

mechanisms; (ii) The financial participation of all parties to R & D oriented towards the automation of carcass grading, improvement of production systems, etc.; (iii) The development of collective campaign of information and communication with consumers.[10] These functions unambiguously relate to the problems associated with multilateral reputation mechanisms that we discussed in section 3. Indeed, a major role of interprofessional arrangements is to facilitate contracts and their enforcement through the development of *transparency* in the organization of transactions and the allocation of quasi-rents. The first formal agreement in the cattle sector was signed only in 1988, since some of the major private slaughtering firms were initially reluctant to comply with the constraints imposed by such collective agreements. . The agreement was (and remains) about marketing conditions of animals over six months of age, rules of access to specialized market places in order to improve security of payments, risk sharing, etc. After the first so-called "mad cow" crisis of 1996, it was extended to rules intended to improve consumers' information on the origin, breed, and types of animals. Details of a typical agreement are provided in Table 1. [11]

<TABLE 1: MAIN CLAUSES OF A TYPICAL AGREEMENT>

3.3. Major sources of contract Litigations and their resolution

Most clauses in this interprofessional agreement unambiguously relate to problems of quality measurement and verifiability. This is a general problem in contract design: as emphasized by Pirrong (1995), incomplete quality specification of what is traded and problems of transfer of property rights among contracting parties are major sources of litigations in that they open the door to potential hold-up problems (Klein, 1996). Transactors must therefore invest in order to delineate and transfer their property rights and to enforce the deal (Barzel 1997). For agricultural products, the difficulties often result from complex problems of quality, which make measurement and/or verification in a timely period particularly critical. This combination of technical expertise and very short delays imposed by

food safety constraints imposes serious limitations on the role of courts in solving litigation. It largely explains the increasing role of interprofessions in the organization of transactions in a context of rapid changes.

In the cattle industry, the major change was the adoption of new pricing rules, with a switch from bilateral negotiations of prices in traditional livestock markets to posted prices fixed directly by slaughtering firms (more on this in section IV). The underlying rationale for this change was that it would reduce search costs for animals dispersed over small, geographically scattered farms, as well as bargaining and measurement costs for the highly variable quality attributes of animals. However, the new rules raise severe problems of quality measurement, which is central for determining prices, since this is done when animals are already in the slaughterhouse, opening door to opportunistic behavior or to beliefs that slaughterhouses are behaving opportunistically.

Quality measurement as a major source of litigations and distrust between farmers and agro-food firms is well documented (Feusti and Feuz 1995, Hobbs 1997). Since quality largely determines the existence and size of quasi-rents, measurement errors are a major source of potential hold-up problems among contracting parties (Barzel, 1982, Klein 1996). Although standardized carcass grading intended to reduce measurement errors comparatively to the traditional method of evaluating living animals,[12] the new pricing method remains open to *ex post* opportunism, with slaughtering firms downgrading animals. 'Errors' on grading can lead to as much as a loss of 15 to 20% of the value paid to the breeder. Although their distribution over a large number of animals considerably reduces their statistical significance, they still seriously affect perception of fairness by farmers.

Indeed, beside the difficulty of direct observation of frauds by cattle raisers, reputation mechanisms and the activation of bilateral sanctions by individual farmers has no chance to deter abuses and to discourage opportunistic behavior among slaughtering firms. It is so

because of (a) observability problems since evaluating carcass requires a technical expertise that cattle raisers do not have or master very imperfectly, and (b) time constraints since complaints should be examined almost instantaneously (before the carcass enters the transformation process) while cattle raisers are often informed only several days after the slaughtering. Of course, controls by parties external to the transactions are possible. In the French cattle industry, a quasi-public organization, the Meat and Livestock Commission (OFIVAL), operates random controls sporadically under formal delegation from the state. There is also the possible although quite exceptional intervention of the public bureau in charge of repressing frauds on products and services.[13] However, these public organizations suffer from limitations similar to those mentioned for public courts.

This likely explains why breeders who initiated interprofessional organizations rapidly got their Local Committees involved in the provision of inspection services in order to help implementing agreements and to provide expertise on grading and quality measurement. For example, in Brittany, a pioneering region in that respect, this *private inspection* service make unexpected visits in each slaughterhouse of its jurisdiction at least once a week, with an extensive review with the manager of all carcasses recently graded. If differences are spotted, the inspector can require an adjustment in the payment to the farmer, and the slaughterhouse must comply. Such action would be almost impossible for individual farmers. In regions without these local services, farmers can turn to the quasi-public agency (OFIVAL). Statistics are not available at the national level, regarding the frequency and sources of litigations. However, we obtained from the Local Committee of Brittany detailed data that provide very significant indications on litigious factors between farmers and slaughtering houses (see Table 2).

<TABLE 2 : CAUSES OF LITIGATION>

The total number of requested interventions (256 over 18 months) may appear almost insignificant when compared to the total number of transactions in this region (over 4 millions animals annually slaughtered). However, as suggested by our theoretical framework and confirmed by all our interviews, what matters is that this is enough to activate reputation mechanisms, deterring slaughtering houses to behave opportunistically and improving mutual trust among parties. One could even argue that the small number of requests signals that the reputation mechanism implemented by this interprofessional organization works well. It operates more as a preventive system than as a coercive one, minimizing the number of potential disputes and economizing on transaction costs.

3.4. The Threat of Collective Boycott

Another tool in the hands of interprofessional associations as private contract enforcers lies in their capacity to activate retaliation. As emphasized by Greif (1989, 2005), multilateral reputation mechanisms developed in a context of repeated games with imperfect monitoring depend on dedicated information and communication systems and on the capacity to punish deviants. In the interprofession we studied, this takes two forms: (a) *Procedural and formal* agreements coordinated directly by the interprofession, as illustrated by the example of inspection services; and (b) *Informal* mechanisms that take the form of *extra-legal* boycott actions.

In the interprofession of the cattle sector, procedural solutions operate as follows. If repeated non compliances to interprofessional agreements are observed, local committees can introduce a formal procedure, eventually leading to publication in specialized magazines of the appropriate information. This can obviously alter seriously the reputation of the deviant. Before going public, intermediate steps are built in to allow adjustment. Once an inquiry is opened, a formal report on deviant behaviors is addressed to the board of directors of the interprofessional association so that informal signals can alert the deviant. In case of repeated

offences, a written injunction is sent. Without appropriate changes, a third step is the invoice of a formal letter to the chairman of the professional union to which the deviant belongs. This person or his/her board can then engage disciplinary sanctions against the deviant, possibly up to banishment from the union (which is part of the interprofession, as it must be remembered). This is of course an extreme measure, to our knowledge never applied in the sector under review. The impact of banishment would also be less dramatic than the one observed in other situations of private ordering (for example, Milgrom, North and Weingast 1990 or Greif 1993), since the opportunist could continue his activities, even if he has to support additional sanction costs imposed by his other trading partners. Still, the threat exists, with its potential impact on the deviant. One may wonder why slaughtering firms accept the intrusion of a private enforcing institution in their business, restricting their capacity to extract a more substantial part of the quasi rent. The only convincing justification we can see is that this collective organization contributes to the pacification and institutionalization of contractual relations, opening the way to dialogue among parties and reducing incentives to impose solutions through violent actions (Barzel 2002).

This brings into the picture the second dimension of punishment. As noticed by Clay (1997), one striking thing about private institutions is the infrequent use of collective punishment. This does not preclude the possibility of such actions. Violence is another way to solve conflicts (Barzel 2002; Alston, Libecap and Mueller 1999).[14] When it happens, it usually signals the urgent need for adjustments and changes in the equilibrium among parties. We argue that the success of the interprofession as a private ordering mechanism results from the anticipation by participants, particularly slaughtering firms, of the risk of much more costly enforcement mechanisms, especially the threat of collective sanctions such as boycott or economic blockade. Confronted to that risk, it is less costly for parties to accept control through mechanisms mutually defined. However, in order to work adequately these private

institutions need powerful informal mechanisms guaranteeing coherent collective actions and effective implementation of sanctions by all members, even if at a cost for individual members.

In the French agricultural sector, farmers' unions have assumed that role, implicitly complementing interprofessional organizations by taking over the active coordination of collective actions (Duclos 1998). Boycotts and temporary blockades have been ritual in the sector since the 1960's. One major advantage of this strategy from the point of view of farmers is that it requires a limited number of persons (and trucks, tractors, etc.), organized commando-like, thus reducing risks of defection and free-riding.[15] However, collective sanctions of this type remain exceptional, although episodic activation without specific reasons has been reported, likely as a strategy for maintaining credible threat (Greif, Milgrom and Weingast 1994).

In the long run, procedural conflict resolution of the first type has clearly prevailed in interprofessions, thus confirming the hypothesis that private ordering develops as a mean for solving disputes, reducing conflicts, and minimizing transaction costs.

4. Gains and Limitations

The decision to rely on interprofessions or other modes of collective organization that are 'private institutions' with a legal status for implementing agreements and solving conflicts remains a private initiative in the hands of economic actors. But why do they choose the support of the law and this mode of self-enforcing arrangement? From an economic point of view,[16] the answer must lie in the balance between gains and costs of private institutions embedded in a legal framework compared to alternative solutions such as relying on public bureaus or going to courts.

4.1. Gains Expected from Collective Action Embedded in a Legal Framework

Indeed, the creation of private contract-enforcement institutions is one option among others. When effective public institutions exist, parties may alternatively choose to face enforcement problems strictly through contractual relationships (Greif 2005). Bilateral arrangements may be preferred for defining property rights, identifying residual claimants, and narrowing or even eliminating sources of contractual hazards (Williamson 1985; Klein 1992). In the cattle industry, this option developed before that of interprofession organizations. Contractual agreements and private organizational solutions initially prevailed for facing a major change, namely: the privatization of slaughtering houses. Privatization occurred in the 1970s, mainly motivated by the large investments required for meeting the new European sanitary standards. Producers' groups, mostly organized in cooperatives, played an important role in that process. Of the 291 slaughtering houses in France,[17] only 25 % are under public control, mostly boards ('regies') administered by local authorities, the remaining being in the hands of private firms and cooperatives, the later slaughtering about 50% of the total French production.

The significant involvement of producers' groups was clearly motivated by the search for organizational solutions by farmers wishing to reinforce their bargaining power in their negotiations with increasingly concentrated agro-food firms (Danet 1982). However, it rapidly became obvious that collective action through organizational forms such as cooperatives had its limitations. First, they represent only half of the slaughtering houses and about one third of the transactions.[18] In a competitive environment, this imposes an important limit on the impact of their action. Second, the distortions affecting the grading system in the cattle industry generated disparities that fed conflicts. Third, these distortions in the implementation of the grading system also revealed the relative inadequacy of private contractual arrangements for dealing with the problems of verifiability, quality measurement, and price determination that we have identified as crucial in the sector.

The combination of these factors explains why parties turned to a more constraining solution, the interprofessional organization, which facilitated the adoption and enforcement of new pricing rules preferred by slaughtering firms, particularly by switching from prices bilaterally negotiated on traditional livestock markets to a posted price mechanism involving a more direct relationship between slaughtering firms and their suppliers (Mazé 2000, 2002). However, efficiency gains expected from this change in pricing rules, through a reduction of information and bargaining costs previously supported by slaughtering firms, could have been ruled out by *ex post* measurement and enforcement costs (Barzel 1982; Wang 1993).

Hence, the key role played by enforcement institutions, whether they are private or public. In our case, gains related to the adoption of the new pricing rules must be compared to the costs of organizing collective retaliation and to the costs of turning to enforcement by a third party. Since collective action is very difficult to build and tend to be taken over by the violent action of small groups, the costs of organizing collective action (on the sellers' side) adding to the risk of costly retaliation by the commercial sector (on the buyers' side) have pushed partners to endorse an alternative to violent coercion. Interprofessional arrangements looked like a viable solution despite their own running costs[19].

4.2. The Changing Nature of Coalition as a Limit

However, interprofessional organizations of that type have their own limitation. In order to effectively monitor conflicts and enforce contracts, they must remain *neutral* with respect to conflicting interests, although they are not really *independent* since they are born out of a coalition among parties to the arrangement… and to conflicts! These constraints point out the importance of their mode of governance. Lorvellec (1993) suggests that the efficiency of such organizations is conditioned by three basic rules: representativeness, parity, and unanimity. These rules are not easily implemented (Johnson and Libecap 2003).

In that perspective, the effectiveness of private institutions relies less on coercion than on voluntary commitment and shared consensus among participants that have their own agenda. This explains the emphasis, in most studies on private ordering, on the homogeneity or cohesiveness, often related to the belonging to an ethnic community or a specific professional group (Greif 1993, 2005). This is not so with the national interprofessional association of our sector. It involves 13 organizations, including representatives of large and small retailers, farmers' unions, cooperatives, middlemen, private slaughtering firms, public slaughter houses, and wholesalers. In that context, the Law 75-600 adopted in 1975 grounded the legitimacy of interprofessional associations into public order and opened the possibility of more stable arrangements, particularly through the specific clause imposing that there be only one national interprofession for each agricultural sector.

Nevertheless, the creation of such interprofessional association backed up by the law strongly depends on the free will of all representative professional organizations of a specific sector to adhere and balance conflicting interests among their respective members. As a matter of fact, representative bodies are populated by those who balance each other's coercive and economic powers (Greif, 2005). Thus, tensions and versatile alliances among participating organizations are at stake. One major source of these tensions came out of the industrial consolidation and regional specialization that occurred since the 1970s. These trends increased the dependence of local farmers on agro-food firms located in the same area and amplified competition among regions. Regional links developed that could help superseding professional specificities at stake for the formation of stable coalitions. However, these forces go in opposite direction from those favoring the creation of an interprofessional association at the national level. Equilibrium between intra and interregional competition then becomes a central issue.

A conflict between the National Interprofession and a Local Committee (namely, Brittany) regarding the collection of fees financing the system provides evidence of this tension. The standard mechanism is that the money collected is sent directly to the national organization that then redistributes resources to local organizations. However, Brittany rejected this solution and negotiated an alternative arrangement in which the money collected is channeled through the local organization that then forward the proportion agreed upon to the National level. Clearly, the choice of one solution rather than another changes the balance of power between the local and national level, giving financial leverage to different parties. This is especially so when some regions (or some groups) have a significant leadership, for economic or political reasons. As argued by Greif, Milgrom and Weingast (1994), rulers tend to lean towards the rights of groups that are well organized and have a large influence, turning away from groups less able to retaliate in case of opportunistic behavior from the dominant groups[20].

4.3. Collective Organizations and the Scope for Self-Regulation

General conditions under which private ordering institutions embedded in a legal framework are efficient can be drawn from our analysis of the cattle industry. What we have shown above is that the interprofessional association emerged primarily as a response to a change in the organization of transactions and the need to improve dispute resolutions and private contract enforcement. Efficiency considerations rather than just distributive or rent seeking strategies were the major drivers. However, the creation of an "interprofession" is only one option among others, so that other factors may influence this decision as well.

Indeed, the nature of the coalition among professional organizations and with economic actors is a central issue (Johnson and Libecap, 2003). An essential component is that the creation of an interprofessional association help minimizing the costs of coalitions formation when the number of actors involved is high. Thus, the actual motivation for its

creation in a specific sector likely varies according to: i) the degree of industrial consolidation, which determines the size and number of agro-food firms involved; ii) the degree of regional specialization, which involves the development of specific assets and specific comparative advantages.

This is what we observe in the cattle industry. A low degree of industrial consolidation maintained a large number of firms, so that multiple parties were involved; and relatively weak regional specializations of breeding activities lead to unstable coalitions. The combination of these two conditions increased the expected benefits from an interprofessional coordination, especially regarding quality grading and private contract enforcement. Although the leadership of one region, Brittany in this case, was significant, it was not powerful enough, with less than 40% of the total national production, to impose its own rules and to prevent the creation of national interprofession.

In other sectors, when leading firms prevail or when regional specialization is strong enough, an interprofessional organization is less likely to emerge as it is less costly for a firm to manage agreements ...and conflicts directly with local producer's groups[21]. This is what we observe, for example, in the French pork industry, in which most of the production is located in Brittany, or in the processed vegetable industry, in which the interprofessional association continuously declined since the 1990's as a result of the dramatic concentration in the industrial organization of the sector. Professional self-regulation and decentralized negotiations at the firm level prevail in those cases, since they allow a reduction of bilateral bargaining costs with individual farmers while imposing the standards of the leading firm with respect to regulating transactions for a specific region or sector.

5. Conclusion

Private institutions play a central role in the efficient organization of economic exchange and the regulation of markets. They improve contractual performances and reduce

transaction costs, for example by establishing quality classification or codification. They also contribute to extend the self-enforcing range of contracts in a world in which not all information is verifiable by an independent third party and in which courts cannot always enforce agreements. First, private enforcement institutions may enjoy industry expertise and specialized knowledge regarding industry transactions. Second, private rules can be tailored to idiosyncratic needs. Third, private systems are often able to act at lower costs than overloaded and procedure laden public courts. Fourth, they tend to produce more predictable outcomes.

The analysis of one such private institution, the Interprofessional Organization in the cattle industry, confirms that private institutions represent a powerful tool for reducing enforcement costs, particularly when dealing with multilateral agreements. In contrast with the emphasis in the literature on formal *ex post* arbitration systems, private institutions rather operate as *ex ante* mediation systems based on complex semi-formal arrangements. At the same time, we have shown that these institutions are subject to severe limitations when multiple parties are involved. Taking this into account, we have argued that being embedded in a legal framework can reduce their cost of governance. However, this is not always a sufficient condition to ensure full convergence of conflicting interests: extra-legal actions may also play a role in building credible threat of retaliation.

We suggest that there are general lessons to be learned from our specific case regarding the complementarity between private institutions and public order when *multilateral* agreements are involved. In this situation, transactors are confronted to coalitions: a legal framework imposing rules and procedures can under these circumstances complement the role of private institutions, increasing the self-enforcing range of contracts, thanks to improved credibility and lower transaction costs.

FOOTNOTES

[1] The delineation of "private" and "public" institutions remains controversial in the literature. In what follows we adopt the distinction proposed by Greif (2005), with public institutions relying on order and sanctions imposed by the state while private institutions are defined and implemented by economic agents themselves.

[2] In his analysis of the private enforcement mechanisms and rules designed by the Chicago Board of Trade, Pirrong (1995) shows that the implementation of new rules that would increase the volume of transactions required legal intervention of the state to impose them, since some participants were loosing part of their bargaining power and their profits because of better delineated property rights and more transparency of transactions.

[3] Referring to the example of cooperatives, Hendrikse (2004) provides interesting elements in that perspective.

[4] There is usually a trade-off in that farmers have to accept restrictions, such as following technical rules and requirements defined by the group, committing to an "*exclusivity rule*" by delivering all their production for a specific product, and even delegating price determination to the group. At the same time, the "intra-professional" organization can take advantage of partial "*territorial exclusivity*" in representing farmers, thus guaranteeing a minimum level of activity to its members while increasing bargaining power through collective action and reducing destructive competition although, as a group, it remains actor in a very competitive market.

[5] Recently, several French farmer unions in this sector have been sued for having been suspected of coordinating in order to influence upward prices paid to breeders during the BSE crisis of 2001 (see the decision of the European Commission of April 2, 2003 nr C (2003) 1065, regarding possible collusion on prices in the beef industry; and the judicial decision of December 13, 2006 (cases T-217/03 and T-245/03: European Commission v. several farmers'

unions), by the first level Court of Appeal of the European Community). There is no evidence that the interprofession was involved in such practices.

[6] Production contracts are agreements between an integrator company and farmers binding the later with specific production practices. They usually have two main components: (a) allocating responsibilities for the provision of inputs, and (b) determining rules of compensation for the farmers. Typically farmers provide land, buildings, utilities and labor while companies provide animals, food, medication, and even services of extra laborers. The legal term used in France for 'production contracts' is "*contrats d'intégration*"

[7] In France, this legal framework was implemented through several laws, particularly: Law nr. 60-808 of April 08, 1960, on standard contracts ("contrats-types"); Law of August 08, 1962, on collective organizations and producer groups; Law nr. 64-678 of July 06, 1964, on "integration" contracts and "campaign" contracts; and Law nr. 75-600 of July 10, 1975, providing support to "interprofessional" associations in agriculture.

[8] This sharply contrasts predictions from agency theory which focuses on the optimal design of individual incentives contracts. One possible interpretation is that gains over negotiation costs from standardized contracts by far exceed losses of incentive intensity from individually tailored contracts (Allen and Lueck 2002).

[9] This possibility creates problems in delineating the perimeter of each organization. For example, can organic producers involved in multi-product activities be organized in one single representative interprofessional association?

[10] This function became particularly significant after the BSE crisis since the Interprofession took a very active role in managing public relations, collecting scientific information and communicating with consumers.

[11] Dramatic changes in R&D funding of French agriculture since 2002 have largely diffused the adoption of interprofessions, although most recent organizations are not involved in

contract enforcement. An example of a R&D project is the design and implementation of an automatic grading system for beef carcasses, with the expectations of a more objective measurement than that from employees of slaughtering firms.

[12] A 1977 decree, later modified and integrated in a European regulation adopted on August 12, 1981, defined dressing and weighting rules for carcasses. However, the existence of this standard mainly introduced for facilitating the implementation of a statistical system for regulating markets accordingly to rules of the Common Agricultural Policy (CAP) does not mean its effective use as a contracting clause. From a legal point of view, slaughterhouses remain fully responsible for grading carcasses. It must be reminded that slaughterhouses are private properties, to which access can be restricted.

[13] In France, *Direction Générale de la Consommation, de la Concurrence et de la Répression des Fraudes* (DGCCRF).

[14] In 1994, a complete physical blockade of the main slaughtering firms located in the Loire valley was implemented by coordinated groups of farmers. It was stopped three weeks later, after the accidental death of an employee of one of the slaughtering firms.

[15] It is easier for cattle breeders to use blockade than for producers of more perishable goods like, say, tomatoes. Indeed, cattle breeders are less time constrained, with marginal loss in animals' quality and marginal costs feeding them if they deliver animals later on.

[16] Other approaches may be relevant here, e.g., political science or sociology.

[17] Data from 2000. See Libecap (1992) for an analysis of the determinants of a similar evolution in the US.

[18] The French cattle market is mainly organized through intermediaries: transactions are processed by producers' groups (32%), private middlemen (34%), or directly by slaughtering firms (15%), the remaining 19 % being traded on traditional livestock markets. Less than 3% of transactions are done on markets through auctions.

[19] Actually a tax, imposed by the Law, is defined and collected by the interprofessional organisation at the national level. The tax was equal to 21 Euros/TEC in 2009, to be shared between farmers, slaughtering firms and retailers. The annual budget of the national interprofession in the cattle industry is around 35 million Euros, with 35% of this budget redistributed to the Local Interprofessional Committee (LIC).

[20] Barriers to entry if they are tight enough may help keeping the coalition stable and facilitate enforcement (Bernstein 1992; Clay 1997; Richman 2005). However, they need also to be porous enough to allow the gradual expansion of the coalition over time, which is a condition for capturing gains from a better matching of agents to market opportunities (Clay 1997). Moreover, they often confront competition policies.

[21] In the case of quality certifications in the food sector, the level of quasi-rents generated by differentiation strategies might be high enough to cover added administrative costs generated by such interprofessional organization. This reduces the expected benefits from embedding the arrangement in the Law of 1975 on interprofessional organization and from complying with the restrictive rules regarding membership and representation that it imposes.

REFERENCES

Allen, D. & Lueck, D. (2002). *The Nature of the Farm.* Cambridge: MIT Press.

Alston, Lee, Gary Libecap and Bernardo Mueller. (1999). A Model of Rural Conflict: Violence and Land reform Policy in Brazil. *Environmental and Development Economics* 4: 135-160.

Aoki, M. (2001). *Towards a Comparative Institutional Analysis*, Cambridge: MIT Press.

Barzel, Y. (1982). Measurement Cost and the Organization of Markets. *Journal of Law and Economics* 25: 27-48.

Barzel, Y. (1997). *Economic Analysis of Property Rights*, 2nd ed, Cambridge University Press.

Barzel, Y. (2002). *A Theory of the State. Economic Rights, Legal rights and the Scope of the State*, Cambridge: Cambridge University Press.

Bernstein L. (1992). Opting Out the Legal System: Extralegal Contractual Relations in the Diamond Industry. *Journal of Legal Studies* 21: 115-157.

Bernstein, L. (1996). Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms. *University of Pennsylvania Law Review* 144: 1765-1821.

Bernstein, L. (2001). Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions. *Michigan Law Review* 99: 1724-1788.

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

Clay, K. (1997). Trade Without Law: Private-order Institutions in Mexican California. *Journal of Law, Economics and Organization* 13 : 1, 202-231.

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, Paris.

Dixit, A. (2004). *Lawlessness and Economics. Alternative Modes of Governance*, Princeton: Princeton University Press.

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

Ellickson, R. (1989). A Hypothesis of Wealth-Maximizing Norms : Evidence from the Whaling Industry. *Journal of Law, Economics and Organization* 5: 1, 83-97.

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.

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. & Weingast, B. (1994). 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*. Dordrecht-New York-Berlin: Springer.

Hadfield, G. (2005). The many legal institutions that support contractual commitment. In C. Ménard & M. Shirley (eds.), *Handbook of New Institutional Analysis*. Dordrecht-New York-Berlin: Springer.

Hendrikse, G. (2004). *Restructuring Agricultural Cooperatives*, Rotterdam: Erasmus University.

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.

Kandori, M. (1992). Social Norms and Community Enforcement. *Review of Economic Studies* 59: 63-80.

Kenney, K. & Klein, B. (1983). The Economics of Block-Booking. *Journal of Law and Economics* 26: 497-540.

Klein, B. (1992). Contracts and Incentives: The Role of Contract terms in Assuring Contractual performance. In L. Werin & H. Wijkander (eds.), *Contract Economics*. Basil Blackwell.

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.

Libecap, G. (1992). The rise of Chicago Meat Packers and the Origin of Meat Inspection and Antitrust. *Economic Inquiry* 30: 2, 242-262.

Lorvellec, L. (1993). Organisations et Accords Interprofessionnels. *Juri-Classeurs Agro-Alimentaire*, Fascicule 830, 1, 2. Paris : Editions Techniques.

Maxime, F. Mazé A. (2006). Auditor Independence: Beyond the Dilemma of Combining Auditing and Advisory Activities for the Development of Quality Assurance Systems in Agriculture. *European Journal of Agricultural Education and Extension* 12: 1, 59-74.

Mazé, A. (2000). Le choix des contrats à l'épreuve de la qualité. Une analyse des mécanismes de gouvernance dans le secteur de la viande bovine, Thèse de Doctorat es Sciences Economiques, Université de Paris I (Panthéon-Sorbonne), Paris.

Mazé, A. (2002). Retailer's Branding Strategies: Contract Design, Organizational Change and Learning. *Journal of Chain and Network Science* 2: 1, 33-45.

Ménard, C. (1996). On Clusters, Hybrids, and Other Strange Forms. The Case of the French Poultry Industry. *Journal of Institutional and Theoretical Economics* 152: 1, 154-183.

Ménard, C. (1998). The Maladaptation of Regulation to Hybrid Organizational Forms. *International Review of Law and Economics* 18: 4, 403-417.

McMillan, J. & Woodruff, C. (1999). Dispute Prevention Without Courts in Vietnam. *Journal of Law, Economics and Organization* 15: 3, 637-656.

McMillan, J. & Woodruff, C. (2000). Private Ordering Under Dysfunctional Public Order. *Michigan Law Review* 98: 2421-2458.

Milgrom, P., North, D. & Weingast, B. (1990). The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges and the Champagne Fairs. *Economics and Politics* 2: 1, 1-23.

Pirrong, C. (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. *Columbia Law Review* 104: 8, 2328-2368.

Rubin, P. (2005). Legal Systems as Framework for Market Exchange. Pp 205-228 in Claude Ménard and Mary Shirley (eds.) *Handbook of New Institutional Analysis*, Dordrecht-New York-Berlin: Springer.

Schwarcz, S. (2002). Private Ordering. *Northern* University Law Review 97: 1, 319-350.

Schwartz, A. (2002). "Contract Theory and Theories of Contract Regulation", Pp. 116-125 in Eric Brousseau and Jean-Michel Glachant (eds.) *The Economics of Contracts. Theories and Applications*, Cambridge (UK): Cambridge University Press.

Schwartz, A. & Scott R. (2003). Contract Theory and the Limit of Contract Law. *Yale Law Journal* 113: 541-619.

Schwartz, A. & Watson, J. (2004). The Law and Economics of Costly Contracting. *Journal of Law, Economics and Organization* 2: 2-31.

Wang, R. (1993). Bargaining versus Posted-Price Selling. *European Economic Review* 39: 1747-1764.

Williamson, O. (1985). *The Economic Institutions of Capitalism Mechanisms of Governance*, New York-London: The Free Press.

TABLE 1 : MAIN CLAUSES OF A TYPICAL AGREEMENT

The Interprofessional agreement of 1988 on the market for cattle above 6 months of age.

a- Transfer of property rights: Rules fixing delays between the agreement and animals' removal at the farm, the maximal period between removal from the farm and slaughter, and standards for carcass presentation and weighting after slaughter.

b- Transfer of risks : Clauses define responsabilities in case of the accidental death of the animal during its transportation or transfer to the slaughterhouse, as well as provisions regarding veterinary interventions by public authorities (Local Interprofessional Committees provide mediation when needed in order to guarantee the rapid intervention of veterinary experts since this is a very perishable product).

c- Indidvidual Animal identification : Standards establishing traceability systems in slaughterhouses, which is central for sanitary purposes as well for payments to farmers (messing up animals was, at that time, quite common in slaughterhouses so that farmers did not necessarily got paid for the 'right' animal).

d- Conditions under which animals are weighted at the slaughterhouse: Clauses specify norms related to characteristics of carcass as well as delays between slaughtering and weighting (shrinking loss).

e- Standardization of Information on 'weighting tickets' delivered to the seller: Detailed information must be provided to farmers allowing them to check that it corresponds to their animal and facilitating claims, which must be monitored by the interprofession in a very short delay. Some local committees even require slaughter houses to keep carcasses at least 24 hours in order to make verification possible before the animal is delivered.

f- Delays for payments to farmers: The agreement specifies payments should be made within three weeks.

TABLE 2: CAUSES OF LITIGATION.

Motivation of request / %	Litigation on carcass weight	Litigations on carcass grading	Responsibility in case of animal mortality or sanitary seizure by public authorities	Litigations on animal identification or loss of official weight tickets
256 interventions	31%	15%	33%	16%

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

< FIGURE 1: REDUCTION OF "HOLD-UP" PROBABILITIES>