

**Zeitschrift:** Schweizerische Zeitschrift für Forstwesen = Swiss forestry journal = Journal forestier suisse  
**Herausgeber:** Schweizerischer Forstverein  
**Band:** 158 (2007)  
**Heft:** 12

**Artikel:** Governance of supplier-customer relations : an empirical review  
**Autor:** Bingen Sande, Jon  
**DOI:** <https://doi.org/10.5169/seals-1097946>

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# Governance of supplier-customer relations: An empirical review

Jon Bingen Sande Norwegian University of Life Sciences (NO)\*

## Governance of supplier-customer relations: An empirical review

The forest industry is riddled with exchange relationships. The parties to exchanges may have diverging goals and interests, but still depend upon each other due to non-redeployable specific assets. Formal and relational contracts may be used to deal with the resulting cooperation problems. This paper proposes a framework based on transaction cost economics and relational exchange theory, and examines to what extent empirical research has found formal and relational contracts to deal with three different governance problems. To that end, I review the results from 32 studies in a range of settings. These studies generally support the view that exchanges characterized by high degrees of specific assets should be supported by formal and relational contracts.

**Keywords:** asset specificity, formal contracts, relational contracts, transaction cost economics, marketing  
**doi:** 10.3188/szf.2007.0406

\* Department of Ecology and Natural Resource Management, P.O.Box 5003, NO-1432 Ås,  
E-Mail: jon.bingen.sande@umb.no

The forest-based industries are characterized by a value chain with many different production stages: from forest management and operations, via a wide range of intermediate production stages in both the solid wood products industry and the pulp and paper industry, to the final production of products as varied as houses, furniture, paper boxes and photographic film (figures 1–3). Organizations typically specialize in different parts of the value chain. The most basic problem in value chains is the coordination problem: how the actors can make coherent decisions about their individual actions (Milgrom & Roberts 1992). One outcome of the efforts to coordinate is often that the different actors and organizations in the value chain adapt their production systems, product designs, logistical systems, ordering systems and other information technology systems to each other. Investment costs are often associated with such adaptation, and therefore they tend to be specialized to the needs of a specific user such as partner, supplier or customer, leading to the creation of specific assets. Specific assets are «durable investments that are undertaken in support of particular transactions, the opportunity cost of which is much lower in best alternative uses or by alternative users, should the transaction be prematurely terminated» (Williamson 1979, 1994).

As already indicated by the different ways that firms adapt to each other, there are a number of different types of specific assets (Williamson 1985). *Physical asset specificity* means that firms or organizations adapt physical assets such as machinery, tooling, and equipment to each other. *Human asset specificity* means that human assets, like knowledge, systems, and routines, are specifically adapted to the other partner. Examples in the forest industry may include a log supplier adapting its log grading and sorting systems to the needs of one or several sawmills, a sawmill adapting lumber grades to particular customer, or that they invest particularly adapted delivery routines or specialized training of own or partner employees. *Site specificity* is often inevitable in the forest industry. This arises partly due to high raw material costs in the forest industry and to high transportation costs. At the same time, the forest resources are spread across large rural areas. This means that markets for many forest products, in particular roundwood, may consist of a very limited number of suppliers and customers, sometimes just one of each. The value of the forest then depends on the willingness and ability of a particular mill to pay for the roundwood from the local forest, and the value of the mill depends on the price it has to pay for the roundwood. Finally, parties to an exchange

**Fig 1** Roundwood transport by ship.  
Photo: Klausner Holz



may invest in *dedicated assets*: assets that have no value outside the particular relationship (Williamson 1985).

When investments in specific assets are made, the relationship between the parties is fundamentally transformed from an *ex ante* large numbers bidding condition to an *ex post* bilateral monopoly (Williamson 1985). The specific assets may be viewed as the outcome of coordination efforts. When parties have made such efforts, they need to agree on how to split the extra surplus that result from these coordination efforts (Ghosh & John 1999; Jap 1999, 2001). The primary difficulty of splitting the surplus is that, somehow, the parties need to reconcile and subordinate their disparate goals (Grant 1996). This difficulty is termed the cooperation problem.

Developed principally by Williamson (1971, 1975, 1979, 1985, 1991a), transaction cost economics deals with how economic actors enable cooperation and how parties to an exchange in an economizing way can reconcile their disparate goals. It gives insight into the comparative properties of mechanisms for structuring exchange relationships and, based on an efficiency criterion, explicitly identifies the conditions under which different structural arrangements are appropriate (Heide & John 1992). Therefore, it has repeatedly been argued for its importance in the strategy, organization, and marketing literatures (e.g., Foss 1996; Nickerson et al 2001; Teece 1984; Williamson 1991b, 1999), and it has reached a position as one of the major frameworks in the literature on marketing exchange relationships (Ghosh & John 1999, Joshi & Stump 1999a)

manifested in a large number of empirical applications (see surveys by e.g., Anderson 1996, Rindfleisch & Heide 1997, David & Han 2004, Macher & Richman 2006).

Traditionally, the emphasis in empirical transaction cost economics has been to analyze the choice between governance structures, such as market, hybrid or vertical integration (e.g., Williamson 1991a, 1971). During the last couple of decades however, a shift has taken place towards developing and testing theories that describe the variation within hybrid or inter-organizational relationships and how they should be governed. In doing this, transaction cost economists have relied particularly on MacNeil's (1978, 1980) relational exchange theory.

This shift has coincided with a shift in business practices. Organizations have increasingly tried new organizational forms by divesting and outsourcing activities that do not require exploitation of their «core competences», or the knowledge in which they have decided to specialize. This trend has had an impact in the forest industry as well. Both in Northern Europe and North America, forest industry companies have spun out their forest assets to separate forest investment management organizations or pure-play forest operating companies. The tradition of vertically integrating both buyers (pulp and paper mills) and suppliers (sawmills) of chips has in many cases been abandoned. Considering the increased emphasis on ensuring coordination in the forest industry value chains through inter-organizational linkages, it becomes important to understand how organizations can ensure cooperation through inter-organizational relations.



With a few exceptions (e.g., Leffler & Rucker 1991, Svendsen 2005) a limited number of studies have performed empirical, quantitative studies of inter-organizational relations in the forest industry. The position of this paper is that more studies on this topic in the forest industry are needed. In order to do such research, I review the theoretical and empirical literature on inter-organizational governance. Considering to what extent theory has received empirical support in other settings, it provides a better basis both for giving well-founded advice to managers and policy makers in the forest industry, as well as for conducting research in the forest industry. In this paper I identify some of the most important variables in the transaction cost economics framework and examine how empirical research has found them to be related to each other. Reviewing 32 empirical studies I find that increased asset specificity is typically found to be positively related to the use of formal and relational contracts.

The paper proceeds as follows. In section 1, I describe three governance problems arising from three attributes of a transaction in the context of inter-organizational relationships. In sections 2 and 3, I discuss formal and relational contracts. In section 4, I review empirical evidence on the relationships between transaction attributes and formal and relational contracts, and in section 5, I discuss implications for management and research in the forest industry.

### **Governance problems and governance in hybrid relationships**

Transaction cost economics views the transaction as the basic unit of analysis. It rests on three behavioral assumptions, bounded rationality, opportunism, and risk neutrality; and identifies three attributes of a transaction, asset specificity, environmental and behavioral uncertainty, and frequency

**Fig 2** Timber Cluster  
Wismar (Mecklenburg-  
Vorpommern).

Photo: Klausner Holz



**Fig 3** Planed material. Photo: Klausner Holz



(Williamson 1979, 1985, 1991a). In addition, a measurement branch of transaction cost economics has been developed, emphasizing how economic actors may have difficulties evaluating performance (Alchian & Demsetz 1972, Williamson 1985). These different attributes give rise to different governance problems.

Williamson (1985) argues that the most important attribute of transactions is specific assets, in particular because of the earlier mentioned fundamental transformation. Assuming bounded rationality, the parties cannot verify *ex ante* if the other party is prone to opportunistic behavior. Any party having done investments then faces a safeguarding problem as the party that has not undertaken the specific investments have incentives to appropriate a fraction of the rents from those specific investments (Heide 1994, Klein et al 1978, Rindfleisch & Heide 1997). An adaptation problem may arise because of environmental uncertainty. Bounded rationality renders it impossible for the parties to write

complete contracts specifying all future contingencies (Williamson 1991a). Finally, reflecting the measurement branch of transaction cost economics, in connection with ascertaining whether contractual compliance has taken place, an evaluation problem may arise because of bounded rationality and behavioral uncertainty (Alchian & Demsetz 1972, Heide 1994, Rindfleisch & Heide 1997). Most studies include proxy measures of frequency as a control variable (such as annual purchasing volumes or values in relationships), but few studies have examined frequency explicitly (Rindfleisch & Heide 1997). Due to this limited attention in the empirical literature, I do not address frequency in this study.

The central position of transaction cost economics is that governance structures, which differ in their costs and competencies, should be aligned with the attributes of transactions in a mainly transaction cost minimizing way, in order to effect an economizing result (Williamson 1981, 1991a). In other words, firms should choose governance struc-

tures that fit with the governance problems they face. Governance structure has been defined as «the institutional framework within which the integrity of a transaction is decided» and «transactions are negotiated and executed» (Williamson 1979). The classical governance structures that have been studied by transaction cost economics are markets and hierarchies. Between markets and hierarchy, Williamson (1991a) suggested, are hybrid relationships.

Many empirical researchers regard understanding hybrid relationships as a major challenge (Rindfleisch and Heide 1997), and they have criticized Williamson's (1985) work for not providing operational dimensions of governance structures. Instead, it has been suggested that the conceptualization of governance as a continuum from market, via hybrid to hierarchy is a «second-order» (i.e., more abstract) conceptualization that disregards how inter-firm governance is a multidimensional phenomena encompassing the initiation, termination and ongoing relationship maintenance between a set of parties (Heide & John 1990, 1992; Heide 1994). Inter-organizational relations are therefore often studied by developing and testing theories that describe relationships and the use of «first-order» governance mechanisms such as formal contracts (e.g., Joskow 1987, Poppo & Zenger 2002), relational contracts (e.g., Heide & John 1992), dependence balancing (e.g. Heide and John 1988), monitoring (e.g., Noordewier et al 1990), centralization (e.g., Berthon et al 2003), use of market incentives (Haugland et al 2005), and pre-qualification of partner abilities and motivation (e.g., Wathne & Heide 2004). This paper considers the use of two of these mechanisms, formal and relational contracts.

### Formal contracts

Contracts are agreements (Llewellyn 1931), promises or obligations to perform particular actions in the future (MacNeil 1978), actions that one would not have done was it not for the fact that the other party would do his or her part of the agreement (Lewis 1969). Contracts have a legal aspect (Llewellyn 1931), and from a transaction cost economics point of view, their main function is to facilitate alignment of incentives, and prevent *ex post* opportunistic behavior. Another important aspect is that formal, written contracts may serve as «blueprints of the exchange» (Ryall & Sampson 2003). They strengthen the certainty with which the agreement is common knowledge to the parties (that both parties know what the agreement is, and both parties know that they both know this). There is less scope for communication problems and misunderstandings.

Contracts are most often described according their complexity, that is, the number and stringency of the provisions employed (Arinjo & Reuer 2004). Consistent with this, the most common ways in which formal contracts have been operationalized in the inter-organizational literature is to use the Weberian bureaucratic model and detect to what extent hierarchy is built into the agreement (e.g., Spekman & Stern 1979, John 1984, Lusch & Brown 1996). Building on Stinchcombe (1985), Heide (1994) suggested that inter-organizational governance aimed at maintaining a relationship can be described along six governance processes that can be built into contracts: (1) role specification, (2) planning, (3) adjustment processes, (4) monitoring procedures, (5) incentive systems, and (6) means of enforcement. Empirical work in marketing and strategy typically concentrate on only a few of these dimensions (e.g., Lusch & Brown 1996, Stump & Heide 1996, Buvik & Haugland 2005) or on more general aspects, such as contract length (in pages), duration, complexity, formality, or how detailed the contract is (e.g., Joskow 1988, Cannon et al 1999, Poppo & Zenger 2002).

### Relational contracts

Relational contracts, or norms, may be understood as shared expectations about behavior based on standards of proper conduct (Pfeffer & Salancik 1978, Opp 1979, MacNeil 1980, Heide & John 1992, Scott 2001). With the notion of norms being standards of proper conduct, as opposed to standards of conduct, one avoids the pitfall of treating the actors as either over- or under-socialized atomists, against which both MacNeil (1980) and Granovetter (1985) warn. Norms are not simply preprogrammed behavior, but principles that are influenced by the entire social matrix. Norms external to the relationship (e.g., not stealing) therefore also affect the relationship.

Another way to understand relational norms are as implicit, self-enforcing agreements (Gibbons 2005) based on agent's common knowledge of the context and past of the relationship. In contractual relations, norms are necessary because formal contracts can never accurately describe the relationship. Contracts are often also intentionally left incomplete, allowing for adaptation as circumstances change (Macaulay 1963, MacNeil 1980, Stinchcombe 1985, Williamson 1985). Serving to guide and control behavior, norms provide stability over time (Opp 1979), allowing the parties in an exchange to do what they are expected to do without having to think out the terms of the exchange at each point in time and at each instance (Ivens and Blois 2004).

**Tab 1** Empirical support for formal contract complexity in 13 studies.

governance problem	positive relationship	positive, but it depends...	insignificant relationship	negative relationship
asset specificity	5 tests: Joskow 1987, Lyons 1994, Poppo & Zenger 2002, Haugland et al 2005, Svendsen 2005	4 tests: Jap & Ganesan 2000, Buvik & Reve 2001, Buvik & Reve 2002, Buvik & Haugland 2005	2 tests: Reuer et al 2003, Wuyts & Geyskens 2005	
environmental uncertainty			2 tests: Dwyer & Welsh 1985, Wuyts & Geyskens 2005	3 tests: Crocker & Masten 1988, Lyons 1994, Poppo & Zenger 2002
behavioral uncertainty		1 test: Poppo & Zenger 2002	1 test: Wuyts & Geyskens 2005	

Relational norms can therefore be regarded as a part of the contract between parties and a governance mechanism, relational contracts, in its own right.

MacNeil presented a long list of different and overlapping norms relating to contracting (Ivens & Blois 2004, MacNeil & Campbell 2001). It has therefore proven difficult for empirical researchers to apply the norm concept in a consistent way. After surveying the empirical norm literature to identify how norms had been dimensionalized and operationalized, Ivens (2002) found a core set of ten norms: (1) long-term orientation, (2) role integrity, (3) relational planning, (4) mutuality, (5) solidarity, (6) flexibility, (7) information exchange, (8) conflict resolution, (9) restraint in the use of power, and (10) monitoring behavior. It is evident that there are no clear boundaries between all the norms.

## Empirical evidence

### The review

In order to examine how the different variables in the framework are related to each other, I first developed a set of hypotheses about how these variables should be related to each other. In short, they stated that transaction attributes may motivate or de-motivate the use of formal and relational contracts. If an attribute motivates a particular governance mechanism, a positive association should be observed (and vice versa). Thus, these reduced-form hypotheses are commonly tested in the empirical literature by regressing transaction attributes onto governance mechanisms. Another common test is to test for moderating effects of formal or relational contracts on the relationship between any one of the governance problems and an outcome variable that is usually performance, transaction costs, opportunism, or centralization. The latter tests the causal structure of the theory more directly. Another question examined was if formal and relational contracts complement or substitute each other. Tests for complementarity typically involve examining both correlations between gov-

ernance forms and how they interact in affecting outcomes (Athey & Stern 1998).

I have largely relied on previous reviews of transaction cost economics to identify studies examining formal and relational contracts. The surveys I relied on were Shelanski & Klein (1995), Crocker and Masten (1996), Rindfleisch & Heide (1997), David & Han (2004) surveying transaction cost economics, Arinjo and Reuer (2004) surveying alliance contract design, and Ivens (2002) surveying relational exchange theory. Additionally, a search in the last few years' issues of some of the major strategy and marketing journals was performed. This resulted in the identification of 32 studies that have examined the relationships between transaction attributes and formal and relational contracts.

I will be brief regarding methods employed in these 32 studies, since this topic is well covered in the surveys by Anderson (1996), Rindfleisch & Heide (1997) and David & Han (2004). In general, it can be noted, that survey questionnaires with multi-item construct measurements is the most common method, followed by a smaller number of studies using archival data, and a few using experimental data. Typical analytical tools are structural equation modeling, partial least squares, or other multivariate techniques often combined with regression analysis. As noted by David & Han (2004), the key constructs have been measured in a great variety of ways. The reduced-form tests assume that competition has weeded out inefficient solutions (Anderson 1996). Thus, most tests have been conducted in competitive industries such as electric components, ball and roller bearings, industrial chemicals, paint (Anderson 1996), sawmilling, fishery, and coal mining. Typically, the tests are performed in single industries, a practice that makes it easier to control for third variables and making the results more reliable.

### Results

Tables 1–3 provide an overview of empirical contributions that have examined the relationship between governance problems and formal and relational contracts. The tables illustrate whether a par-

**Tab 2** Empirical support for relational contracts in 20 studies. \* Governance problems in these studies are found to be positively associated with some norms, not related to some norms, and negatively related with others norms.

governance problem	positive relationship	positive, but it depends ...	insignificant relationship	negative relationship
<b>asset specificity</b>	<b>10 tests:</b> Heide & John 1990, Heide & John 1992, Heide & Stump 1995, Gundlach et al 1995, Brock Smith & Barclay 1997, Bello & Gilliland 1997, Achrol & Gundlach 1999, Poppo & Zenger 2002, Rokkan et al 2003, Haugland et al 2005	<b>1 test:</b> Heide 1994	<b>6 tests:</b> Heide & John 1990*, Joshi & Stump 1999b, Berthon et al 2003, Rokkan et al 2003, Haugland et al 2005, Svendsen 2005	
<b>environmental uncertainty</b>	<b>3 tests:</b> Noordewier et al 1990, Buvik & John 2000, Poppo & Zenger 2002, Wathne & Heide 2004*		<b>2 tests:</b> Heide & John 1990*	<b>6 tests:</b> Heide & John 1990*, Heide & Stump 1995, Joshi & Stump 1999b, Bello & Gilliland 1997, Bello et al 2003, Wathne & Heide 2004*
<b>behavioral uncertainty</b>			<b>2 tests:</b> Heide & Miner 1992, Poppo & Zenger 2002	<b>1 test:</b> Stump & Heide 1996

ticular study has found support for a positive or negative relationship, if the relationship was insignificant or if it depended on some third variable (column «positive, but it depends ...»).

A main conclusion is that the relationship between asset specificity and formal and relational contracts are the only relationships that have received relatively solid support for a positive relationship. A positive relationship was supported in 9 out of 11 tests for formal contracts, and in 11 out of 17 tests for relational contracts. Several of these studies support a positive relationship only under certain circumstances. In particular, it has been found that relationship duration and phase (Jap & Ganesan 2000, Buvik & Haugland 2005), and the balance or imbalance of dependency (Buvik & Reve 2002) and specific investments (Buvik & Reve 2001) interact with asset specificity in their effect on formal contracts. Additionally, Bucklin & Sengupta (1993) found that the presence of a formal contract significantly reduced the perception of power imbalances in the relationships. Some studies have examined several different norms, so that some studies have provided both support and rejection of the propositions (marked with \* in table).

Few studies have found more formal or relational contracts in the face of environmental or behavioral uncertainty. Overall, the reviewed studies

seem to indicate that «looser» organizational structures are preferred under higher uncertainty. This conclusion becomes stronger for the case of environmental uncertainty when we consider that studies have found a negative association between environmental uncertainty and contract completeness (Crocker & Masten 1991, Crocker & Reynolds 1993, Ghosh & John 2005). With higher uncertainty, the need for flexibility seems to dominate the need for contractual precision. Some studies have, however, shown environmental uncertainty to interact with asset specificity (Buvik & John 2000, Poppo & Zenger 2002), behavioral uncertainty (Poppo & Zenger 2002) or other variables (Wathne & Heide 2004) in its effect on governance or in determining the effectiveness of the governance mechanisms. Overall, the number of tests is small and fragmented, so it is impossible to draw strong conclusions.

Five studies have found contract complexity and relational norms to be complements, meaning that the effect of formal contracting on relationship outcomes increases if the relationship is also governed by relational contracts. For example, Cannon et al (2000) found when market dynamism or task ambiguity is high, an increased degree of legal bonds will only increase supplier performance if the level of cooperative norms is high. Without cooperative norms, increasing legal bonds would decrease supplier performance. Poppo & Zenger (2002) found that as managers increase the use of relational contracts, their formal contracts tended to get more customized as well, and that increases in both governance mechanisms increased performance. Wuyts & Geyskens (2005) criticize the practice of comparing relational contracts (norms) with formal contracts, because it confounds the governance decision with relationship quality (the degree of norms such as

	substitutes	complements
<b>Are formal and relational contract complements or substitutes?</b>	<b>1 test:</b> Wuyts & Geyskens 2005	<b>5 tests:</b> Achrol & Gundlach 1999, Cannon et al 2000, Haugland et al 2005, Lazzarini et al 2004, Poppo & Zenger 2002

**Tab 3** Empirical support for relationship between formal and relational contract in six studies.

solidarity, flexibility or information exchange may be viewed as synonymous with relationship quality). Instead, they measure to what extent purchasing relationships were governed with contracts and to what extent the supplier was selected based on experience from close previous cooperation. When testing, it turned out that if the selection of a particular supplier relied on experience from close previous cooperation with that supplier, detailed contract drafting increased opportunism, thereby supporting a hypothesis about substitution.

## Discussion and conclusion

### Managerial implications

The theories presented in this paper give normative guidelines as to how managers can analyze relationships and make trade-offs and decisions. An analysis may use the model depicted in figure 4 as a blueprint for developing a relationship. The model illustrates the links that have received strong and weak support in empirical research. As a first step, we need to assess the desired level of specific investments in a relationship. As noted in the introduction, there are several different types of specific investments, and we find all of them in the forest industry.

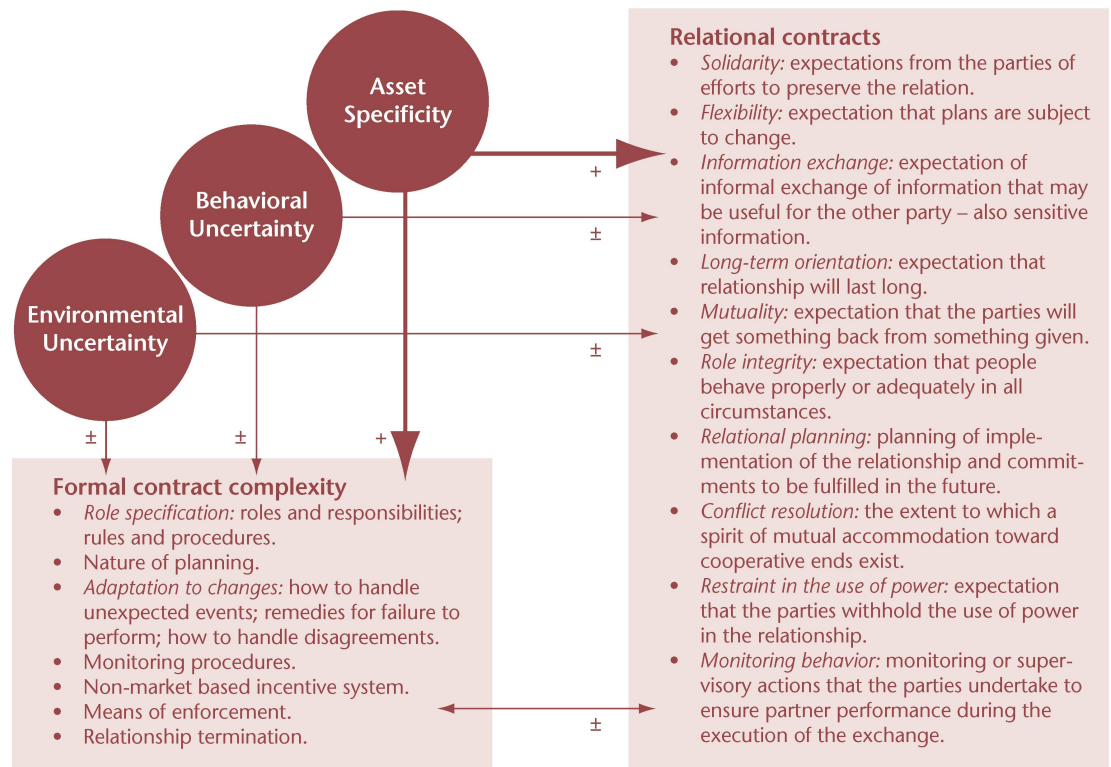
Asset specificity is important in order to improve coordination between the parties in the value chain, and thereby value creation. These kinds of

investments can also be seen as ways for companies to implement their competitive strategies. For a company to outperform rivals, it has to establish a difference that it can preserve (Porter 1996). That difference must be higher value to customers, creating comparable value at a lower cost, or doing both, and it may easily involve specific assets (Ghosh & John 1999). For example, to what extent a sawmilling company is able to position itself as a cost-leader, utilize the roundwood efficiently, maintain speed and volume in production, or to what extent it can differentiate itself from competitors by bringing extra benefits to customers in the form of higher quality lumber, better logistics and particularly adapted qualities and dimensions. All of these examples almost inevitably involve specific assets.

As the desired level of specificity has been assessed, we need to examine the desired level of governance. This study has shown that with *high degrees of specific assets, one should employ high degrees of formal and relational contracts*. An implication of this is that the firm must ensure that they have the ability to employ both formal and relational contracts.

We should further assess sources of uncertainty, such as volume uncertainty, technological uncertainty and behavioral uncertainty. The empirical evidence is ambiguous about how these factors should be judged. They may make using formal and relational contracts so costly that it may reduce the desirability of investing in specific assets in the first place or increase the desirability of employing ver-

**Fig 4** A blueprint for managerial action based on propositions that have received strong and weak support in empirical research. Strong support for a positive relationship is illustrated by a thick arrow; weak support for any relationship is illustrated by a thin arrow.<sup>1</sup>



<sup>1</sup> definitions based on Williamson 1985, Heide & John 1990, Heide & John 1992, Noordewier et al 1990, Rindfleisch & Heide 1997, Brock Smith & Barkley 1997, Cannon et al 2000, Ivens 2002, Ivens & Blois 2004

tical integration, joint ventures or other equity based governance forms. They may also encourage more use of formal and relational contracts. Managers should also carefully evaluate how formal and relational contracts affect with each other.

### Implications for research

A marketing perspective, with its ability to understand exchange, should be productive in the forest industry. With a value chain characterized by many different stages and business-to-business marketing relations, the perspectives of transaction cost economics and relational exchange theory should be particularly useful because it explains how value can be brought to the customer while efficiently utilizing the productive assets of all the parties. Transaction-cost economics makes predictions and invites comparing them with the empirical data. As indicated, a wide range of different types of governance mechanisms may be examined, of which only two types were dealt with here. Other mechanisms and structures that are relevant in the forest industry are market versus hierarchy, degree of taper integration or dual distribution, contract design more specifically, pre-qualification procedures, compensation and incentive issues, organization of product development, and strategic alliances.

Second, and as evident in this paper, several areas are still poorly understood, in particular relating to uncertainty and the complementarity of formal and relational contracts. The results of the surveys by David & Han (2004) and Rindfleisch & Heide (1997) provide motivation for research on transaction cost economics more generally as the main propositions of transaction cost economics have only received modest empirical support. The predictions regarding uncertainty have fared poorly in empirical testing. These reviews also suggest that there are serious methodological flaws in current research on transaction cost theory, which invites efforts to improve methodology. As pointed out by Dahlstrom & Nygaard (2005) and Carter & Hodgson (2006), findings in empirical studies may have alternative explanations, and they need to be tested for. In conclusion, better empirical work is needed to test the causal structure of transaction cost economics. Other areas that may prove fruitful avenues for research are the examination of knowledge processes and the role of governance in such processes (see e.g., Foss 2005), as well as combinations of transaction cost economics with strategic positioning analysis and the resource-based view (e.g., Ghosh & John 1999, Nickerson et al 2001). The forest industry should be a useful setting for developing and testing theories about how organizations cooperate and coordinate. ■

## References

- ACHROL RS, GUNDLACH GT (1999) Legal and social safeguards against opportunism in exchange. *J Retailing* 75 (1): 107–124.
- ALCHIAN AA, DEMSETZ H (1972) Production, information costs, and economic organization. *Amer Econ Rev* 62: 777–795.
- ANDERSON E (1996) Transaction cost analysis and marketing. In: Groenewegen J, editor: *Transaction cost economics and beyond*. Boston: Kluwer. pp. 65–84.
- ARINJO A, REUER JJ (2004) Alliance contractual design. Barcelona: Universidad de Navarra, IESE Business School, Anselmo Rubiralta Center for Globalization and Strategy, Working Paper 572. 23 p.
- ATHEY S, STERN S (1998) An empirical framework for testing theories about complementarity in organizational design. NBER working paper 6600. 38 p.
- BELLO DC, CHELARIU C, ZHANG L (2003) The antecedents and performance consequences of relationalism in export distribution channels. *J Bus Res* 56:1–16.
- BELLO DC, GILLILAND DI (1997) The effect of output controls, process controls, and flexibility on export channel performance. *J Marketing* 61 (1): 22–38.
- BERTHON P, PITT LF, EWING MT, BAKKELAND G (2003) Norms and power in marketing relationships: alternative theories and empirical evidence. *J Bus Res* 56: 699–709.
- BROCK SMITH J, BARCLAY DW (1997) The effects of organizational differences and trust on the effectiveness of selling partner. *J Marketing* 61 (11): 3–21.
- BUCKLIN LP, SENGUPTA S (1993) Organizing successful co-marketing alliances. *J Marketing* 57 (2): 32–46.
- BUVIK A, HAUGLAND SA (2005) The allocation of specific assets, relationship duration, and contractual coordination in buyer-seller relationships. *Scand J Manage* 21: 41–60.
- BUVIK A, JOHN G (2000) When does vertical coordination improve industrial purchasing relationships? *J Marketing* 64 (4): 52–64.
- BUVIK A, REVE T (2001) Asymmetrical deployment of specific assets and contractual safeguarding in industrial purchasing relationships. *J Bus Res* 51: 101–113.
- BUVIK A, REVE T (2002) Inter-firm governance and structural power in industrial relationships: the moderating effect of bargaining power on the contractual safeguarding of specific assets. *Scand J Manage* 18: 261–284.
- CANNON JP, ACHROL RS, GUNDLACH GT (2000) Contracts, norms, and plural form governance. *J Acad Market Sci* 28: 180–194.
- CANNON JP, PERREAULT J, WILLIAM D (1999) Buyer-seller relationships in business markets. *J Marketing Res* 36: 439–460.
- CARTER R, HODGSON GM (2006) The impact of empirical tests of transaction cost economics on the debate on the nature of the firm. *Strategic Manage J* 27: 461–476.
- CROCKER KJ, MASTEN SE (1988) Mitigating contractual hazards: unilateral options and contract length. *RAND J Econ* 19: 327–343.
- CROCKER KJ, MASTEN SE (1991) Pretia ex machina? Prices and process in long-term contracts. *J Law Econ* 34: 66–99.
- CROCKER KJ, MASTEN SE (1996) Regulation and administered contracts revisited: lessons from transaction-cost economics for public utility regulation. *J Regul Econ* 9 (1): 5–39.
- CROCKER KJ, REYNOLDS KJ (1993) The efficiency of incomplete contracts: an empirical analysis of Air Force engine procurement. *RAND J Econ* 24: 126–146.

- DAHLSTROM R, NYGAARD A (2005) Measurement of transaction costs and falsification criteria: toward future directions in empirical research on transaction costs theory. In: James HS, editor. *New ideas in contracting and organizational economics research*. New York: Nova Science. pp. 89–103.
- DAVID RJ, HAN SK (2004) A systematic assessment of the empirical support for transaction cost economics. *Strategic Manage J* 25: 39–58.
- DWYER FR, WELSH MA (1985) Environmental relationships of the internal political economy of marketing channels. *J Marketing Res* 22: 397–414.
- FOSS NJ (1996) Knowledge-based approaches to the theory of the firm: some critical developments. *Organ Sci* 7: 470–476.
- FOSS NJ (2005) *The knowledge governance approach*. Copenhagen: Center Strategic Management Globalization Copenhagen Business School, SMG Working Paper 1 32 p.
- GHOSH M, JOHN G (1999) Governance value analysis and marketing strategy. *J Marketing* 63 (4): 131–145.
- GHOSH M, JOHN G (2005) Strategic fit in industrial alliances: an empirical test of governance value analysis. *J Marketing Res* 42: 346–357.
- GIBBONS R (2005) Four formal(izable) theories of the firm? *J Econ Behav Organ* 58 (October): 200–245.
- GRANOVETTER M (1985) Economic action and social structure: the problem of embeddedness. *Am J Sociol* 91: 481–510.
- GRANT RM (1996) Toward a knowledge-based theory of the firm. *Strategic Manage J* 17: 109–122.
- GUNDLACH GT, ACHROL RS, MENTZER JT (1995) The structure of commitment in exchange. *J Marketing* 59 (1): 78–92.
- HAUGLAND SA, REVE T, GRØNHAUG K (2005) *Governance modes in international business-to-business relationships*. Bergen: Norwegian School of Economics and Business Administration, working paper, unpublished. 42 p.
- HEIDE JB, JOHN G (1988) The role of dependence balancing in safeguarding transaction-specific assets in conventional channels. *J Marketing* 52 (1): 20–35.
- HEIDE JB, JOHN G (1990) Alliances in industrial purchasing: the determinants of joint action in buyer-supplier relationships. *J Marketing Res* 27: 24–36.
- HEIDE JB, JOHN G (1992) Do norms matter in marketing relationships? *J Marketing* 56 (2): 32–44.
- HEIDE JB, MINER AS (1992) The shadow of the future: effects of anticipated interaction and frequency of contact on buyer-seller cooperation. *Acad Manage J* 35: 265–291.
- HEIDE JB, STUMP RL (1995) Performance implications of buyer-supplier relationships in industrial markets: a transaction cost explanation. *J Bus Res* 32 (1): 57–66.
- HEIDE, JB (1994) Interorganizational governance in marketing channels. *J Marketing* 58 (1): 71–85.
- IVENS BS (2002) Governance norms in relational exchange: what we do know and what we do not know. IMP Group, Working Paper 428. 22 p. [impgroup.org/uploads/papers/402.pdf](http://impgroup.org/uploads/papers/402.pdf)
- IVENS BS, BLOIS KJ (2004) Relational exchange norms in marketing: a critical review of Macneil's contribution. *Marketing Theory* 4: 239–263.
- JAP SD (1999) Pie-expansion efforts: collaboration processes in buyer-supplier relationships. *J Marketing Res* 36: 461–475.
- JAP SD (2001) «Pie Sharing» in complex collaboration contexts. *J Marketing Res* 38: 86–99.
- JAP SD, GANESAN S (2000) Control mechanisms and the relationship life cycle: implications for safeguarding specific investments and developing commitment. *J Marketing Res* 37: 227–245.
- JOHN G (1984) An empirical investigation of some antecedents of opportunism in a marketing channel. *J Marketing Res* 21: 278–289.
- JOSHI AW, STUMP RL (1999A) Transaction cost analysis: integration of recent refinements and an empirical test. *J Bus Bus Mark* 5 (4): 37–71.
- JOSHI AW, STUMP RL (1999B) Determinants of commitment and opportunism: integrating and extending insights. *Can J Adm Sci* 16: 334–352.
- JOSKOW PL (1987) Contract duration and relationship specific investments: empirical evidence from coal markets. *Amer Econ Rev* 77: 168–185.
- JOSKOW PL (1988) Asset specificity and the structure of vertical relationships: empirical evidence. *J Law Econ Organ* 4: 95–117.
- KLEIN B, CRAWFORD R, ALCHIAN AA (1978) Vertical integration, appropriable rents, and the competitive contracting process. *J Law Econ* 21: 297–326.
- LAZZARINI SG, MILLER GJ, ZENGER TR (2004) Order with some law: complementarity versus substitution of formal and informal arrangements. *J Law Econ Organ* 20: 261–298.
- LEFFLER KB, RUCKER RR (1991) Transactions costs and the efficient organization of production – a study of timber harvesting contracts. *J Pol Econ* 99: 1060–1087.
- LLEWELLYN KN (1931) What price contract? An essay in perspective. *Yale Law J* 40: 704–751.
- LUSCH RF, BROWN JR (1996) Interdependency, contracting, and relational behavior in marketing channels. *J Marketing* 60 (4): 19–38.
- LYONS BR (1994) Contract specific investment: an empirical test of transaction cost theory. *J Econ Manage Strat* 3 (Summer): 257–278.
- MACAULAY S (1963) Non-contractual relations in business: a preliminary study. *Am Sociol Rev* 28: 55–67.
- MACHER JT, RICHMAN BD (2006) Transaction cost economics: an assessment of empirical research in the social sciences. *J Econ Lit*, submitted.
- MACNEIL I, CAMPBELL D (2001) *Relational Theory of Contract*. London: Sweet & Maxwell. 432 p.
- MACNEIL IR (1978) Contracts: adjustment of long-term economic relations under classical, neoclassical, and relational contract law. *Northwest U Law Rev* 72: 854–905.
- MACNEIL IR (1980) *The new social contract – an inquiry into modern contractual relations*. New Haven: Yale Univ Press. 165 p.
- MILGROM P, ROBERTS J (1992) *Economics, organization and management*. Upper Saddle River: Prentice-Hall. 621 p.
- NICKERSON JA, HAMILTON BH, WADA T (2001) Market position, resource profile, and governance: Linking Porter and Williamson in the context of international courier and small package services in Japan. *Strategic Manage J* 22: 251–273.
- NOORDEWIJER TG, JOHN G, NEVIN JR (1990) Performance outcomes of purchasing arrangements in industrial buyer-vendor relationships. *J Marketing* 54 (4): 80–93.
- OPP K (1979) The emergence and effects of social norms. A confrontation of some hypotheses of sociology and economics. *Kyklos* 32: 775–801.
- PFEFFER J, SALANCIK GR (1978) *The external control of organizations – a resource dependence perspective*. Stanford: Stanford Univ Press. 300 p.

- POPPO L, ZENGER T (2002) Do formal contracts and relational governance function as substitutes or complements? *Strategic Manage J* 23: 707–725.
- PORTER ME (1996) What is strategy? *Harvard Business Rev* 74 (6): 61–78.
- REUER JJ, ARINJO A, MELLEWIGT T (2003) Entrepreneurial alliances as governance form. Barcelona: Universidad de Navarra, IESE Business School, Anselmo Rubiralta Center for Globalization and Strategy, Working Paper 527. 22 p.
- RINDFLEISCH A, HEIDE JB (1997) Transaction cost analysis: past, present, and future applications. *J Marketing* 61 (4): 30–54.
- ROKKAN AI, HEIDE JB, WATHNE KH (2003) Specific investments in marketing relationships: expropriation and bonding effects. *J Marketing Res* 40: 210–224.
- RYALL MD, SAMPSON RC (2003) Do prior alliances influence contract structure? Evidence from technology alliance contracts. Rochester: University of Rochester, Bradley Policy Research Center, working paper FR 03–11. 49 p.
- SCOTT RW (2001) *Institutions and organizations*. Thousand Oaks: Sage. 2 ed. 255 p.
- SHELANSKI HA, KLEIN PG (1995) Empirical research in transaction cost economics – a review and assessment. *J Law Econ Organ* 11: 335–361.
- SPEKMAN RE, STERN LW (1979) Environmental uncertainty and buying group structure: an empirical investigation. *J Marketing* 43 (2): 54–64.
- STINCHCOMBE AL (1985) Contracts as hierarchical documents. In: Stinchcombe AL, Heimer CA, editors. *Organization theory and project management: administering uncertainty in Norwegian offshore oil*. Oslo: Norwegian Univ Press, Industriøkonomisk Institutt, Rapport 58. pp. 121–171.
- STUMP RL, HEIDE JB (1996) Controlling supplier opportunism in industrial relationships. *J Marketing Res* 33: 431–441.
- SVENDSEN MLF (2005) *Governing international customer relationships – the influence of product differentiation, customer market attractiveness, and relational capability*. Bergen: Norwegian School Economics Business Administration, Dissertations. 160 p.
- TEECE DJ (1984) Economic analysis and strategic management. *Calif Manage Rev* 26 (3): 87–110.
- WATHNE KH, HEIDE JB (2004) Relationship governance in a supply chain network. *J Marketing* 68 (1): 73–89.
- WILLIAMSON OE (1971) The vertical integration of production: market failure considerations. *Amer Econ Rev* 61 (2): 112–123.
- WILLIAMSON OE (1975) *Markets and hierarchies*. New York: Free Press. 286 p.
- WILLIAMSON OE (1979) Transaction cost economics: the governance of contractual relations. *J Law Econ* 22: 233–261.
- WILLIAMSON OE (1981) The modern corporation: origins, evolution, attributes. *J Econ Lit* 19: 1537–1568.
- WILLIAMSON OE (1985) *The economic institutions of capitalism*. New York: Free Press. 450 p.
- WILLIAMSON OE (1991A) Comparative economic organization: the analysis of discrete structural alternatives. *Adm Sci Q* 36: 269–296.
- WILLIAMSON OE (1991B) Strategizing, economizing, and economic organization. *Strategic Manage J* 12 (Winter): 75–94.
- WILLIAMSON OE (1994) Transaction cost economics and organization theory. In: Smelser NJ, Swedberg R, editors. *The Handbook of Economic Sociology*. Princeton: Princeton Univ Press. pp. 77–107.
- WILLIAMSON OE (1999) Strategy research: governance and competence perspectives. *Strategic Manage J* 20: 1087–1108.
- WUYTS S, GEYSKENS I (2005) The formation of buyer-supplier relationships: detailed contract drafting and close partner selection. *J Marketing* 69 (4): 103–117.

## Governance von Lieferanten-Kunden-Beziehungen: eine empirische Übersicht

Die Wald- und Holzwirtschaft ist geprägt von Tauschbeziehungen. Die Akteure haben zwar unterschiedliche Ziele und Interessen, sie sind jedoch wegen spezifischen Investitionen voneinander abhängig. Zur Beherrschung dieser Kooperationsprobleme können sowohl formale als auch relationale Verträge vereinbart werden. Der Beitrag schlägt einen auf der Transaktionskostenökonomik und der relationalen Vertragstheorie basierenden Rahmen vor und postuliert dann sieben Thesen zur Behandlung von drei verschiedenen Governanceproblemen mit Hilfe von formalen und relationalen Verträgen. Anhand von 32 Untersuchungen aus verschiedenen Branchen wird geprüft, inwieweit diese Thesen empirisch gestützt werden. Gesamthaft gesehen zeigt sich, dass Tauschbeziehungen, welche sich durch eine hohe Spezifität auszeichnen, mittels formalen und relationalen Verträgen abgesichert werden sollten.

## Gestion des relations entre fournisseurs et clients: un aperçu empirique

L'économie des forêts et du bois est caractérisée par ses relations d'échange. Malgré des objectifs et des intérêts divergents, les acteurs sont interdépendants du fait de la spécificité de leurs investissements. Des contrats formels et relationnels peuvent être conclus pour maîtriser ces problèmes de coopération. L'article propose un cadre basé sur l'économie des coûts de transaction et sur la théorie des contrats relationnels. Il formule ensuite sept thèses en vue de résoudre trois problèmes de gestion différents à l'aide de contrats formels et relationnels. L'auteur examine dans quelle mesure ces thèses peuvent être confirmées empiriquement sur la base de 32 études provenant de différentes branches. En général, ces études soutiennent le point de vue que les relations d'échange caractérisées par une grande spécificité devraient être garanties par des contrats formels et relationnels.