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**AN EMPIRICAL INVESTIGATION OF INTERORGANIZATIONAL OPPORTUNISM  
AND CONTRACTING MECHANISMS**

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# **AN EMPIRICAL INVESTIGATION OF INTERORGANIZATIONAL OPPORTUNISM AND CONTRACTING MECHANISMS**

## **Abstract**

This study investigates contracting mechanisms in situations of opportunistic disputes between organizations. We specifically explore the relationships between the formal versus informal nature of opportunism and the formal versus informal nature of contractual governance. We use a unique data set of 102 buyer-supplier disputes to explore in depth different types of opportunism—that is, strong form versus weak form opportunism—and different types of contracting mechanisms—that is, the controlling and coordinating functions of formal contracts and the cooperative and competitive sides of relational contracts. Our detailed empirical analysis suggests distinct relationships between the different contracting mechanisms, the different types of opportunism, and the level of legal fees necessary to deal with the dispute. These findings enable us to derive implications for research on the role of contractual mechanisms in dealing with interorganizational opportunism.

## **Keywords**

opportunism, formal contract, relational contract, legal fees, vertical relationship

## **INTRODUCTION**

The risk of opportunism is often seen as an inherent feature of interorganizational relationships. In this regard, opportunism—or self-interest seeking with guile (Williamson, 1985)—represents one of the central assumptions underlying transaction cost economics (TCE). As Williamson (1993: 97) states ‘huge numbers of interesting problems of economic organization are missed or misconstrued if opportunism is ignored or suppressed. But for opportunism, most forms of complex contracting and hierarchy vanish.’

Williamson (1985) largely regards opportunism as a behavioral trait embodied in economic actors. In spite of its theoretical and practical prominence, empirical research on opportunism is still relatively sparse (Das and Rahman, 2002; Jap and Anderson, 2003). Although TCE research has traditionally discussed opportunism as a general concept, the potential for different types of opportunistic behaviors to emerge has been understudied (Macher and Richman, 2008). Thus, whereas opportunism has a central position in TCE, there is still a need to clarify how it manifests itself in an exchange relationship.

At the same time, TCE addresses the problem of organization as one of devising contractual governance structures that have the purpose of safeguarding transactions against the hazards of opportunism. Although much research—both in management and economics—has shown that exchange relationships are commonly governed by a combination of relational and formal contracting mechanisms (e.g., Baker et al., 2002; Poppo and Zenger, 2002), we still do not know much about the influence of governance structures on the types of opportunism. This is all the more surprising because this issue is at the heart of the TCE research agenda (Williamson, 2003). The purpose of this study is to improve our understanding of contracting mechanisms in interorganizational relationships with opportunism. On the one hand, prior literature on opportunism has suggested a distinction between formal and informal breaches of the contract—

or strong form versus weak form opportunism (Luo, 2006; Wathne and Heide, 2000; Williamson, 1993). On the other hand, scholars in economics and management studying contracts have pointed out the existence of formal and informal contracts (e.g., Baker et al., 2002; Poppo and Zenger, 2002). Our data allow us to explore an intriguing question: are there some relationships between the formal versus informal nature of opportunism and the formal versus informal nature of contractual governance?

Instead of testing a given model, we use an inductive approach to focus on a detailed empirical analysis. We thereby respond to recent calls (e.g., Hambrick, 2007; Oxley et al., 2010) for empirical research contributing substantively to a better understanding of an important phenomenon in strategic organization. We use a unique data set of 102 buyer-supplier disputes to explore in depth different types of opportunism and contracting mechanisms. The data, collected through a law firm, includes all of the correspondence and other documents exchanged between the disputing parties and their lawyers for each case. We were also able to access the original contracts designed by the trading partners along with additional background information on the firms involved.

Three main findings emerge from our analysis: (1) strong form opportunism tends to be associated with relatively higher legal fees than weak form opportunism, (2) control and coordination dimensions of formal contracts seem to be associated with lower legal fees and lower likelihood of strong form opportunism, and (3) our analysis does not show any specific pattern between the nature of relational contracts and amount of legal fees or the types of opportunism.

The remainder of our paper is organized as follows. We start by describing in detail our data and methods. We then present the results of our empirical analysis on the relationships among (1) the types of opportunism and the level of legal fees, (2) the contracting mechanisms and the level of

legal fees, and (3) the contracting mechanisms and the types of opportunism. We then compare our observations with theoretical and empirical literature in management and economics. The discussion of relevant convergences and divergences between our empirical results and existing research leads us to suggest possible avenues for additional inquiry for the strategic organization of contracting.

## **EMPIRICAL APPROACH: A DETAILED ANALYSIS OF LAW FIRM'S FILES**

### ***Data collection on dispute cases***

We collected our data in an independent law firm; a mid-sized firm managed by the same team of partners since the beginning of the 1990s. The opportunity to study cases was a unique way to have access to a large sample of disputes with real contractual documents and very rich details on the profiles of the disputants and the context of the dispute.

Lawyers' notes have some attractive features as a data source for our study of interorganizational opportunism. As it was confirmed during our complementary interviews with lawyers and our period of observation within the law firm, firms involved in such disputes are aware of the importance of keeping track of their communications with their partners. In particular, lawyers directly support their clients in documenting the file and managing the overall process (see, for example, Berger, 2006; Murray et al., 1989; Sampson, 2003).

Our sample includes all the cases handled by this law firm between 1991 and 2005—102 cases in all—that involved disputes arising in exchange relationships between a buyer and a supplier.<sup>1</sup>

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<sup>1</sup> Contracts involving more than two parties represent a small minority of the cases handled by the law firm. Because it is more difficult to identify specific violations and solutions, we excluded these multilateral disputes from our sample. Our sampling requirement was that the case involved a vertical relationship between only two partners; this led to the exclusion of 26 cases in total. To check for potential bias, differences between included and excluded files and firms were examined. T-tests of the differences of means suggest that files and firms excluded from the sample did not significantly differ from those included along any observable dimension other than those used to limit the sample. Results are available on request.

Each legal file for each of the 102 disputes contains between 800 and 5,000 pages; this includes all documents issued by each party in the contract and exchanged during the dispute-resolution process. In addition to mandatory legal documents, the lawyers in each case requested from their clients all possible relevant information that could explain their situation and their perception of the conflict.

One of the co-authors spent four months in the law firm to collect data and gain insights into the legal system and the way of doing business in the law firm. In addition to daily conversations with lawyers and administrative staff, 17 interviews were conducted with other lawyers and law professors who specialize in contract law. Due to the highly confidential character of the data, it was not possible to speak directly with the firms involved in the disputes, nor is it possible to disclose their identities.

## **DESCRIPTION OF THE SAMPLE OF DISPUTES AND TYPES OF OPPORTUNISM**

### ***Overview of the sample***

Ninety-nine of the 102 cases involved only European firms; three also involved non-European firms. Because some companies were involved in several cases and were established clients at the law firm, the sample contained 178 different companies. The firms in our sample came from a variety of industries: manufacturing (52 percent), services (32 percent), retail (15 percent), and construction (2 percent). The contracts represented different types of transactions with a roughly even split across distribution contracts (35.3 percent), production supply contracts (29.4 percent), and IT contracts (26.5 percent); there were a smaller number of contracts for consulting and other services (8.8 percent).

The issues underlying the dispute also varied across relationships, and in some cases the disputes evolved over time in size and scope. Four primary types of conflicts were identifiable at the

outset of the disputes: issues regarding deal scope and deliverables (40.2 percent), work quality (23.5 percent), work delays (21.6 percent), and payment (14.7 percent). Sixty percent of the cases ended in litigation and 40 percent were eventually settled via private resolution processes. Of the cases 32.4 percent included exchange partners that had interacted with each other previously and 46 percent of the cases involved cross-border relationships. Further details about the nature and characteristics of the deals involved in our sample are reported in Table 1.

— Insert Table 1 about here —

### ***Representativeness of the sample***

Because all of the relationships we study involve disputes, it is important to consider the representativeness of our sample. To probe that our sample is representative of the full population of contracts, we compared our sample with other general samples of contracts; that is, not specifically ending up in disputes. As it is not possible to gather our own control group of firms that engaged in contracts and did not have disputes—and, for instance, operate a Heckman correction—we compared our sample with the content of other academic articles describing with sufficient details their sample of contractual agreements.

We completed a literature review of the studies focusing on contractual complexity in interorganizational relationships not specifically ending up in dispute. We found two samples with a clear description of the contractual complexity's distribution: Reuer and Ariño's (2002; 2007) sample of 88 alliances involving Spanish firms of various sizes from a variety of industries and Reuer et al.'s (2006) sample of 66 alliances in the German telecommunications industry. In order to compare our sample with those two other samples of contracts, we recoded the 102 contracts in our sample following Parkhe's (1993) approach (i.e., level of contractual detail between 0 and 8) to get the same operationalization of contractual complexity.

First, on Parkhe's unweighted index of complexity—which tabulates the presence of up to eight key contractual clause categories—our sample's score (4.36) is situated between the score (3.69) for Reuer and Ariño's (2002; 2007) sample and the score (5.05) of Reuer et al. (2006) sample. Second, we compared the distribution of contractual complexity of the contracts in our sample with the distribution of contractual complexity in Reuer et al.'s (2006) sample (to the best of our knowledge, the Reuer et al.'s (2006) article is the only one that details the distribution of contractual provisions and can thus serve as a benchmark). We did not find a statistically significant difference between the two samples ( $\Pr(|T| > |t|) = 0.9581$ ). Third, in Figure 1, we made a comparison of the frequency of each clause in each of the three samples.

— Insert Figure 1 about here —

No specific difference emerges between our sample of contracts and the two other samples of contracts not specifically ending up in dispute. We followed-up with a series of t-tests to compare the three samples. We did not find a statistically significant difference between our sample and the two other samples on the overall contractual complexity ( $\Pr(|T| > |t|) = 0.9667$ ). Furthermore, Reuer and Ariño (2007) factor analyzed Parkhe's eight provisions and found that the first three provisions of Parkhe's 8-item index relate primarily to coordination (i.e., Clauses #1, #2, and #3), whereas the remaining five relate primarily to control (i.e., Clauses #4, #5, #6, #7, and #8). Again, we did not find a statistically significant difference between our sample and the two other samples on the level of contractual coordination ( $\Pr(|T| > |t|) = 0.7132$ ) and on the level of contractual control ( $\Pr(|T| > |t|) = 0.7694$ ).

All in all, these analyses suggest that our sample appears, a priori, to consist of contracts that do not differ significantly from the general population of (nondispute) contracts. Although such

analyses cannot eliminate the possibility of selective representation, it does mitigate such concerns. We come back to this issue in our discussion.

### ***A detailed example of dispute***

In order to clarify the empirical context of our research, it may be helpful to provide an example of a dispute from our sample. In January 2003, a small French firm specializing in machinery contracted with a mid-sized Austrian firm in the electrical equipment industry. It was planned that the Austrian firm would manufacture specialized components that would be used by the French firm. The contract specified in great detail how firms had to share information and coordinate their activities on a weekly basis for the development of the specialized components (i.e., coordination clauses<sup>2</sup>). However, no specific clause of monitoring or penalty system had been drafted in the contract (i.e., no control clauses). After a few months of collaboration, the French firm became increasingly skeptical about the ability of its supplier to develop the specialized components under the conditions that had been promised in the contract (i.e., strong form opportunism). After a few meetings with its partner firm and still not managing to resolve the problem, the French firm decided that it was time to engage the services of a law firm (which eventually provided us with our data). The dispute continued for another nine months, at which point it was privately settled without going to court. The legal fees added up to €21,180 for the French firm.

### ***Distinguishing between two forms of opportunism***

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<sup>2</sup> The terms ‘coordination clauses,’ ‘control clauses,’ and ‘weak/strong form opportunism’ are further explained shortly.

The traditional view (e.g., Williamson, 1985) equates opportunism with violations of explicit contractual obligations. More recently, however, this ‘strong form’ view of opportunism has been augmented to include the possibility of violations of the spirit of an agreement (Wathne and Heide, 2000; Williamson, 1993). Defined as ‘weak form’ opportunism, it involves a relational norm violation that is not spelled out in the formal contract but rather embedded in the common understanding between the trading partners.

Our empirical approach evaluates opportunistic behaviors from the firms’ perspectives.<sup>3</sup> We assess opportunism by examining complaints voiced by the firms in letters and documents exchanged with their exchange partner and recorded in the law firm’s files. The use of secondary data gathered ex post but reflecting real-time information is a good way to limit social desirability bias, ex post rationalization, and retrospective errors (Miller et al., 1997).

As both strong form and weak form opportunism may be perceived within the same dispute, we see opportunism as two different constructs. The key distinction between strong form and weak form opportunism is that strong form opportunism describes the strategic manipulation of information and misrepresentations that involve violations of contractual obligations that are explicitly codified in a contract (Luo, 2006). By contrast, weak form opportunism refers to situations in which there is a perceived relational norm violation, that is, violation of an obligation not spelled out in the formal contract but embedded in the common understanding of the trading partners.

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<sup>3</sup> In line with prior empirical works on opportunism, we think that ‘opportunistic behavior is almost impossible to observe firsthand’ (Provan and Skinner, 1989: 206). Following the approach used in most of the few articles that contain an empirical study on opportunism, we looked at the opportunism perceived by firms (e.g., Gassenheimer et al., 1996; Weaver and Dickson, 1998).

In order to develop appropriate measures of strong form and weak form opportunisms, a team of two researchers developed a list of relevant concepts and preliminary response categories to use for information coding (see Table 2).

— Insert Table 2 about here —

Following this, all documents exchanged by the parties were read and coded independently by both researchers. We then proceeded with an item selection and classification process. To systematize the data coding, we used a computer-based qualitative analysis with Concordance software. We then compared our respective coding of each file and the few disagreements were solved by discussion. We developed four alternative approaches to coding opportunism in our sample of disputes.

First, we focused on the initial perception of opportunism at the onset of the dispute. Our interviews with the lawyers and our analysis of the data indicate that the nature of the contentious issue at the origin of the conflict greatly affects conflict development. We used a binary variable (strong form opportunism = 1 versus weak form opportunism = 0) to measure the perceived form of opportunism at the onset of the dispute. Fifty-two disputes in our sample started with a perception of weak form opportunism and 50 disputes with strong form opportunism.

Second, as strong form opportunism and weak form opportunism are not mutually exclusive, we investigated the possible coexistence of the types of opportunism during a given dispute. We then analyzed each of the 2,261 messages exchanged between the parties in the 102 disputes. Based on this second way to code opportunism, it appears that strong form opportunism was manifested in 83 percent and weak form opportunism in 78 percent of the disputes in our sample.

Third, in order to reflect to what extent strong form or weak form opportunism dominates in a given conflict, we developed a continuum measure from a strong form to a weak form. We used a continual reading of the strength of strong form opportunism, measured as (# of messages with

strong form opportunism) / (# of messages with weak form opportunism + # of messages with strong form opportunism). This variable has a minimum of 0, a maximum of 1, and an average of 0.52.

Finally, we coded strong form and weak form opportunism as two distinct continuous variables (rather than a proportion of strong versus weak) through the number of messages for strong form opportunism and weak form opportunism in a given dispute.

In order to better evaluate the distribution and relationships between the two forms of opportunism, we drew a plot of the messages about opportunism ranked by (1) the total number of messages and (2) the proportion of messages about strong form versus weak form opportunism.

— Insert Figures 2a and 2b about here —

No immediate clear pattern appeared: we found cases with a few mentions of opportunism (i.e., one or two messages) involving either strong form or weak form opportunism. We also found cases involving either only strong form or weak form opportunism with a higher total number of messages (i.e., around five messages). However, in the cases with a lot of messages about opportunism (i.e., eight or more), we systematically found a mix of strong form and weak form opportunism.

### ***Forms of opportunism and legal fees***

The next step of our empirical investigation is to look at the potentially distinct influences of each form of opportunism. Prior studies have considered a number of consequences of opportunism, such as its influence on performance (e.g., Gassenheimer et al., 1996), firm boundaries (e.g., Steensma and Corley, 2001), or commitment (e.g., Skarmeas et al., 2002). The influence of opportunism on costs has not been directly studied so far except for Dahlstrom and Nygaard

(1999). However, Dahlstrom and Nygaard (1999) do not consider distinct forms of opportunism. Thus, in the next section, we probe the distinct influence of each form of opportunism at the level of legal fees.

Few studies in TCE directly examine the costs of conducting exchanges in interfirm relationships (Artz and Brush, 2000; Masten et al., 1991); as such, there is little guidance available about the appropriate measures of enforcement costs or, more specifically, legal fees. Here, we measure lawyer's fees, that is, the compensation the law firm receives from its clients for resolving situations of perceived opportunism (logarithmic value in thousands of inflation-adjusted Euros). This gave us an estimate of the main direct costs associated with the time, effort, and expertise necessary for the dispute resolution.

Legal fees reflect through a unique monetary variable the different tasks done by the diverse protagonists at the law firm (senior lawyers, junior lawyers, interns, and staff). Given our sample, comparisons were possible and relevant between files because the invoicing process was clearly delineated by the law firm. With a single firm sample, we are able to directly observe the billing process and can be confident that differences in fees are driven by the duration and complexity of dispute resolution.<sup>4</sup> The advantages associated with our data source (and our exclusive focus on exchanges that have experienced a dispute) naturally come at the cost of some limitations on the generalizability of our findings. These limitations are discussed in detail at the end of the paper. We conduct a series of tests to investigate the influence of the form of opportunism on the level of legal fees. First, a simple t-test shows that the difference between the two forms of opportunism is significant (mean of legal fees = 2.11 when the opportunism at the onset of the dispute is a 'strong' form and mean of legal fees = 1.28 when the opportunism at the onset of the

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<sup>4</sup> Consistent with TCE, 'transaction costs are always assessed in a comparative way, in which one mode of contracting is compared with another. Accordingly, it is the difference between, rather than, the absolute magnitude of transaction costs that matters' (Williamson, 1985: 22).

dispute is a ‘weak’ form;  $\Pr (|T| > |t|) = 0.0000$ ). Second, in Figure 3, we created a scatter plot of the level of legal fees and the relative intensity of strong form opportunism with our measure:  $(\# \text{ of messages with strong form opportunism}) / (\# \text{ of messages with weak form opportunism} + \# \text{ of messages with strong form opportunism})$ .

— Insert Figure 3 about here —

This figure suggests that disputes involving a high level of strong form opportunism (relative to the total number of messages exchanged between the partners about opportunism) tend to be associated with higher legal fees.

Third, we estimate the relationship between the types of opportunism and the legal fees with five specifications in Table 3. In the first column, we include only the control variables we discussed previously. In the four other columns, we test the relationship among each of our four ways to code opportunism and legal fees.

— Insert Table 3 about here —

Across the different specifications, two patterns emerge. First, it appears that disputes with strong form opportunism (either at the onset or during the dispute) are associated with relatively higher legal fees than disputes with weak form opportunism (everything else being equal). Second, disputes with a relatively high level of strong form opportunism appear to be linked with higher legal fees. Such results suggest that each type of opportunism is likely to be associated with significantly different amounts of legal fees.

## **FORMAL AND RELATIONAL CONTRACTING MECHANISMS**

The next step of our investigation is to examine the relationship between the contracting mechanisms and (1) the level of legal fees and (2) the types of opportunism. Our data allow us to explore the relationships between the formal versus informal nature of opportunism and the

formal versus relational nature of contractual governance. Thus, in the next section, we continue our empirical investigation by focusing on the nature of the formal contracts and then the nature of the relational contracts before turning to the possible links between contracting mechanisms and (1) the level of legal fees and (2) the types of opportunism.

### ***Investigation of the formal contracts***

Our empirical investigation is driven by the desire to get a better understanding of contractual governance mechanisms in a context of interorganizational opportunism. TCE has suggested that governance forms ‘are distinguished by different coordinating and control mechanisms and by different abilities to adapt to disturbances’ (Williamson, 1991: 269); however, ‘the dimensionalization of governance structures has been relatively slighted’ (Williamson, 1991: 277).

Research on contractual governance has emphasized the need for more detailed and more extensive measures of contract provisions to improve empirical work in this area (e.g., Poppo and Zenger, 2002). At the same time, recent research has pointed out the multiple dimensions of contracts (Malhotra and Lumineau, 2011; Reuer and Ariño, 2007; Ryall and Sampson, 2009) and has suggested that there are two main reasons why partners in interfirm relationships draw up formal contracts: control and coordination. First, contractual control attempts to create adherence to a desired outcome with a minimal amount of deviant behavior through the exercise of authority or power mechanisms. Second, because of a clear definition of roles and information sharing, contractual coordination can be approached more as a way to achieve a desired collective outcome and to facilitate goal congruence by providing the appropriate linkages between the two partners.

We follow this distinction to analyze the simultaneous presence of control devices and coordination features and develop a detailed assessment of contractual clauses in interorganizational relationships. It helps us in particular to clarify the different facets of contractual complexity. Our study of formal contracts is based on close examination of the actual contracts signed by the firms, which lay out in detail all the relevant clauses. Following an extensive review of the relevant empirical literature, we worked in close cooperation with four legal experts specializing in contract law (three of whom are practicing lawyers). The purpose of this collaboration was to develop appropriate measures of the control and coordination features of the contracts in our sample. Following accepted practices in the literature (Parkhe, 1993; Reuer and Ariño, 2007), we used a checklist of key clauses to develop these measures.

We operationalized the controlling function of the contract through five factors: (1) right to audit/inspection, (2) safeguarding the system, (3) control by a third party, (4) having a penalty clause, and (5) having a resolution clause. The measure is therefore defined as  $\sum D_i$ ;  $D_i = 1$  if provision  $i$  exists;  $D_i = 0$  otherwise. The summation is an integer variable ranging from 0 to 5.

The coordinating function of the contract can be described through five key clauses: (1) assignment of roles and responsibilities, (2) indication of duration and conditions of renewal, (3) organizational coordination—ability to reassign tasks among participants without altering the goal of the contractual arrangement, (4) strategic coordination—a process that is set up to redefine the objectives of the relationship, and (5) dispute resolution—an arbitration/mediation clause. The measure for the controlling dimension is defined as  $\sum D_i$ ;  $D_i = 1$  if provision  $i$  exists;

$D_i = 0$  otherwise. The summation is also an integer variable ranging from 0 to 5. Examples for each type of clause are shown in Table 4.<sup>5</sup>

— Insert Table 4 about here —

As an additional validity check on our measures of contractual control and coordination we contacted six other legal experts, all professors in contract law, and asked each to evaluate the level of contractual control and the level of contractual coordination of five randomly selected contracts in our data set. We then conducted interviews with each of these experts guided by a structured questionnaire.<sup>6</sup> Each interview lasted between one and one-half and three hours. We calculated the intraclass correlation coefficients of the six experts for each of the two contractual functions (Shrout and Fleiss, 1979). The two values are significant at the .001 level, indicating high inter-rater reliability (.988 for the controlling function and .980 for the coordinating function). Thus, the expert ratings are highly internally consistent, which in turn suggests low random and specific errors. Finally, we compared the experts' results with our own evaluations of the sample contracts. We also found a strong convergence. Indeed, the experts' average ratings concurred with our own approach (.995 for contractual control and .991 for contractual coordination; both significant at the .001 level).

Furthermore, we conducted a follow-up analysis to evaluate the robustness of our coding scheme.

We reanalyzed all coordination and control clauses in our sample by adding an interpretative

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<sup>5</sup> Our decision to adopt an unweighted summation of individual contract clauses in our two measures of contractual functions also follows earlier research (Barthélemy and Quélin, 2006; Lui and Ngo, 2004; Ryall and Sampson, 2009).

<sup>6</sup> We contacted six other contract law experts to evaluate the same five randomly selected contracts in our data set. Each expert was asked to make 50 assessments (5 contracts \* 2 functions \* 5 criteria). Our interviews were organized around the following questions:

- For this contract, please evaluate the presence or absence of the 10 following clauses [this question was then repeated for four other contracts]
- How do you characterize each of these five contracts? (independently and comparatively)
- As for the controlling aspects, how do you characterize each of these five contracts? (independently and comparatively)
- As for the coordinating aspects, how do you characterize each of these five contracts? (independently and comparatively)

coding step that takes into account the inherent complexity of contractual provisions. In this step, a rater eliminated all clauses that seemed ambiguous—that is, those that did not clearly suggest a coordination versus control function as would be implied by our initial coding scheme. This coding required not only that the rater read the text of each clause as written, but to also consider the context in which the clause was introduced and embedded. To test the reliability of this alternative measure, a second rater evaluated 10 randomly selected clauses for each of the 10 types of provisions. Out of the 100 clauses checked by both raters, the level of agreement is 89 percent. This more conservative measure of coordination versus control provisions led us to delete 7.25 percent of the coordination provisions and 11.14 percent of the control provisions. Rerunning the analyses with the revised measure gave us results—not reported but available on request—that were almost identical to those of our initial coding.

Figures 4a and 4b show the heterogeneity of the complexity of formal contracts in our sample using the frequency distribution of the number of observations for each level of controlling and coordinating clauses.

— Insert Figures 4a and 4b about here —

### ***Investigation of the relational contracts***

In the wake of scholars who emphasized the importance of informal agreements in organizations (Blau, 1955; Simon, 1947), economists and management scholars have pointed out the role of relational contracts<sup>7</sup> to circumvent difficulties in formal contracting (Baker et al., 2002; Levin, 2003). In addition to formal contracts existing between parties, relational contracts—that is, informal agreements and informal codes—affect the behaviors of parties (Bolton and

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<sup>7</sup> We use the terms *informal contracts* and *relational contracts* interchangeably. In fact, ‘contracts we call “relational” are sometimes called “self-enforcing” (Telser, 1981; Klein, 1996), “implicit” (MacLeod and Malcolmson, 1989), or both (Bull, 1987)’ (Baker et al., 2002: 40; see also Gil, 2011).

Dewatripont, 2005) through accumulated experience, self-enforcing mechanisms, and the development of a community of interest (e.g., Bull, 1987; Corts and Singh, 2004; Hart and Moore, 1988; Kenney and Klein, 2000).

We use two alternative measures to probe relational contracts in our sample. First, based on a double rating, we evaluated relational contracts between firms by looking at records to see if it mentioned nothing about a past relationship between the two firms (0) or some past relationship between the two firms (e.g., ‘Our teams worked together last month for the [ABC] contract’) (1). Such a measure is in line with prior research on interfirm relationships, which has used the mere existence of a buyer-supplier relationship, regardless of the parties’ attitude toward the relationship, as an indicator of their relationships (see, e.g., Carson et al., 2006; Corts and Singh, 2004).

Second, our data allow us to go one step further and investigate the quality of the relational contract between parties. As suggested by Ryall and Sampson (2009: 914), ‘prior deals are an imperfect measure for both approaches, capturing all prior deals whether positive or not (and therefore not necessarily facilitating trust development).’ Information on the relational experience prior to the dispute is drawn from copies of exchanges between the partners as well as from lawyers’ notes in the dispute files. These notes are compiled during the normal course of events at the first meetings between the lawyer and the client during the focal dispute. In addition to understanding the origins of the current dispute, during these initial meetings lawyers routinely interview the client regarding the nature of any previous exchanges between the firms and the behavior of the other party in these prior contracts.

To distinguish between cooperative and competitive relational contracts, we first developed a preliminary list of relevant response categories for use in coding. Extant research on attitudes toward, and satisfaction in, trading relationships suggests three highly interrelated dimensions of

the higher order construct of cooperative relational norms: flexibility, participation, and solidarity (Heide and John, 1992; Jap and Ganesan, 2000; Noordewier et al., 1990).

Similar to the coding of the types of opportunism, we followed the Weber (1990) coding protocol. The level of agreement between the raters (all superior to 95%) and the correlation between the ratings (all superior to .90 at the 0.001 level) indicate a high degree of consistency in the ratings. Any residual disagreements on ratings were resolved by discussion.

Relational contract was constructed as a categorical variable and coded as follows: *Cooperative relational contract* = 1 if the file contains explicit references to flexibility, participation, and/or solidarity in prior interactions between the partners; 0 otherwise. *Competitive relational contract* = 1 if the file contains explicit references to inflexibility, nonparticipation, and/or individualism in prior business interactions between the partners; 0 otherwise. Files coded as zero on both measures were cases with no reference to any transactions between the firms prior to the start of the contract under dispute. Table 5 gives examples of statements for each type of relational contract.

— Insert Table 5 about here —

In Table 6, we examine separately our key variables of interest in (1) our overall sample ( $N = 102$ ) and then in our different subsamples: (2) cases in which firms had no prior exchange ( $N = 69$ ), (3) cases in which firms had prior exchange ( $N = 33$ ), (4) cases in which firms had a cooperative relational contract ( $N = 17$ ), and (5) cases in which firms had a competitive relational contract ( $N = 13$ ). We calculate the mean difference tests for each sample and its complement. Interestingly, the tests do not reveal any significant differences between the different subsamples.

— Insert Table 6 about here —

We explore the relationship between the types of contracting mechanisms—formal and informal—and the level of legal fees with four specifications in Table 7a.

— Insert Table 7a about here —

The regressions suggest that higher levels of control clauses and coordination clauses of the formal contracts are associated with fewer legal fees. However, this part of the analysis does not show any specific pattern between the nature of the relational contracts and the level of legal fees. In Table 7b, we conduct analyses between the types of contracting mechanisms—formal and informal—and the forms of opportunism. We use probit for our binary measure of opportunism at the onset of the dispute (strong form = 1; weak form = 0) in columns 1a to 4a and OLS for our measure of the intensity of strong form opportunism (relative to the total number of messages exchanged between the partners about opportunism) in columns 1b to 4b. Across the different specifications, it seems that the two dimensions of formal contracts (i.e., control and coordination) tend to be linked with a lower likelihood of strong form opportunism (as perceived at the onset of the dispute) as well as in disputes in which strong form opportunism is relatively lower.

— Insert Table 7b about here —

## **DISCUSSION**

As mentioned previously, our purpose is not theory evaluation but an exploratory analysis of interorganizational opportunism and contracting mechanisms. In the following discussion, we first revisit the empirical issues about the validity of our empirical analysis. As we explain below, our results can only support claims that are tentative and suggestive. We then open a discussion to invite other scholars in strategic organization to tackle the theoretical issues raised on interorganizational opportunism and contracting mechanisms and refine our findings with a sounder research design.

### *Endogeneity issues*

Repeated calls have been made to pay attention to endogeneity issues (e.g., Bascle, 2008). We acknowledge that any such study of contracting mechanisms—like all organizational design problems—will inevitably raise the issue of endogeneity (Oxley and Wada, 2009; Shaver, 1998).

When firms draft their contracts, it is possible that they do so selectively in anticipation of the likelihood of opportunism, the type of opportunism likely to arise, and the costs it would involve.

This suggests that the contracting mechanisms might be endogenous because parties design their agreements based on objectives other than those directly governing their transaction. Biased coefficient estimates and misleading conclusions might be drawn when strategy performance estimates do not account for the endogeneity in strategy choice (Bascle, 2008; Hamilton and Nickerson, 2003; Shaver, 1998). Unobserved factors may drive observed differences in the type of opportunism and the level of legal fees, rendering observed correlations spurious.

Ideally, we would estimate a two-stage least squares model in which the first-stage specification explains the nature of the contracting mechanisms as a function of some instrumental variables.

Unfortunately, a full-blown causal identification strategy—meeting both the conditions of relevance and exogeneity (Murray, 2006; Woolridge, 2002)—was practically not feasible. We therefore remain circumspect in interpreting our results.

In addition, we have tried to be as sensitive as possible to potential alternative relationships and to include an extensive set of control variables. In particular, if the formal contract is an outcome of a previous buyer-supplier interaction and embodies the norms that govern the relationship, then we would expect that parties with cooperative relational contracts would develop formal contracts embodying relational norms to continue to enhance the relationship. Furthermore, we would expect that parties with competitive relational contracts would negotiate formal contracts

embodying their relational contracts. However, if we examine the data (reported in Table 8), we see that this is simply not the case.

— Insert Table 8 about here —

Scholars are divided about the effects of partnering experience on formal governance structure (Lumineau et al., 2011; Ryall and Sampson, 2009). Although some prior studies argue that increased familiarity with the partner enhances the ability to design contractual structures (Dekker, 2004; Poppo and Zenger, 2002) and others argue that partner experience reduces the need for extensive governance structures (Gulati and Nickerson, 2008; Zollo et al., 2002), our findings do not reveal any significant relationship between the type of relational contract and the nature of formal contracts. For instance, although we observe relatively less contractual control for deals in which partners had a prior relationship (2.69) than for first deals between parties (2.86), this difference is not significant.

We now link our empirical findings with existing literature in management and economics on interorganizational opportunism and contracting mechanisms. Our purpose here is mostly to raise questions and to lay the foundation for interesting follow-on work on the strategic organization of contracting.

### ***The relationship between the forms of opportunism and legal fees***

Our findings suggest that each form of opportunism—strong versus weak—is likely to lead to different amounts of legal fees. Such patterns can be linked with the literature on self-enforcing contracts (Klein, 1996; Klein and Murphy, 1988; Srinivasan and Brush, 2006), which suggest that the verifiability of outcomes influences the enforceability of contracts (Baker, 2002; Baker et al., 2002; Kvaloy and Olsen, 2009).

One way to interpret our findings is to consider that when a firm violates an exchange agreement in areas that are addressed in the contract—that is, engages in strong form opportunism—the behavior tends to be observable by the parties taking part in the exchange and verifiable by the courts. When the dispute directly involves juridical aspects, it may seem rational for the firm to invest in the juridical expertise of its lawyers. The firm may consider that the benefits of an investment in lawyers' resources are worth the costs (i.e., the expenses in legal fees). For instance, it may seem more likely that the opportunistic partner will be sanctioned because of the lawyers' findings. As a result, lawyers are likely to be more involved and deploy more efforts to try to prove which firm is right and which firm is wrong, and legal fees may be relatively high as a result.

In contrast, when opportunism is perceived as a breach of the spirit of the agreement, the violation may be much more difficult to verify and sanction: whereas the signed contract is formally codified and has a legally binding effect on each party's behavior, the implicit part of the agreement does not have such formally structured or documented legal obligations. Thus, contrary to strong form opportunism, there may be few explicit remedies or directions available in the case of weak form opportunism involving a violation of the spirit of the agreement (Luo, 2006). Because weak form opportunism seems more difficult to enforce, firms may consider that the costs of lawyers' involvement exceed the benefits. Thus, such reasoning could help to explain our empirical results that show, everything else being equal, that disputes involving strong form opportunism tend to be linked with relatively higher legal fees than disputes involving weak form opportunism.

### ***Contracting mechanisms in interorganizational opportunism***

As we explained previously, our empirical analysis was motivated by the desire to get a better understanding of contractual governance mechanisms in a context of interorganizational opportunism. We thus started by disentangling the control and coordination dimensions of formal contracts. We now return to the empirical and theoretical implications of such a distinction in the relationship between formal contracts and (1) legal fees and (2) types of opportunism.

#### *Dimensions of the formal contracts and legal fees*

As our findings suggest, formal contracts can affect ex post transaction costs and, in particular, legal fees in a variety of ways. Such results call for further research on the different dimensions of formal contracts. Although prior literature has mostly perceived the formal contract as a controlling device (e.g., Williamson, 1985), complex formal contracts may also serve as a way to coordinate activities by supporting rational decision making (Lumineau et al., 2011). In our study, we have disentangled these two dimensions of formal contracts by looking in detail at the impact of different contractual safeguards (i.e., the controlling dimension and the coordinating dimension) on legal fees.

The controlling side of the formal contract defines the rights and obligations of the involved parties (Lyons and Mehta, 1997). It gives exchange partners the right to sanction a party that does not perform according to the primary agreement. In that way, adding contractual control clauses to a contract may reduce the risk of costly defection or rent misappropriation because it is easier to detect and deal with divergence from the agreed terms of the exchange. In our initial example, the contract—empty of specific control clauses that inspect and monitor the partner’s activities—did not allow the French firm to check the progress made by the Austrian firm. With such explicit provisions, parties could have incorporated enforcement features in a manner that is verifiable (and hence enforceable) by a third party (Srinivasan and Brush, 2006). Moreover, contractual

control can specify sanctions and penalties that encourage fulfillment of contractual obligations and can help resolve disputes when they arise through supervision and monitoring mechanisms or penalty clauses.

Although the controlling function of contracts has been the most common focus of prior research, our study points out the role of the coordinating function of formal contracts. In addition to enhancing control, formal contracts may also help to define the objectives of the relationship, assign tasks among partners, or more generally serve as a framework to guide coordination (Mooi and Ghosh, 2010) and facilitate convergence of expectations (Malmgren, 1961), leading to a common understanding of what goals exchange partners wish to pursue and how they want to achieve these goals. Thus, the coordinating function of a contract refers to the organization of goals, priorities, and programs for the future; the ordering of the desires and expectations between or among the transacting parties; and the adjustment of individual behaviors to accommodate schedules and functions selected for mutual endeavors (Lumineau & Malhotra, 2011; Ryall and Sampson, 2009). As our findings suggest, even in instances when opportunistic behavior arises during an exchange, coordinating clauses in a contract may still facilitate communication and information sharing based on the detailed task descriptions and a greater understanding of the assignment of roles and responsibilities of each party. To refer back to our initial example, the contract explicitly mentioned the priorities for each partner and the interfaces to jointly manage the French and Austrian companies' collaboration. Clear lines of communication actually have been acknowledged as a key element of harmonious resolution in conflict situations (Cummings, 1984). Furthermore, for given transaction characteristics, the coordinating dimensions of the contract help to encourage and support knowledge building and to reduce exchange uncertainty. Over time, coordination shapes the emergence of shared understanding and common knowledge such as language and routine interactions between

exchange partners (Puranam et al., 2006). Their support of processes of feedback and efficient adjustments (Heath and Staudenmayer, 2000) may explain why they make handling cases of opportunistic dispute easier. Such coordinative aspects foster effective exchange and learning processes between trading firms, for instance, by detailing a process to redefine the objective or to reassign tasks among firms during their relationship.

#### *Dimensions of the formal contracts and forms of opportunism*

Our findings also suggest that the extent of controlling and coordinating clauses embedded in a formal contract may differentially affect the form of opportunistic behavior that one is likely to encounter during transaction execution.

Control provisions (such as those specifying regular on-time delivery assessments or assurance inspections) reduce the ability of exchange partners to deviate from duties or obligations codified in the formal contract. They increase monitoring and scrutiny of partners' activities (Provan, 1993; Provan and Skinner, 1989) and help to check actions that are verifiably in conflict with codified contractual terms (Klein, 1996; Klein and Murphy, 1988). It would explain why, as we observed in our sample, increased contractual control tends to reduce strong form opportunism. At the same time, 'when the balloon of opportunistic behavior is poked in one place by the blunt instrument of rational . . . control, it readily yields but re-emerges elsewhere in ways that may make it more difficult and costly to detect and curtail' (Ghoshal and Moran, 1996: 24). Thus, such control provisions may have a different effect on weak form opportunism. Indeed, surveillance-oriented governance mechanisms consistently have been shown to have negative effects on attitudes toward the targeted behavior (Enzle and Anderson, 1993; Lepper and Greene, 1975). Monitoring tools and other control provisions implemented by the trading partners may

therefore divert opportunistic actions away from actions codified in the written legal document toward actions and norms in the informal zones of the agreement (Nagin et al., 2002).

Furthermore, when coordinating clauses are included in a formal contract, partners may be in a better position to communicate, establish, and maintain an interorganizational interface and make internal adjustments in response to a partner's change in action. In fact, by facilitating interaction among participants on a project, coordinating aspects improve mutual adjustment (Thompson, 1967) and mutually satisfactory compromise (Gundlach et al., 1995). As such, one would expect that violations of the contractual agreement would be reduced through the inclusion of more coordination clauses. Such features would particularly be well suited in preventing opportunistic actions that are unobservable—or observable but not verifiable by a third party—because they foster an ongoing and reciprocal pattern of interactions between the parties (Klein, 1996; Srinivasan and Brush, 2006). As our findings suggest, coordination provisions could reduce the likelihood of weak form opportunistic behavior by enabling firms to have a common understanding of their agreement. However, because coordination clauses rarely specify explicit rights and obligations, their impact on strong form opportunism is likely to be overlooked. Again, our findings suggest possible avenues for additional research on the different dimensions of contractual governance and their distinctive influences.

#### **IMPLICATIONS FOR FURTHER RESEARCH**

Our exploratory study has five main implications for research on the strategic organization of contracting and opportunism. First, whereas opportunism has a central position in TCE, there is still a need to clarify how it manifests itself in an exchange relationship. Operationalizing a construct involves checking whether it is uni- or multidimensional (Tsang, 2006). Our study is among the first to investigate the underlying mechanisms of this core behavioral assumption.

This effort to theoretically and empirically distinguish strong form versus weak form opportunism thus contributes to reinforcing the foundation of TCE's precepts. Our exploratory analysis of the multifaceted nature of opportunism is also a first step in helping to learn how it could be controlled more effectively (Luo, 2007). We thus specifically call for more research in this direction.

Second, our detailed observations suggest that the different functions of the contract should be further incorporated into the governance literature. In line with Williamson's (1991) theoretical insights, our empirical analysis suggests that different governance mechanisms possess inherent efficacy in handling opportunism and must be evaluated with respect to particular opportunistic disturbances. Taking this multidimensionality into account could benefit further research in TCE because it could help to explain how firms can strategically react to opportunistic disturbances and thus minimize some transaction costs. More broadly, we suggest that viewing the contractual governance through an overall lens is overly restrictive. By disentangling the two contractual dimensions of control and coordination, we further assess the dimensionalization of governance and the relative efficacy of alternative modes of organization. Our study extends here recent research on the strategic importance of "legal astuteness" as a valuable managerial capability that may provide a competitive advantage (Bagley, 2008). We thus call for greater awareness of both the different dimensions of contracts—e.g., control and coordination—and their multiple functions in specific contexts—e.g., organizing a transaction, preventing opportunism, or reacting to opportunism. The strategic organization literature could thereby extend our efforts to analyze the different facets of contractual design.

Third, this study complements recent studies on self-enforcing agreements in management literature (Mesquita and Brush, 2008; Srinivasan and Brush, 2006). Although formal contracts are traditionally presented as enforceable by a third party but inflexible, our findings suggest that

coordination clauses are a means to help firms partly reap the benefits of flexibility and enforceability. This contractual dimension actually may combine some features of enforceability of formal contracts and flexibility of self-enforcing agreements. Such provisions may have some of the characteristics of flexibility of relational contracts because they allow parties to use their detailed knowledge of their specific situation and to adapt to new information as it becomes available. At the same time, because they occur in the framework of a legal device, they may be observable ex post by a third party. It therefore suggests that the relevant question is not just to know what to write in the contract but also how to write the contract. Governance choices not only have to be considered given initial transaction attributes but also in light of their efficacy to face ex post contingencies. Our study therefore suggests promising directions to explain why firms may decide to include coordinative provisions in their formal contract even if such terms cannot be easily enforced by third parties (Ryall and Sampson, 2009).

Fourth, by leveraging our information regarding relational contracts, we introduced a distinction among competitive, cooperative, or nonexistent relational contracts. Not only did we devise a coding scheme, but we also suggest that this distinction extends prior research, which typically has considered relational contracts simply by evaluating only whether there were prior ties (e.g., Zollo et al., 2002). Evaluating presence as well as substance, we believe, provides a much better measure of relational contracting mechanisms. We invite additional inquiry to extend this qualitative distinction and to leverage it to probe the interplay of formal and informal governance mechanisms.

Fifth, we also see great opportunities to extend our work by looking more precisely at what constitutes the violation of a norm.<sup>8</sup> Beyond the existing governance structure and economic incentives, complementary work considering the firm as an arena for political leadership would

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<sup>8</sup> We thank an anonymous reviewer for pointing us in this direction.

be valuable. It would be particularly interesting to study how managers can inspire firm members to transcend short-term self-interest and induce cooperativeness (Miller, 1992). The political skills of leaders may influence the shared perceptions of the organizational actors (Miller, 1992) and, in particular, their perception of weak form opportunism. We thus see avenues for future research on contracting mechanisms and opportunism bridging the literature about organizational economics and organizational behavior.

### **LIMITATIONS AND CONCLUSION**

First, some of the most important limitations come from the selection bias inherent in the sample available from our data source: law firm case notes. Our comparison of contracts in our sample with available benchmarks mitigates this concern because it suggests that our sample is quite representative of the broader universe of interorganizational relationships. Moreover, we do not observe disputes between exchange partners unless they escalate to the point in which lawyers become involved. We therefore may be observing a biased sample skewed toward the most serious disputes and the most challenging disturbances. In addition, our sample of disputes collected through a law firm may be biased toward disputes in which the legal issues related to the formal contract are prominent. Disputes involving less legal expertise and dealing mainly with the relational aspects of the agreement may be less likely to go through lawyers. Such a possibility may partly explain the lack of significance of relational contracts in our tests.

Second, we believe that contractual measurement deserves further research. It is likely that some clauses are more important than others (1) in general and/or (2) from one transaction to another. It is also likely that there exist some interaction effects (positive or negative) between some sets of clauses.

Third, the central thrust of this article has been to offer insights into contracting mechanisms and opportunism. Our study was conducted essentially on firms from continental European countries with a legal system based on civil law. Future research in other institutional settings and areas would be valuable to confirm or discount our observations.

Fourth, we focused on legal fees for the firms represented by the law firm from which we collected data. On the one hand, extensions could be made to include transactions for which law firms are not used to guaranteeing enforcement. On the other hand, we ignore the internal side of costs related to the resources mobilized within each firm involved in the relationship or their opportunity costs. There are many opportunities to probe more deeply into the different transaction costs at each stage of an interfirm relationship (e.g., front end versus back end) and to understand how they relate to each other. Complex contracts provide for flexible responses to opportunistic conditions; at the same time, inclusion of more contract terms leads to higher ex ante costs (Anderson and Dekker, 2005; Mooi and Ghosh, 2010). Thus the insertion of additional contract clauses affects the ex ante costs of negotiating and writing the contract and the ex post costs associated with monitoring and enforcement (Dyer and Chu, 2003; Scott and Triantis, 2006). We call for more research to understand the trade-off between efficiently managing opportunism and economizing on governance costs. We especially consider that viewing opportunism as a policy variable that is subject to cost-benefit assessments represents an important avenue for further research and practice in the field of strategic organization.

In summary, despite these limitations, our study reveals some thought-provoking patterns. Our unique data set has enabled us to develop a more detailed understanding of interorganizational opportunism and strategic organization of contracting. We hope that our study brings more attention to the role of contractual governance in dealing with opportunism.

**TABLE 1**  
**Descriptive statistics of the deals**

	Mean	S.D.	Min.	Max.
Type of transaction				
Distribution	0.35	0.48	0	1
Services	0.08	0.28	0	1
IT	0.26	0.44	0	1
Production	0.29	0.45	0	1
International (Dummy variable with a value of 0 for relationships between firms from the same country and 1 for international relationships)	0.46	0.50	0	1
Revenues asymmetry between parties (Log [Absolute value [(Revenue of Firm A)-(Revenue of Firm B)] in thousands of inflation-adjusted Euros for the year in which the contract was signed). Data for this measure come from Bureau van Dijk's AMADEUS database.	7.66	0.96	5.16	10.28
Time bound (Dummy variable reflecting the presence (1) or absence (0) of a prespecified duration of the relationship)	0.65	0.47	0	1
Technical detail (Log of the number of pages of technical specifications in the contract or its appendix)	1.18	1.40	-0.69	4.8
Asset specificity (Based on a content analysis of the legal file to look for references to tailored assets that support a given transaction, which cannot be redeployed easily outside of a particular exchange relationship)				
Human assets (Dummy variables indicating the presence (1) or absence (0) of specialized skills, training needs, specific knowledge about a supplier's particular product, and time and effort that go into learning about a supplier's specific requirements)	0.53	0.50	0	1
Physical assets (Dummy variables indicating the presence (1) or absence (0) of specialized assets for production, specialized production equipment, related interorganizational systems that link buyer and supplier production, and scheduling activities)	0.46	0.50	0	1
Site assets (Dummy variables indicating the presence (1) or absence (0) of idiosyncratic investments in facilities and investment in dedicated facilities specific to this relationship)	0.21	0.41	0	1

$N = 102$

**TABLE 2**  
**Examples of statements for each form of opportunism**

<i>Form of opportunism</i>	<i>Examples of statements</i>
Strong form opportunism	<ul style="list-style-type: none"> <li>- ‘You cheated on the agreed terms and provisions written in our contract.’</li> <li>- ‘Your firm is deviating from the conditions specified in our contract.’</li> <li>- ‘I remind you that Article 4 requires that . . . therefore, firm . . . does not fulfill its written commitments.’</li> </ul>
Weak form opportunism	<ul style="list-style-type: none"> <li>- ‘You are not honoring your oral promise and are not respecting our implicit understanding.’</li> <li>- ‘You withheld important information and thereby breached our unspoken promises.’</li> <li>- ‘This lack of honesty does not coincide with the spirit of our agreement.’</li> </ul>

**TABLE 3**  
**Forms of opportunism and legal fees**

*Column (1):* only control variables

*Column (2):* strong form opportunism = 1 versus weak form opportunism = 0

*Column (3):* absence/presence of strong form opportunism (0/1) and absence/presence of weak form opportunism (0/1)

*Column (4):* intensity of strong form opportunism: (# of messages with strong form opportunism) / (# of messages with weak form opportunism + # of messages with strong form opportunism)

*Column (5):* number of messages of strong form opportunism and number of messages of weak form opportunism

	Legal fees				
	(1)	(2)	(3)	(4)	(5)
Opportunism (0/1)		0.82*** (0.06)			
Weak form opportunism (0/1)			-0.40*** (0.11)		
Strong form opportunism (0/1)			0.50*** (0.12)		
Intensity of strong form opportunism				0.99*** (0.10)	
Weak form opportunism (# of messages)					-0.07** (0.02)
Strong form opportunism (# of messages)					0.10*** (0.02)
Technical detail	-0.08* (0.04)	-0.05* (0.02)	-0.07* (0.03)	-0.06* (0.02)	-0.08** (0.03)
Time bound	-0.14 (0.10)	0.03 (0.06)	-0.03 (0.09)	0.03 (0.07)	-0.04 (0.08)
Asymmetry	-0.00 (0.05)	0.01 (0.03)	0.01 (0.04)	0.02 (0.03)	0.02 (0.04)
International	-0.00 (0.10)	0.09 (0.06)	-0.00 (0.08)	0.06 (0.07)	0.04 (0.08)
Asset specificity – Human	0.06 (0.11)	0.00 (0.07)	0.06 (0.09)	0.00 (0.08)	0.04 (0.08)
Asset specificity – Physical	-0.20† (0.11)	-0.08 (0.07)	-0.17† (0.10)	-0.13 (0.08)	-0.16† (0.09)
Asset specificity – Site	-0.13 (0.15)	0.04 (0.09)	0.01 (0.12)	0.04 (0.10)	-0.02 (0.11)
Prior relationship	-0.13 (0.11)	-0.06 (0.06)	-0.13 (0.09)	-0.11 (0.07)	-0.14 (0.08)
Distribution	-0.09 (0.14)	-0.14† (0.08)	-0.23† (0.12)	-0.16 (0.10)	-0.11 (0.11)
Services	-0.01 (0.20)	-0.05 (0.12)	-0.13 (0.17)	-0.13 (0.14)	-0.14 (0.15)
IT	-0.04 (0.14)	-0.01 (0.08)	-0.13 (0.12)	-0.12 (0.09)	-0.10 (0.10)
Constant	2.08*** (0.43)	1.24*** (0.27)	1.77*** (0.38)	1.21*** (0.31)	1.68*** (0.34)
R <sup>2</sup>	0.21	0.71	0.45	0.61	0.53
Adj R <sup>2</sup>	0.11	0.67	0.36	0.56	0.46

$N = 102$ ; †  $p < 0.10$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ . Standards errors are in parentheses.

**TABLE 4**  
**Examples of statements for each dimension of the formal contract**

<i>Type of clauses</i>	<i>Examples of statements</i>
Clauses of control	<ul style="list-style-type: none"> <li>- Right to audit/inspection: ‘Firm A maintains the right to audit Firm B’s manufacturing facility for conformance . . .’</li> <li>- Safeguard/hostage clause: ‘Upon termination of the agreement, the Manufacturer shall repurchase the product stock from the Distributor . . .’</li> <li>- Control/inspection by a third party: In a contract between Firm A and Firm B to supply product for final customer Firm C: ‘Firm C may at all reasonable times visit Firm A’s facilities and observe the work being performed.’</li> <li>- Penalty clause: ‘If Firm A fails to complete and deliver on the specified dates . . . Firm A shall pay Firm B liquidated damages at the rate of [X] Euros per day of delay.’</li> <li>- Termination/resolution clause: ‘In the event the obligations of one of the Parties do not comply with the articles referred to hereunder, the contract shall be, if required by the creditor of the said obligations, cancelled, by giving notice of such termination . . .’</li> </ul>
Clauses of coordination	<ul style="list-style-type: none"> <li>- Assignment of roles and responsibilities: ‘All development work will be performed by Developer or its employees at Developer’s offices or by approved independent contractors who have executed confidentiality and assignment agreements that are acceptable to the Client.’</li> <li>- Indications of duration and conditions of renewal: ‘This Agreement is made for a term of three years. The Agreement shall be renewed automatically at the end of three years unless . . .’</li> <li>- Operational coordination related to reassignment of tasks among participants: ‘On completion of Phase 1, Parties agree to discuss the allocation of resources to the task.’</li> <li>- Strategic coordination: ‘The 2nd-stage specific objectives will be defined by the Parties through mutual consultations after completion of the 1st-stage objectives.’</li> <li>- Dispute resolution provision: ‘Any dispute arising out of or in connection with this Agreement shall be settled without recourse to the courts . . .’</li> </ul>

**TABLE 5**  
**Examples of statements for relational contracts**

<i>Type of relational contract</i>	<i>Examples of statements</i>
Cooperative relational contract	<ul style="list-style-type: none"> <li>- ‘The parties have been working together for five months in a cooperative way. Mr. XYZ [the manager in charge of the project] especially points out ‘the collaborative and trusting atmosphere’ of their relationship with Firm B’s team.’</li> <li>- ‘It is now the third time Firm A and Firm B are doing business together. They first worked together in 2002 on . . . They also worked together in 2004 for the implementation of . . . Technicians and engineers from both parties have developed strong ties. They even used to go out and play soccer together.’</li> <li>- ‘The ABC project is the first transaction between Firm A and Firm B. So far, each party seems to have been really willing to share information on their own business. When they faced this issue on . . . in November, the commercial people were very flexible and spent much time to adapt and look for a joint solution.’</li> </ul>
Competitive relational contract	<ul style="list-style-type: none"> <li>- ‘Firm A and Firm B started to work together in 2001. In spite of regular tensions, both parties look very committed into this relationship. According to Mr. XYZ [the CEO] and Mr. ZYX [the vice president], it would be unreasonable to look for another trading partner, especially after their investment in this unique 400,000-Euro robot.’</li> <li>- ‘Very soon after the beginning of the deal, parties have reported mutual rigidity. After the first meeting, parties reciprocally accused the other of rigidity and selfishness.’</li> <li>- ‘Frictions have been frequent from the beginning of Firm A–Firm B relationship in 2000. Firm B regularly blames unhelpful behavior of Firm A’s managers, while Firm A reproaches Firm A for being obstructive.’</li> </ul>

**TABLE 6**  
**Descriptive statistics by subsamples**

	<i>Overall sample</i> <i>N = 102</i>			<i>Repeat exchange = 0</i> <i>N=69</i>			<i>Repeat exchange = 1</i> <i>N = 33</i>			<i>Cooperative relational contract = 1</i> <i>N = 17</i>			<i>Competitive relational contract = 1</i> <i>N = 13</i>		
	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range
Contractual control	2.813	1.487	0-5	2.869	1.474	0-5	2.696	1.530	0-5	2.647	1.729	0-5	2.846	1.405	0-5
Contractual coordination	2.568	1.389	0-5	2.681	1.366	0-5	2.333	1.428	0-5	2.529	1.328	0-5	2.076	1.656	0-5
Sum contractual complexity	5.401	1.915	0-10	5.060	2.304	0-10	5.565	1.693	0-10	5.235	2.411	0-10	4.923	2.325	2-9
Forms of opportunism at the onset	0.490	0.502	0-1	0.492	0.503	0-1	0.484	0.507	0-1	0.529	0.514	0-1	0.461	0.518	0-1
Intensity of strong form opportunism	0.528	0.369	0-1	0.524	0.363	0-1	0.535	0.387	0-1	0.573	0.385	0-1	0.526	0.412	0-1
Legal fees	1.688	0.512	0.113-2.330	1.704	0.470	0.113-2.330	1.656	0.599	0.301-2.324	1.706	0.601	0.301-2.324	1.593	0.635	0.301-2.283

**TABLE 7a**  
**Type of contracting mechanisms and legal fees**

	Legal fees			
	(1)	(2)	(3)	(4)
Contractual control		-0.27*** (0.04)	-0.27*** (0.04)	-0.28*** (0.04)
Contractual coordination		-0.14*** (0.03)	-0.16*** (0.03)	-0.15*** (0.03)
Prior relationship			-0.18* (0.08)	-0.17 (0.24)
Cooperative relational contract				0.09 (0.25)
Competitive relational contract				-0.10 (0.25)
Technical detail	-0.07† (0.04)	0.03 (0.03)	0.02 (0.03)	0.02 (0.03)
Time bound	-0.11 (0.10)	0.19 (0.12)	0.12 (0.12)	0.17 (0.13)
Asymmetry	-0.01 (0.05)	-0.01 (0.04)	-0.00 (0.04)	0.01 (0.04)
International	0.01 (0.10)	-0.15† (0.08)	-0.17* (0.08)	-0.15† (0.08)
Asset specificity – Human	0.03 (0.11)	0.18† (0.09)	0.21* (0.09)	0.24* (0.09)
Asset specificity – Physical	-0.20† (0.11)	-0.08 (0.09)	-0.08 (0.09)	-0.07 (0.09)
Asset specificity – Site	-0.15 (0.14)	0.06 (0.12)	0.10 (0.12)	0.04 (0.12)
Distribution	-0.07 (0.14)	-0.14 (0.11)	-0.17 (0.11)	-0.17 (0.11)
Services	0.00 (0.20)	-0.06 (0.15)	-0.10 (0.15)	-0.11 (0.15)
IT	-0.02 (0.13)	-0.06 (0.11)	-0.09 (0.10)	-0.09 (0.10)
Constant	2.08*** (0.43)	2.85*** (0.38)	2.92*** (0.37)	2.77*** (0.39)
R <sup>2</sup>	0.19	0.51	0.53	0.54
Adj R <sup>2</sup>	0.11	0.44	0.46	0.46

$N = 102$ ; †  $p < 0.10$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ . Standards errors are in parentheses.

**TABLE 7b**  
**Types of contracting mechanisms and forms of opportunism**

*Columns 1a to 4a:* Probit (binary measure of opportunism at the onset of the dispute: strong form = 1; weak form = 0)  
*Columns 1b to 4b:* OLS (measure of the intensity of strong form opportunism relative to the total number of messages exchanged between the partners about opportunism)

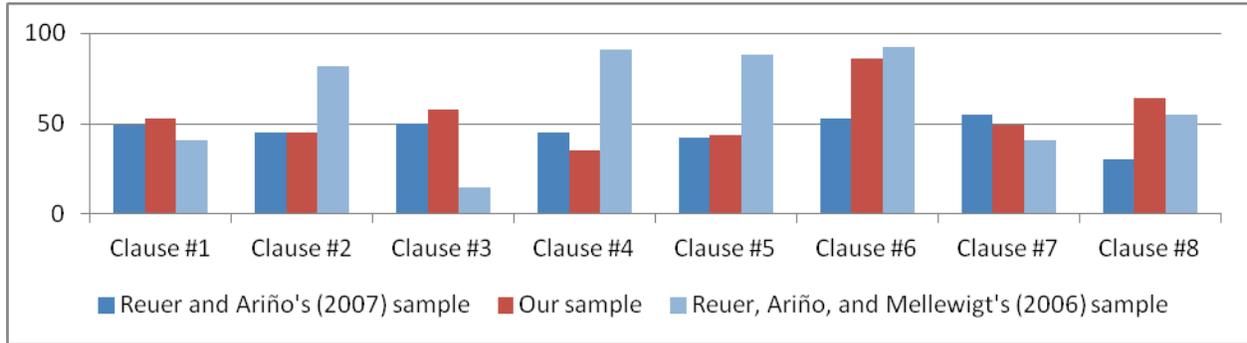
	Types of opportunism							
	(1a)	(2a)	(3a)	(4a)	(1b)	(2b)	(3b)	(4b)
Contractual control		-0.84*** (0.23)	-0.87*** (0.24)	-0.96*** (0.26)		-0.09** (0.03)	-0.09** (0.03)	-0.10** (0.03)
Contractual coordination		-0.79*** (0.21)	-0.92*** (0.23)	-0.92*** (0.23)		-0.09** (0.03)	-0.10** (0.03)	-0.10** (0.03)
Prior relationship			-0.72† (0.42)	-1.07 (3.21)			-0.06 (0.07)	-0.12 (0.20)
Cooperative relational contract				0.71 (3.21)				0.10 (0.22)
Competitive relational contract				-0.07 (3.23)				0.03 (0.22)
Technical detail	-0.11 (0.12)	0.24 (0.17)	0.21 (0.17)	0.24 (0.18)	-0.01 (0.02)	0.03 (0.03)	0.03 (0.03)	0.03 (0.03)
Time bound	-0.62* (0.30)	-0.47 (0.62)	-0.83 (0.67)	-0.55 (0.73)	-0.17* (0.07)	-0.12 (0.10)	-0.15 (0.11)	-0.13 (0.11)
Asymmetry	-0.11 (0.15)	-0.19 (0.19)	-0.13 (0.20)	-0.08 (0.21)	-0.02 (0.03)	-0.03 (0.03)	-0.02 (0.03)	-0.02 (0.03)
International	-0.34 (0.29)	-1.04** (0.38)	-1.19** (0.41)	-1.14** (0.42)	-0.06 (0.07)	-0.14* (0.06)	-0.15* (0.07)	-0.13† (0.07)
Asset specificity – Human	0.11 (0.33)	0.52 (0.39)	0.70† (0.42)	0.86† (0.45)	0.04 (0.08)	0.09 (0.07)	0.10 (0.08)	0.11 (0.08)
Asset specificity – Physical	-0.41 (0.31)	-0.10 (0.40)	-0.12 (0.41)	-0.08 (0.41)	-0.06 (0.08)	-0.02 (0.07)	-0.02 (0.07)	-0.01 (0.08)
Asset specificity – Site	-0.78† (0.44)	-0.13 (0.52)	0.07 (0.55)	-0.12 (0.59)	-0.18† (0.10)	-0.07 (0.10)	-0.05 (0.10)	-0.07 (0.11)
Distribution	0.35 (0.42)	0.04 (0.49)	-0.12 (0.50)	-0.14 (0.50)	0.07 (0.10)	0.03 (0.09)	0.02 (0.09)	0.01 (0.09)
Services	0.27 (0.58)	0.02 (0.68)	-0.19 (0.69)	-0.17 (0.69)	0.11 (0.14)	0.08 (0.13)	0.06 (0.09)	0.06 (0.13)
IT	-0.01 (0.41)	-0.40 (0.52)	-0.59 (0.54)	-0.60 (0.54)	0.08 (0.10)	0.07 (0.09)	0.06 (0.09)	0.06 (0.09)
Constant	1.69 (1.31)	6.31** (2.01)	6.86** (2.14)	6.45** (2.18)	0.87** (0.31)	1.35*** (0.32)	1.37*** (0.32)	1.31*** (0.34)
LR $\chi^2$	26.27	58.47	61.54	62.73				
Pseudo R <sup>2</sup>	0.18	0.41	0.43	0.44				
R <sup>2</sup>					0.20	0.33	0.33	0.34
Adj R <sup>2</sup>					0.11	0.24	0.24	0.22

$N = 102$ ; †  $p < 0.10$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ . Standards errors are in parentheses.

**TABLE 8**  
**Formal contracts by subsamples**

	<i>Competitive relational contract</i>	<i>No relational contract</i>	<i>Cooperative relational contract</i>
<i>More than three contractual control clauses and fewer than three coordination contractual clauses</i>	4 cases (i.e., 30.7% of the cases with competitive relational contract)	21 cases (i.e., 30.4% of the cases with no relational contract)	4 cases (i.e., 23.5% of the cases with cooperative relational contract)
<i>Fewer than three contractual control clauses and more than three contractual coordination clauses</i>	1 case (i.e., 7.7% of the cases with competitive relational contract)	12 cases (i.e., 17.4% of the cases with no relational contract)	5 cases (i.e., 29.4% of the cases with cooperative relational contract)

**FIGURE 1**  
**Comparison of samples**



Frequency of the presence of clause  $x$  in Reuer and Arino's (2007) sample (88 alliances involving Spanish firms of various sizes from a variety of industries) and Reuer et al.'s (2006) sample (66 alliances in the German telecommunications industry).

Clause #1: periodic written reports of all relevant transactions

Clause #2: prompt written notice of any departures from the agreement

Clause #3: the right to examine and audit all relevant records through a firm of CPAs

Clause #4: designation of certain information as proprietary and subject to confidentiality provisions of the contract

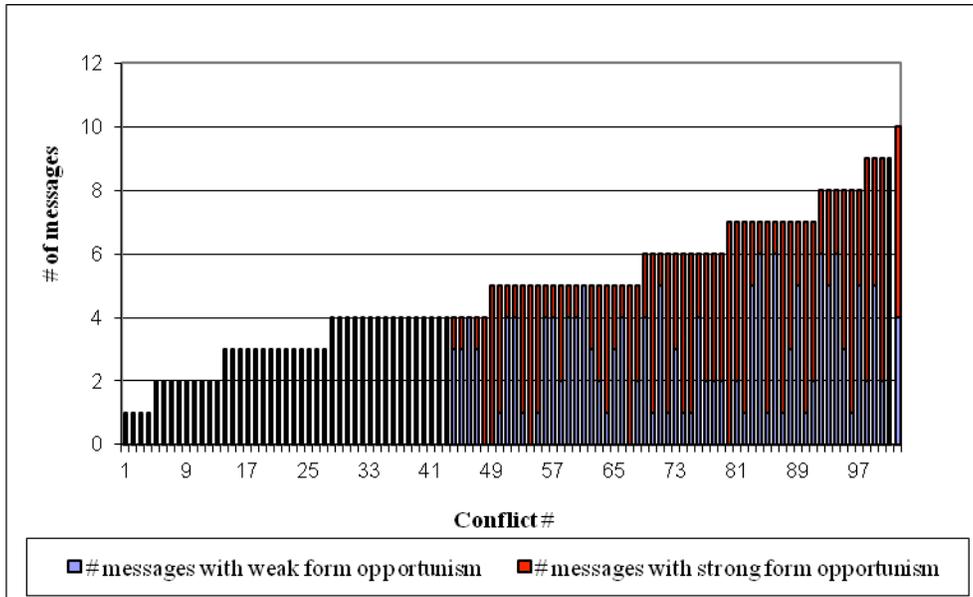
Clause #5: non-use of proprietary information even after termination of agreement

Clause #6: termination of agreement

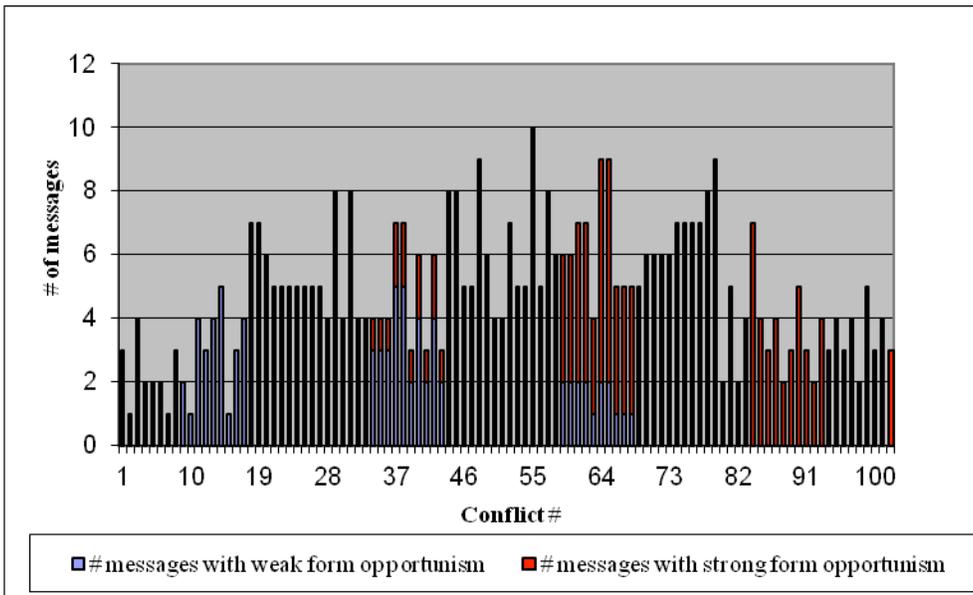
Clause #7: arbitration clauses

Clause #8: lawsuit provisions

**FIGURE 2a**  
**Plot of the messages about opportunism**  
**(ranked by the total number of messages about opportunism)**

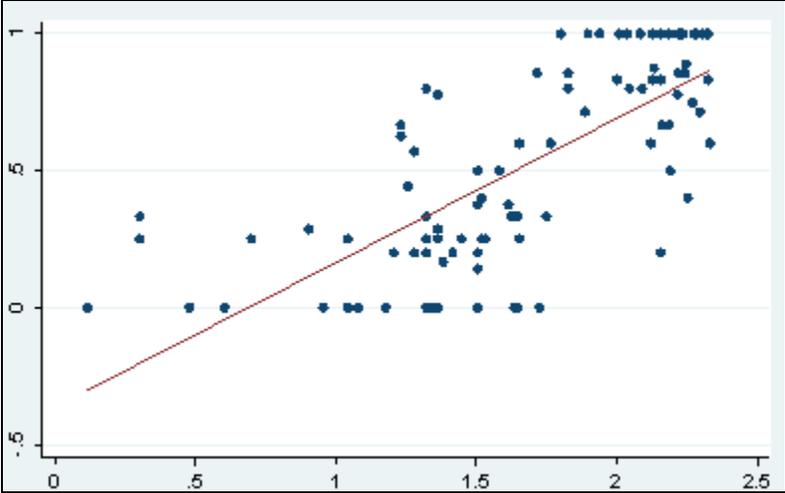


**FIGURE 2b**  
**Plot of the messages about opportunism**  
**(ranked by the proportion strong versus weak about opportunism)**



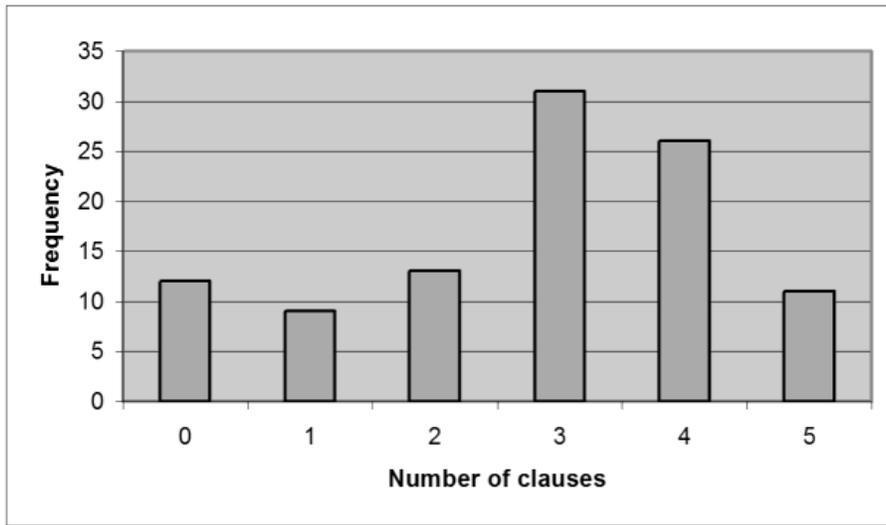
**FIGURE 3**  
**Intensity of strong form opportunism and legal fees**

*Intensity of  
strong form  
opportunism*



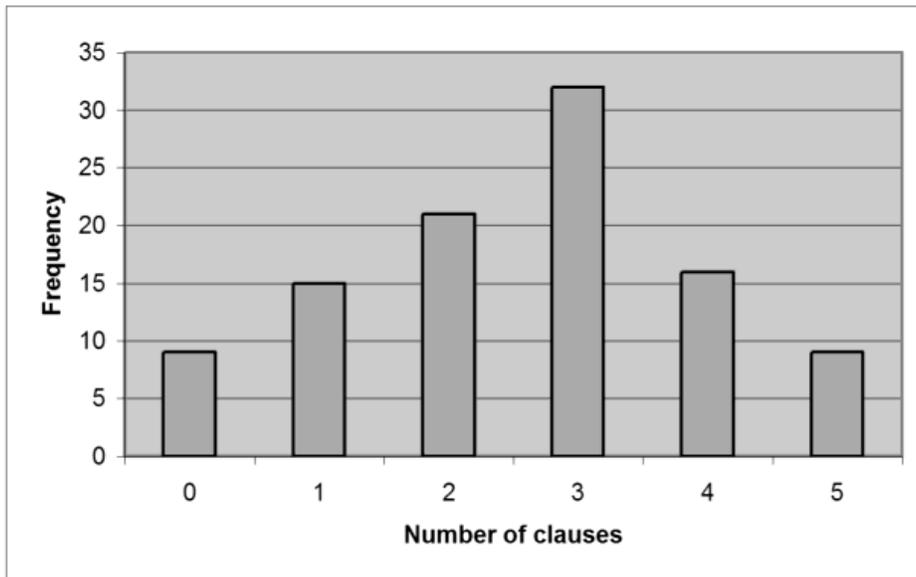
*Legal fees*

**FIGURE 4a**  
**Clauses of contractual control: Distribution**



$N = 102$

**FIGURE 4b**  
**Clauses of contractual coordination: Distribution**



$N = 102$

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