



Leveraging knowledge-based resources: The role of contracts

Stefanos Mouzas^{a,*}, David Ford^b

^a Lancaster University, Lancaster LA1 4YW, United Kingdom

^b Euromed Management, Marseille, France

ARTICLE INFO

Article history:

Received 1 July 2009

Received in revised form 1 June 2010

Accepted 1 November 2010

Available online 7 July 2011

Keywords:

Interaction

Resources

Knowledge

Contracts

ABSTRACT

Every firm faces the challenge of leveraging valuable resources in the form of the intellectual assets, know-how and expertise of itself and others around it. They can only achieve this through interaction with other idiosyncratically capable firms. But through interaction, resources, activities and actors themselves evolve in relation to each other. In this situation of complex business interaction and uncertainty, the conditions under which the respective knowledge and expertise can be leveraged often need to be expressed and manifested as joint consent between the involved parties. Designing an agreed platform for using knowledge-based resources of others poses a real challenge for many companies because the knowledge that firms need to access is inherently indeterminate and continually evolving. This study addresses this issue by investigating the role of contracts in leveraging knowledge-based resources. The study builds on an interactive view of resource leveraging in general and on ideas on knowledge-based resources in particular (Håkansson et al., 2009). The paper reports on empirical research conducted between 2003 and 2007 that examined real-world contracts in manufacturer–retailer networks. The study draws conclusions on the role of contracts in leveraging knowledge-based resources and more widely on the dialectic nature of resource transformation.

© 2011 Elsevier Inc. All rights reserved.

1. Introduction: business interaction and resources

Interaction between business actors appears to transcend interpersonal discussion or bargaining and is a substantive process involving the activities and resources of the involved actors (Ford & Håkansson, 2006b). Through this process, activities and resources and actors themselves evolve in relation to each other. The ubiquity of business interaction across the business landscape and the intensity of interaction in many inter-company relationships lead to the diversity of the business landscape as a whole. This diversity emphasizes the importance for each business actor of its relationships with specific counterparts, each associated with unique combinations of valuable activities and resources, either within the counterpart or accessible through its relationships with others. More profoundly, an interacted business landscape also has important implications for the nature of business resources (and activities and actors) in that landscape: A particular resource in such an interacted landscape is not a fixed entity, but is the outcome of its interactions with other resources. Hence the use and value of a resource is dependent on the particular combination and characteristics of other resources with which it interacts and is combined. Similarly, the nature of a particular

resource is the outcome of its continuing interactions with others over time. In other words, a particular business resource may have multiple identities in network space and time in the different interactions in which it is involved.

Each of the business relationships of a particular actor provides an interactive arena in which the resources of the involved actors can be combined and developed. Through interaction over time these resources will follow a particular co-evolutionary *path* of change and development for the benefit of the two counterparts leading to their growing inter-dependence with each other. Further, each of the dyadic relationships of an individual actor are connected with others forming a network-like structure that gives access to and affects a wide array of more or less distant resources. This structure involves multiple interactive processes through which a particular resource is confronted and combined with different others in different relationships also produces a *tension* in the evolution of that resource.

The growing technological and financial intensity of business operations provides an incentive for companies to limit the proportion of the resources needed for their operations that they hold in-house and to increase their dependence on the resources of particular counterparts. Seeking, developing and managing productive relationships with multiple counterparts under conditions of resource inter-dependence, uncertainty and tension becomes a critical task for managers. This management task is complex enough in the case of existing physical resources, even though those resources involve long-term and often dedicated investment and re-investment.

* Corresponding author. Tel.: +44 77 666 45 275.

E-mail addresses: S.Mouzas@lancaster.ac.uk (S. Mouzas), David.Ford@euromed-management.com (D. Ford).

But at least these physical resources can be readily identified and assessed and their ownership, location and use are relatively clear. But business relationships are also concerned with the respective expertise and knowledge of counterparts and how that knowledge is embedded in multiple activities, resources and individual actors and in different relationships (Becker, 2001; Conner & Prahalad, 1996; Håkansson & Waluszewski, 2007a, 2007b; Kogut & Zander, 1992).

The dichotomy between 'knowledge' and 'knowing', suggested by Cook and Brown (1999), calls for a closer examination of the logic of interaction as opposed to the logic of possession. Cook and Brown (1999, p. 387) specify that "[b]y 'knowing' we do not mean something that is used in action or something necessary to action, but rather something that is part of action (both individual and group action)". This shares some similarities with the widely accepted distinction between 'know-what' and 'know-how' (Loasby, 1999). While 'know-what' is usually understood as information that can be articulated, stored and disseminated, 'know-how' is associated with the actors' resources or their knowledge to access idiosyncratic resources of others. The management task for counterpart actors is made more complex in this particular situation:

The development of a business actor is enabled by the extent to which through interaction it is able to leverage the knowledge and expertise resources of counterparts. At the same time, that development is more or less constrained in its direction by the actor's dependence on others (Håkansson & Ford, 2002).

It is how this process takes place and how resource interaction can be facilitated through contractual arrangements that form the unifying ideas of this study. Within the recent business and management literature exists a growing interest in contracts as repositories of knowledge and platforms for learning processes (Argyres, Bercovitz, & Mayer, 2007; Argyres & Mayer, 2007; Mayer & Argyres, 2004). The need to effectively leverage valuable knowledge in the form of intellectual assets, know-how and expertise is increasingly crucial because a great deal of business activity appears to be occurring via strategic partnerships, alliances or other forms of inter-firm arrangements (Reuer & Arino, 2007). However, many contractual arrangements fail to perform as enablers of resource interaction because of high transaction costs, information asymmetry or symmetric ignorance of business opportunities. Leveraging the resources of others is likely to require a different architecture of inter-firm contracting which is open-textured and capable of integrating complex, dispersed and incomplete knowledge on a continuing basis.

This paper builds on notions of interaction and resource interaction, based on empirical research conducted between 2003 and 2007 to examine real-world contracting in manufacturer–retailer networks. The paper argues that inter-firm knowledge is not what companies learn cognitively, but the indeterminate outcome of complex interactions over recursive time based on an agreed set of rules and principles. As the complexity of interaction increases, companies choose umbrella agreements as contract forms that balance the need for certainty and calculability of interaction with the need to remain sufficiently flexible to respond to unforeseen contingencies and embrace new or emerging business opportunities.

An understanding of the leveraging of knowledge-based resources requires us to go beyond the logic of possession and examine leveraging as an integrative part of the interaction process. Also, an investigation of the role of contracts can help us to understand how companies deal with the complexities of interaction and the uncertainties that are involved in it. Leveraging resources has a re-ordering and re-confirming function. Leveraging resources is neither pre-specified nor predetermined, but is subject to joint consent, both tacit and explicit.

2. Contracting and resource leveraging

Capitalizing on the knowledge-based resources of others enables companies to address problems by transforming aspects of their

available resources, activities and themselves (Kogut & Zander, 1992; Nickerson & Zenger, 2004). Contract scholarship has started to be concerned with learning and resource transformation (Argyres et al., 2007; Argyres & Mayer, 2007; Mayer & Argyres, 2004). More importantly, contract scholarship has started to look at the exact form or design of contracts and considers contract design as a *firm capability*. Contract design capabilities involve learning what provisions to include in a contract and recent has examined critical types of contractual provisions, such as contingency planning and task description. This research provides evidence that continuing interaction between firms may lead to greater effort at contingency planning in subsequent contracts (Argyres et al., 2007). Similarly, studies of contract design in partnerships in bioscience, fine chemicals, biotechnology and biopharmaceuticals emphasize the risks of contractual arrangements and pay attention to the inclusion of revision clauses, hardship and force majeure clauses and dispute resolution mechanisms. Studies of contractual provisions in R&D relationships suggest that leveraging inter-firm knowledge is likely to continue as long as market threats remain limited and perceived technological complementarities remain extensive (Faems, Janssens, Madhok, & Van Looy, 2008).

The growing interest in contracting as *firm capability* raises three further issues with regard to the problems in achieving resource transformation: Firstly, the increasing complexity of interaction (Argyres & Mayer, 2007; Håkansson & Ford, 2002; Reuer & Arino, 2007; Taylor & Plambeck, 2007). Secondly, the growing information asymmetries among contracting parties (Nayyar, 1990). And thirdly, the multiplicity of unforeseen contingencies in the business landscape (Maskin & Tirole, 1999; Tirole, 1999). Complex interaction, information asymmetries and unforeseen contingencies often lead interacting firms to seek to explicitly state and manifest as joint consent the conditions under which knowledge can be leveraged between them.

But designing an agreed platform for using the resources of others poses a real challenge for many organizations because the knowledge that firms need is "inherently indeterminate and continually emerging" (Tsoukas, 1996, p. 11). For example, consider the business landscape for fast-moving consumer goods in which a manufacturer of cleaning products seeks to access the unique know-how of raw-material suppliers, the innovative abilities of packaging firms, the creative potential of advertising and promotion agencies or the scanner data and consumer profiles obtained daily by grocery retailers. Similarly, each individual supplier, packaging firm, advertising agency or grocery retailer needs the unique knowledge of other firms. In this example, companies face the problem of utilizing knowledge not given to anyone in its totality (Hayek, 1945). Hence, the essence of leveraging knowledge-based resources is "integration of individuals' specialized knowledge" (Grant, 1996, p. 375). The utilization of dispersed knowledge through interaction brings with it further tensions such as the conflict between accessing and acquiring knowledge. For example, Grant and Baden-Fuller's (2004) theoretical framework distinguishes between 'knowledge exploration' (accessing) and 'knowledge exploitation' (acquiring). This crucial distinction is in line with other empirical studies (Mowery, Oxley, & Silverman, 1996; Nakamura, Shaver, & Yeung, 1996).

Joint consent matters in this substantive process of interaction because resources are combined, changed or transformed through interaction between them. Joint consent between contracting parties is the "moral component" that distinguishes between valid and invalid resource transformations (Barnett, 1986, p. 270). In this way, contracts are manifestations of agreements that specify how resources are acquired, used or transformed (Schwartz & Scott, 2003; Steyn, 1997) whilst they establish a "relation of recognition and respect" among those who decide to participate (Markovits, 2004, p.1417). The use of another's resources that is not based on a joint consent is not sustainable. This applies to knowledge-based resources as well as to physical resources. Additionally, knowledge can be seen as a 'non-rival good'; this means that the use of knowledge by one actor does not limit

its use by another (Cornes & Sander, 1986; Romer, 1990). The absence of joint consent may lead to widespread and uncontrolled use of methods, systems, ideas or designs, without reward to originators. Companies, protect their knowledge as property rights by copywriting, patenting or by keeping it secret. Joint consent treats counterparts as actors that bring 'property rights' (Foss & Foss, 2005) to an exchange system (Biggart & Delbridge, 2004) and manifest their consent (Barnett, 1986) about how their resources could be used.

3. Barriers and enablers of joint consent

Contemporary business and legal studies indicate the existence of formidable barriers which make it nearly impossible for firms to reduce important terms of their arrangements with each other into complete and final joint consent (Gergen, 1992; Schwartz, 1992; Schwartz & Scott, 2003). These barriers to the creation of a joint consent between contracting parties include information asymmetries and significant transaction costs that can involve a) unforeseen contingencies, b) drafting costs, c) enforcement costs, and d) renegotiation requirements (Arino & Reuer, 2004; Segal, 1999). These barriers may explain why some firms prefer not to use contracts at all in many business relationships (Campbell, Collins, & Wightman, 2003; Harrison, 2004; Macaulay, 1963, 2004). Many companies attempt to overcome these barriers by arranging umbrella agreements, also described by lawyers as 'framework agreements', 'umbrella contracts' or 'framework contracts' (Mouzas & Furnston, 2008).

The core of this contract form is the observation that the increasing interdependence among firms means that the primary concern of the interacting parties is not the detection of deceit or betrayal, but instead is the use of knowledge among firms to create joint gains (Collins, 2009). Hence the leveraging of knowledge-based resources is frequently the product of deliberate contract design that once instituted, regulates inter-firm relationships by their codes of operations. Thus umbrella agreements are contracts that circumscribe the fundamental rules and principles which guide the conclusion of resource transformation (Mouzas & Ford, 2006). The function of an umbrella agreement differs from the function of other contract forms that define all the terms of an inter-firm agreement. An umbrella agreement between related parties is not concerned with immediate contractual decisions for all future eventualities. Instead, an umbrella agreement is an enabler which spells out a set of rules that flexibly guide future contractual decisions. Rules enshrined in umbrella agreements refer to implicit or explicit directions of 'expected behavior' that embody the actors' preferences (Nee, 1998: p. 87). Repeated interaction between actors leads to the development of principles which operate as 'optimization commands' (Dworkin, 1967).

Therefore, rules and principles may limit the types of relationships in which the actors are able to participate (Håkansson & Ford, 2002). They act as focal points that help actors achieve a coordination of their efforts. Based on an informal experimental investigation, Schelling (1960) defined focal points as a set of mutually perceived expectations, shared appreciations or preoccupations, and sensitivities. Mehta, Starmer, and Sudgen (1994) replicated Schelling's (1960) research in a more formal setting with incentives in which they confirmed that actors achieve much better coordination if they rely on a set of prominent and salient points. In this way, rules and principles are focal points which may guide interaction among firms (Håkansson & Ford, 2002). They increase the "predictability" of group members' behavior and give expression to a group's "central values" (Feldman, 1984, p. 47). A contract as an umbrella agreement can be used to regulate all crucial aspects of a continuing interaction and resource transformation.

For example, it may specify and regulate interaction processes, information systems and enabling technologies, resource combinations as well as performance measurement. The parties to such an umbrella agreement are not required to specify new terms in their future interaction nor are they required to refer to the pre-existence of an umbrella agreement (Mouzas & Ford, 2006). The role of umbrella

agreement is particularly significant in knowledge-intensive interactions where the institutionalization of cognitive frameworks, in the sense of shared mindset, provides the 'architecture' for a continuous resource transformation (Boisot, 1995; Karamanos, 2003). An umbrella agreement can, therefore, be compared to discursive institutions which codify the parties' knowledge about efficient ways to interact (Sabel, 1994). Discussing the idea of 'discursive institutions', Sabel (1994, p. 138) explains that institutions (such as umbrella agreements) can transform transactions into discussions "by which parties come to reinterpret themselves and their relation to each other by elaborating a common understanding of the world".

Leveraging knowledge-based resources by umbrella agreement may solve the central conflict between learning and monitoring. In Sabel's (1994) view, learning is about "acquiring the knowledge to make and do the things valued in markets" while monitoring is about the determination by the interacting parties "that the gains from learning be distributed according to the standards agreed between them" (1994, p.137). In this way, umbrella agreements can be seen as 'knowledge repositories' (Mayer & Argyres, 2004); they represent an effective coping strategy for not only monitoring what is being done but also learning what works best (Sabel, 1994).

4. Conceptual framework: leveraging knowledge-based resources

This section presents a conceptual framework for the study of leveraging knowledge-based resources. The framework links the theoretical perspectives together by considering relationships between concepts contained in a number of different literatures and attempts to create new meaning. It consists of three conceptual dimensions a) repeated interaction b) recursive time and c) focal points, which will be used as analytical bases to make sense of the empirical findings. We arrived at these conceptual dimensions by condensing the theoretical background to consider a) substantive process (repeated interaction), b) time (recursive time) and c) boundary conditions (focal points). For an analysis of these dimensions, see (Ford & Håkansson, 2006a; Mouzas & Ford, 2009).

4.1. Repeated interaction

Repeated interaction between individually significant counterparts takes place at many organizational levels. It may take a physical form whenever deliveries, payments, services, learning or other business developments take place. Each interaction episode will be interpreted, consciously or unconsciously by the counterparts and by others and contribute to their reactions (Håkansson & Ford, 2002). The extent of repeated interaction means that any attempt to leverage resources will need to be expressed in interactive terms. Understanding repeated interaction also requires an insight into the various ways by which actors with different resources, potentials and interests seek to create joint gains (Bazerman, Baron, & Shonk, 2001).

Joint gains may be achieved through repeated interactions among actors who have the ability to see the broader picture and the connectedness of activities and resources. They require a shift in actors' self-perception from 'self as independent' to 'self as part' of a larger whole (Bigelow, 1992). Companies' openness to move beyond existing task-specific interactions and engage in heedful and regular interaction is crucial for their ability to access, combine or acquire useful resources (Mouzas, Henneberg, & Naudé, 2008).

4.2. Recursive time

The concept of time is not understood here as a linear process but as recursive practice. The pre-eminence of repetitions and routines, organizational habits and institutionalized forms of interactions such as periodic business reviews, task reviews, annual operating plans or annual contract negotiations among firms are manifestations of

recursive time. Furthermore, the use of enabling technologies and the institutionalization of Electronic Data Interchange among firms as well as Continuous Stock Replenishment programs re-enforce the pre-eminence of routines and recurrent events.

4.3. Focal points

Focal points are the boundary conditions or prominent, salient bearings of mutually perceived expectations and shared appreciations or concerns (Mehta et al., 1994; Sudgen, 1995). They emphasize particular aspects of knowing that are important and may divert attention from other facets of knowing that may not be recognized as relevant for the involved actors. Focal points emphasize that in a repeated interaction, the *precedent* becomes extremely important. The logic of precedent implies that if a particular problem X is settled in case C, then the rationale in case C would be applied by later actors on problem X. In other words, case C sets a precedent in relation to problem X (Duxbury, 2008). Based on the logic of precedent, actors attempt to co-ordinate their interactions to their mutual benefit by drawing on *focal points* which are salient rules and principles of mutually perceived expectations. Actors develop rules and principles because these conventions, operating within a certain space-time, provide focal points for each actor's "expectation of what the other expects him to expect to be expected to do" (Schelling, 1960, p. 57).

These three conceptual dimensions circumscribe a platform for leveraging knowledge-based resources. A platform is not conceived as a sequence of states (Bunge, 2004; Hedstrom & Swedberg, 1998) but is considered as a 'topology' or 'podium' of factual, physical and social artifacts where leverage of resources may occur (Johnson & Sohi, 2003). Our attention, therefore, is focused on understanding the 'possibility' of inter-firm resource leverage. In this way, contracting is a manifestation of joint consent that works by introducing new possibilities for resource leverage.

5. Empirical study

5.1. Methods and setting

The present empirical study investigates the role of contracts in leveraging knowledge-based resources in manufacturer–retailer networks in Germany. These networks comprise fast-moving consumer goods manufacturers such as Procter and Gamble, Unilever, Nestlé, Coca-Cola, Philip Morris, and Johnson & Johnson, and grocery retailers such as Wal-Mart, Metro, Rewe, Aldi, and Tesco (Hingley, 2005; Villas-Boas & Zhao, 2005). Consumer goods manufacturers and grocery retailers in Germany were chosen for investigation because they are a significant part of the economy; being the largest manufacturer–retailer networks in Europe and generating an annual turnover of €120 billion in a market of 82 million consumers. Manufacturers have a wealth of knowledge in the production and marketing of strong consumer brands, while retailers, with their large number of outlets, have a direct knowledge of their shoppers.

Manufacturers' knowledge of how to supply retailers and retailers' knowledge of how to supply consumers does not rely entirely on their own internal resources. They need the knowledge and expertise of their counterparts to conduct their own business. For this reason, one of the most intriguing empirical findings during the initial stages of this investigation in early 2003 was the observation that because of the economic interdependence within manufacturer–retailer networks, the primary concern of the manufacturers and retailers was not with the individual products or services but rather with the continuous leverage of knowledge and expertise to create joint gains.

The research project indicated that umbrella agreements are seen by manufacturers and retailers as a strategy to deal with the problem of integrating dispersed, and continuously emerging, knowledge. This encouraged closer examination of repeated inter-firm interaction

between 12 firms to identify how resource leveraging occurred. By using case study research methods (Easton, 1998; Gibbert, Ruigrock, & Wicki, 2008; Halinen & Törnoos, 2005; Ragin, 1992; Tsoukas, 1989), the research looks at how umbrella agreements are used as a platform for leveraging knowledge and expertise in manufacturer–retailer networks. Forty-eight in-depth interviews and 12 company workshops with senior managers were conducted between 2003 and 2007. The interviewees included business managers such as Business Unit Directors, Category Managers, Information Technology Managers, Sales Directors, Purchasing and Supply Directors, Key Account Managers. The unit of observation that bounded a 'case' was the inter-firm relationship manifested by an umbrella agreement. We logged our field observations (including impromptu chats and meetings) shortly after they occurred into a self-devised field-tracking system. These were entered into a "chronological events list" and served as a filter or index to the wider set of observations. This was crucial in the collection of umbrella agreements because it helped us to carry out a closer examination and triangulation of primary data.

We also made periodic entries into a field diary to supplement the collection of more formal material about the agreements gathered; these diary entries also provided reflections on the research as a whole. We also retained for analysis electronic copies of contract drafts that we received via e-mail. The workshops took place in the premises of manufacturers and retailers and were supported by senior management. The rationale behind these workshops was to encourage and actively engage informants to become co-producers of relevant empirical insights. Furthermore, the study of contemporary manifestations of joint consent was a novel method to move beyond subjective views obtained through interviews or workshops and examine objectified inscriptions of leveraging knowledge-based resources.

Data analysis involved critical examination, evaluation, categorization, and recombination of the data collected to address the research phenomenon of leveraging resources. Our attention focused on the relationship between the manifestations and the reproduced patterns of manufacturer–retailer interaction. These included annual negotiations, business propositions, follow-up contracts, electronic interchange and notification processes. The analytical dimensions underpinning the theoretical framework were a product of identifying knowledge gaps in the literature, and our initial empirical observation of reproduced patterns of manufacturer–retailer interaction.

Using the framework, our primary goal in data analysis was to link the theoretical knowledge with the empirical observations. This process involves "casing", following Ragin's (1992, p. 225) depiction: "[C]asing is an essential part of the process of producing theoretically structured descriptions of social life and of using empirical evidence to articulate theories.... By limiting the empirical world in different ways, it is possible to connect it to theoretical ideas that are general, imprecise, but dynamic verbal statements". The data analysis of the present research confined the empirical world of manufacturer–retailer networks in a) *substantive process* (repeated interactions) b) *time* (recursive time) and c) *boundary conditions* (focal points) to connect the reality to conceptual propositions. In the following sections, the paper presents case episodes and discusses the multiple levels of interface and resource combination as well as the process and content of contracting.

6. Multiple levels of interface and resource combination

Leveraging knowledge-based resources necessitates a domain consensus between manufacturers and retailers which is the parties' agreement over functions and roles in a business relationship. Parties may lack resources, technological or organizational capabilities to fulfill certain functions or they may specialize in a certain domain. Alternatively, companies' capabilities may develop and change and thus, domains may be disputed and redefined over time. This is demonstrated vividly in the engagement of retailers in boosting retailer brands, often referred as 'private labels' (Dunne & Narasimhan, 1999;

Narasimhan & Wilcox, 1998). This tendency can be regarded as an attempt by the retailers to invade domains that are traditionally the preserve of manufacturers, to redefine role-sets and to redraw the boundaries of domains. It is, therefore, essential to look at companies' boundary conditions in the sense of shared appreciations or concerns. Manufacturers need to contract with a relatively small universe of major retailers to obtain shelf space for their brands and arrange pricing and promotional terms. In contrast, retailers are primarily concerned with the competitiveness of their outlets, the development of a distinct image among consumers, the growth of their own labels, and the profitability of their outlets. Manufacturers and retailers recognize their interdependence and seek umbrella agreements that pave the way toward a jointly created knowledge base. This effort requires multiple levels of interface and resource combination at seven distinct areas (see Table 1): 1) Research & Development, 2) New Product Development, 3) Launches and Re-launches, 4) Category Management, 5) Consumer and Shopper Insight, 6) Retailer Brands and 7) Joint Investments.

The interface between manufacturers and retailers is linked with their evolving organizational resources, for example, key account management, purchasing or category management. Umbrella agreements are negotiated annually at headquarters level, where the historically developed interface is between the retailers' purchasing departments and the manufacturers' sales/key account departments. Purchasing managers and key account managers are becoming sophisticated, powerful agents across different functions; they are experienced, senior managers responsible for the establishment and development of inter-firm relationships and inter-firm resource combination. Based on their negotiated umbrella agreements, purchasing managers and key account managers interact on matters such as new R&D and new product development issues; they arrange product-tests within selected retail outlets or pilot-projects; they run test-markets for new products and launch or roll-out initiatives nationwide; they agree about the resources required from both counterparts such as packaging, trade materials and promotions, advertising, shelf-space, trade allowances and man-power and decide about their specific combination.

Purchasing managers and key account managers are involved in the development of category management systems that involve the management of whole product categories as profit centers; they work together sharing knowledge and experience with regard to consumer

and shopper insight; they make joint investments in facilitating technologies such as electronic data interchange; and, in some cases, they take initiatives in creating retailer brands (private labels). In designing umbrella agreements, purchasing and key account managers draw on the expertise of other staff departments, such as legal, marketing, or operations. Exit scenarios, termination clauses or exclusivity rights, for example, are drafted by corporate lawyers in the legal department and are used by purchasing and key account managers.

The managers who negotiate umbrella agreements are not necessarily the ones who must forge and live with the specific contracts that follow. This alignment problem often generates internal friction between different departments or functions; for example, a traditional friction exists between purchasing and sales managers or between key account and brand managers. At the regional and business center level, the interface is between the regional key account manager or sales director and the head of the regional business center or distributor. At this level, the representatives of retailers and manufacturers renegotiate and agree on further interaction according to the framework of umbrella agreements concluded at headquarter-level. The agreed activities will then be implemented at the outlet level through cooperation between the manufacturers' sales representatives and the retailers' store managers. In this way, practical issues such as stock management, merchandising, displays at the point-of-sale and direct contact with consumers represent an operational fine-tuning of resource combination agreed at headquarters level.

7. The contracting process

Having examined the multiplicity of interface levels, let us now examine the process of how manufacturers and retailers contract to leverage knowledge-based resources. In the annual negotiations that take place between September and December, manufacturers' key account managers contact the purchasing managers of retailers to review the annual performance of their business relationship. In principle, contracting parties are driven by their interest to maintain and develop their existing relationship. Contracting parties recognize the value of their relationship and acknowledge their determination to learn from each other new, innovative ways to create joint gains. In practice, however, the whole learning process is driven by a) their particular concerns (focal points), for example, property rights, retailer/manufacture brands, shopper insight, exclusivity or liability issues, b) the amalgamated know-how of promoting repeated interaction, for example through information-based systems such Continuous Stock Replenishment or Vendor Managed Inventory and c) the recurrent forms of interaction, for example, periodic business reviews and task reviews (recursive time).

For this reason, manufacturers and retailers formulate agendas and define a range of possible outcomes. Manufacturers' key account managers ask for the listing of their brands within retailers (shelf space), offering trade allowances as a fee or payment for the distribution that a brand obtains (Sullivan, 1997). Because of the critical importance of this issue, key account managers are often supported by specialists such as business managers or logistics managers (see Table 1). Retailers' purchasing managers might confront manufacturers' key account managers with requests or demands for the production of retailer brands (own labels). Strong manufacturers show resistance to this temptation by arguing that this is not a focal point of their business policy. Smaller manufacturers, however, are more likely to consent to producing retailer brands because by this means they can rapidly generate a significant sales volume without having to pay for trade allowances or expensive advertising campaigns. Other boundary conditions refer to the instigation of cooperation in the areas of new product development, category management and joint investments and increasingly in the development of consumer and shopper insight. Manufacturers have sophisticated market research departments and know a lot about their consumers.

However, they know relatively little about the shopping behavior of their consumers. In contrast, retailers gain a lot of knowledge about

Table 1
Multiple Levels of Interface and Resource Combination.

Retailers	Resource combination	Manufacturers
Headquarters –Purchasing –Sales –Marketing	–Research & Development –New Product Development –Launches/Re-launches –Category Management –Consumer/Customer Insight –Retailer Brands –Joint Investments	Headquarters –Key Account Management –Marketing –Logistics
Regional level –Business unit –Distributors	Electronic Data Interchange Wholesale management Continuous Stock Replenishment Trade Promotions	Regional Key Account Manager
Outlets –Store Manager	Stock management Merchandising Displays/Promotions Contacts with consumers	Sales Director Sales representatives

shoppers' behavior (through cameras and scanner data) but they lack the consumer insight that manufacturers have. The interaction process is driven by objectified measures of resources and market performance. For example, the market shares of individual brands or items, the trade allowances that manufacturers are willing to pay, competitive offers and the weight of retailer brands will exercise a significant impact on contracting results. In this way, short-term conditions often take precedence over the wish to maintain and develop a business relationship.

8. What is included in the contract

A contract between a fast-moving consumer goods manufacturer and a grocery retailer is a manifestation of consent that contacting parties wish to combine a set of specified resources. This joint consent takes the form of an umbrella agreement: The agreement starts with the definition of the scope of business, which includes the listing of types of products or range of services and moves on to the specification of clauses that regulate the leveraging of knowledge and expertise to create joint gains. Table 2 presents a collection of twenty three different contract clauses frequently used in manufacturer–retailer networks. These clauses deal with such sensitive issues as exclusivity, information flow, electronic data interchange, continuous stock replenishment, category management, confidentiality, subcontracting, warranties, property rights, and termination.

They emphasize the importance of repeated interaction because the use of counterparts' resources is dependent on their particular combination and characteristics of other resources with which the resources are combined. A closer examination of the negotiated contracts between manufacturers and retailers reveals a number of significant variations. The main variations relate to the existence of a diversity of possible focal points. Some of the parties are concerned with the transfer of property rights or exclusivity rights, while others are more concerned with electronic data interchange and consumer or shopper insights. Manufacturer–retailer contracts demonstrate a variety of accepted rules and principles regarding individual freedom and unilateral action. For example, manufacturers with strong market shares include contract clauses that confer powers to them to determine prices unilaterally. Similarly, manufacturers with strong bargaining power include contract clauses that restrict the retailers' ability to revoke orders after manufacturers' production start.

These clauses reveal that resource combination is subject to limitations and parties wish to specify these limitations in advance. The empirical evidence shows that some umbrella agreements may restrict or confer powers on parties to vary their initial position or renegotiate some of their own duties. For example, umbrella agreements may confer powers on retailers to have a continuous stock replenishment according to consumer off-takes. This allows retailers to directly access manufacturers' warehousing resources for the purpose of replenishing their stock. Contract provisions regarding 'electronic data interchange' are considered as enablers of resource interaction between manufacturers and retailers because they introduce factual (e.g., data regarding products and prices), and physical (e.g., information technologies and scanners) artifacts that facilitate a rational resource combination in the area of logistics and invoicing. Electronic data interchange provisions are, therefore, drafted in cooperation with the counterparts' information technology departments. In comparison, provisions regarding 'category management' are prepared in conjunction with the market research and trade marketing departments.

Consider the provisions for resource interaction between manufacturer Nestlé and retailer Rewe in which manufacturer Nestlé is appointed Category Captain, a term equivalent to preferred supplier. In this case, manufacturer Nestlé, as Category Captain, will transfer 'industry knowledge' to retailer Rewe with regard to a specific category of products, for example, market research, product specification and development, consumer data etc. In return, retailer Rewe will transfer 'retail knowledge' to manufacturer Nestlé with regard to 'shopper

Table 2
A manifestation of consent.

Framework of focal points	Contractual clauses
Product range/Services	for example, Laundry and cleaning products
Exclusivity	Both parties have the right obtain competitive offers at any time
Information	Parties defined three performance indicators. Mutual notification regarding all future capital investment and R&D
Electronic data interchange	Parties defined an electronic data Interchange at wholesale level for logistics and invoicing purposes
Continuous stock replenishment	Parties agreed a continuous stock replenishment on the EDI at wholesale level
Category management	Manufacturer is appointed Category Captain and transfers 'industry knowledge' to retailer. Retailer transfers 'retail knowledge' related to 'shopper insight'. Both parties will collaborate to achieve efficient product categories.
Notification	Notification regarding product damages need to be made within two weeks
Subcontracting	Subcontracting is only possible upon consent
Assignment	All requests need to be made in writing
Volume/Price	Verbal requests need to be confirmed in writing To be agreed/Continuous Stock Replenishment Unilateral price determination
Invoicing	Unless otherwise agreed, on a monthly basis. Payment in 60 days. Delivery cost is paid by the supplier (Delivered Duty Paid)
Re-negotiation	Annual re-negotiation/business reviews quarterly Any controversy shall be finally settled by Arbitration (International Chapter of Commerce)
Force Majeure	Parties bear no liability for damages occurred as a result of war, political unrest, strikes, lock-outs, and governmental interventions
Guarantee	The retailer reserves the right to demand the elimination of deficiencies or to allow the return of products within twenty days at suppliers' cost
Liability	The obligation to remedy deficiencies apply also to services obtained from subcontractors
Secrecy	All information exchanged is confidential and shall not to be available to third parties without written consent of the other party
Property rights	No transfer of property rights. Supplier ensures that no third person has obtained property rights
Saving Clause	Unless it is of major importance, invalidity of one or more clauses will not have any effect on the umbrella agreement as a whole
Legal venue	Zurich/Switzerland
Amendments	The supplier has the obligation to revoke any orders in writing which she does not wish to accept
Addition	Need to be made in writing
Duration	Indefinite agreement/Annual re-negotiation
Termination	Each party has the right to terminate the agreement immediately with regard to a particular type of services

insight' at the point of sale, for example, scanner data regarding shoppers' buying behavior. Counterparts' quotes illustrate this:

"We know a lot about our customers as consumers; however, we know very little about these customers as shoppers" Key Account Manager, Manufacturer Nestlé.

"We have point-of-sale technologies that allow us to gain shopper insight; but we do not have the product knowledge and marketing know-how of leading manufacturers" Purchasing Manager, Rewe.

Knowledge-based resources of manufacturer Nestlé and retailer Rewe were combined based on an umbrella agreement that created certainty and calculability of resource combinations and enabled further resource ties between the counterparts. Counterparts' consent

was conducive to further resource ties between the parties because the umbrella agreement moved beyond physical and factual artifacts to embrace social artifacts which encourage on-going social exchange of ideas, comments, suggestions through regular category reviews. The appointment of Nestlé as a Category Captain was a social artifact that enabled further adaptations of retailer's point-of-sale resources in the areas of shelf design, merchandising, and software for scanner data as well as further adaptations in manufacturer's market research resources through the introduction of category-based systems.

The impact of umbrella agreements on resources ties is also evidenced in business arrangements with regard to the exclusive production and distribution of retailer brands. If this is the case, the manufacturer will produce the retailer's own labels; the manufacturer's resources in production capacities and product know-how will be tied with the retailer's resources in distribution. Nonetheless, the primary concern of umbrella agreements is not with the specification of specific transactions but rather with rules and principles that allow resource ties that create joint gains. For this reason, the use of information technology is regarded by manufacturers and retailers as a major step towards managing the increasing data flow from the consumer's decision, up to merchandising and production planning. This knowledge exchange tightens the resource connectivity between retailers and manufacturers and contributes to a reduction in slack and administrative costs.

9. Discussion of results

The manifestation presented in Table 2 shows that the purpose of contracting is to arrive at a joint consent regarding all crucial aspects of leveraging the parties' knowledge and expertise in specified areas. Hence, manufacturer–retailer contracts provide a set of jointly accepted focal points (Mehta et al., 1994; Sudgen, 1995) that guide the complexity of repeated interaction over recursive time. Inter-firm manifestations demonstrate the counterparts' consent that resource combination can be agreed according to a pre-existing framework and that “it is the intention of the companies to do so” (McLauchlan, 1998, p. 97). This openness to learning is regarded as important in manufacturer–retailer networks because of the high speed at which products are launched, re-launched and traded (Villas-Boas & Zhao, 2005).

Hence, manufacturers and retailers are confronted with a plethora of exchanges, a multiplicity of information requirements and an increasing complexity of inter-firm coordination. For this reason, manufacturers and retailers see umbrella agreements as an enabler for combining valuable resources. In this way, an umbrella agreement is a joint consent that reflects the conceptual dimensions of ‘leveraging knowledge-based resources’; Table 3 illustrates this. Firstly, the joint

consent defines the basic rules and principles that govern the substantive process of *repeated interaction*; the joint consent specifies reciprocal practices of mutual information and notification, electronic data interchange, exclusivity of exchange, restrictions applied to information secrecy as well as product and monetary flows.

Secondly, contracting parties' joint consent incorporates *recursive time* by specifying recurrent patterns of inter-firm interaction. This is demonstrated in the annual or periodic re-negotiation between manufacturers and retailers, the quarterly business reviews and periodic meetings. Thirdly, joint consent attempts to articulate focal points, such as the domain of business, property rights, saving clauses, guarantees or liabilities, interaction patterns, termination rights or ‘force majeure’. These focal points emphasize aspects of knowing that are relevant for both parties and set precedents that guide subsequent interactions.

Inter-firm contracts between manufacturers and retailers reveal significant resource interdependencies and continuous efforts to create an ‘architectural knowledge’ (Henderson & Clark, 1990) which accelerates the integration of heterogeneous knowledge into a ‘common knowledge’ (Grant, 1996; Grant & Baden-Fuller, 2004). In this respect the role of *repeated interaction*, *recursive time* and *focal points*, is critical. These three dimensions of circumscribe the substance of a platform where ‘common knowledge’ may or may not occur (c.f. Johnson & Sohi, 2003). Inter-firm contracts may imply a degree of formality.

The formality, however, is not the opposite of substance but aims to preserve what is important in this substance (Stinchcombe, 2001). A contract, therefore, is an abstraction of possibility; a refined version of the substance. This means that the same platform used by different contracting actors may result in different resource leveraging. The integration of dispersed knowledge, not known to any single actor, into a ‘common knowledge’ (Becker, 2001; Grant, 1996; Grant & Baden-Fuller, 2004) can be seen as the product of continuous and recursive interplay between knowledge as ‘inter-action’ and knowledge as a ‘possibility’ (Hargadon & Fanelli, 2002).

Manufacturer–retailer contracts reduce the factual, physical and social artifacts into abstract schemata constructed jointly by the contracting parties. For this reason, inter-firm resource leveraging depends on the cyclical interplay between the *matter* of the knowledge as interaction and the actors' willpower (consent) that resides in knowledge as a *possibility*. In this way, our empirical findings extend Hargadon and Fanelli's (2002) claim of recursive interplay between ‘knowledge as action’ and ‘knowledge as a possibility’ by incorporating the concept of joint consent.

Empirical findings in manufacturer–retailer networks demonstrate that the integration of dispersed knowledge into a ‘common knowledge’ depends on the cyclical interplay between the *matter* of the knowledge as interaction and the actors' consent that makes knowledge leveraging *possible*. In our study, actors' consent is manifested by contract forms known as umbrella agreements. Umbrella agreements between manufacturers and retailers institutionalize the cognitive framework, in the sense of shared mindset; they create the ‘architecture’ that enables regular and repeated knowledge-intensive interactions (Boisot, 1995; Karamanos, 2003).

The joint formulation of contracts between manufacturers and retailers transforms transactions into discussions (Sabel, 1994), and codifies the firms' knowledge about efficient ways to interact (Mayer & Argyres, 2004). Firms are able to exploit interaction efficiencies because of their previous investments in time-bound relational assets such as Electronic Data Interchange or institutionalized forms of continuous negotiation. This empirical finding is in line with other studies of inter-firm knowledge transfer. Studies in the U.S. and Japanese Automotive industries, for example, emphasize the role of relational assets and distinguish between simple knowledge transfer techniques and technological capabilities jointly developed (Kotabe, Martin, & Domoto, 2003).

The role of contracts is to codify the firms' agreement of how capabilities are expected to be utilized and how productive knowledge

Table 3
Leveraging knowledge-based resources.

Conceptual dimensions	Joint consent
R Repeated Interaction	Mutual Information/ Notification Practices Electronic Data Interchange Restrictions/Information Secrecy
R Recursive Time	Regulation of Subcontracting Annual/Periodic Re-negotiation Organizational Routines Business Reviews Periodic Task Reviews/Meetings Continuous Stock Replenishment
Focal Points	Domain Consensus Manufacturer/Retailer Brands Property Rights Shopper Insight Guarantee/Liability Duration/Termination Force Majeure

is expected to be transferred between firms. For this reason, contracts are not simply 'knowledge repositories' (Mayer & Argyres, 2004) but rather enablers of resource interaction that tighten the resource connectivity between contracting parties. The agreement between manufacturer Nestlé and retailer Rewe demonstrates this. Actors' willpower manifested by a written consent acted as a catalyst for resource interaction and the creation of further resource ties. This was possible because the umbrella agreement acted as a relational device incorporating social artifacts. The appointment of manufacturer Nestlé as Category Captain by retailer Rewe, demonstrates vividly that the integration of dispersed knowledge was an achievement that depended actors' consent that made the leverage of resources possible. Moreover, the case demonstrates that distribution-resources, such as retail-shelf and point-of-sale technologies, are not fixed entities, but are the outcome of repeated interactions with manufacturers' resources such as product knowledge and market management.

10. Conclusions

On the basis of this empirical study, it is apparent that leveraging knowledge-based resources is linked with firms' capability to engage in interaction that generates joint gains. The study examined leveraging knowledge-based resources as utilization of dispersed knowledge through interaction (Becker, 2001; Grant, 1996; Grant & Baden-Fuller, 2004; Håkansson, Ford, Gadde, Snehota, & Waluszewski, 2009; Håkansson & Waluszewski, 2007a, 2007b; Hayek, 1945). In manufacturer–retailer networks that involve producers of consumer goods and grocery retailers, companies arrange umbrella agreements as a contract form under which leveraging of valuable resources may occur. This constitutes a paradigm change because parties are more concerned with leveraging the knowledge and expertise of others than with individual prices or volumes.

The present study offers three important lessons: First, companies need to arrive at a joint consent with other firms in order to achieve a leveraging of knowledge-based resources that is continuous, valid and legitimate. Understanding the inter-cognitive achievement of consent requires a fundamental insight into the significance of 'property rights' over resources or 'entitlements' which specify the rights that actors may possess, acquire or transfer in their interactions with other actors (Coase, 1960; Demsetz, 1966).

Secondly, the conditions under which a resource may be leveraged need to be explicitly stated and manifested. Even within established relationships the design of a contracting for leveraging knowledge-based resources, requires an 'architectural knowledge'. This architectural knowledge is enshrined in the exact design of contracts between the involved parties. This study demonstrates that umbrella agreements provide this 'architectural knowledge' that specifies the conditions under which leverage of resources may occur.

These agreements spell out the basic rules and principles of working together; and, thereby, create a structure that guides resource interaction. Thirdly, companies' capability to engage in repeated interaction that generates joint gains is what makes it possible for them to learn from other firms (Becker, 2001; Conner & Prahalad, 1996; Kogut & Zander, 1992). Nonetheless, knowledge is not what firms possess or what they have learned cognitively; it appears that leveraging knowledge-based resources is more than a 'one-way' process between the source firm and the recipient firm. Leveraging knowledge-based resources is rather a dialectic process inherent in a substantive process of repeated interaction over recursive time guided by focal points.

The study demonstrated that resource leveraging is a complex and time-consuming process. In diverse and continuously changing business relationships, companies need to balance the need for certainty and calculability of their interactions with the need to remain open to embrace new or emerging opportunities. Companies are susceptible to changes in their surrounding networks and have to interact with other firms to protect and advance their own knowledge or expertise. Further

research in this area needs to include the investigation of how companies deal with the inherent complexity and time-intensity of resource interaction in their particular contexts and how companies see this issue as a possibility for exploring and exploiting new opportunities. Looking at the conceptual dimensions of a) repeated interaction, b) recursive time and c) focal points further research may explore how manifestations of consent in different industries become enablers of resource leveraging; and how these manifestations are impacted by or impact on companies' own practices of resource combinations.

The pursuit of such research would require the employment of research methods with the operational ability to a) investigate the complexity of resource leveraging, b) to handle critically rich data, multiple sources of information and multiple interactions c) to investigate the interaction among organizational actors and d) to capture process over time. As Coase (1994, p.12) emphasizes "the process of contracting needs to be studied in a real world setting". A lot of econometric as well as structural equation models fail to capture significant dynamic processes. Focusing on real, temporal and dynamic processes, researchers need to move beyond the use of descriptions of individual experiences (Elsbach, Sutton, & Whetten, 1999; Tsoukas, 1989; Weick & Browning, 1986) and consider the study of inter-organizational manifestations such as contracts, agreements, protocols or correspondence among actors.

Researchers can look at the links between repeated interaction, recursive time and focal points as reference points and investigate resource leveraging through inter-firm contracting. In this sense, business contracts advance our understanding of the conditions under which this resource leveraging may occur. Building on the idea that agreements among parties are not instantaneous events but are progressively reached through interaction over a period of time, future research could shed more light into the contemporary inter-firm resource interaction. This is only possible if researchers manage to escape functional and discipline specialization and search for hidden links. Further research may increase our understanding of the existing but hidden possibilities of inter-firm resource interaction.

References

- Argyres N, Mayer KJ. Contract design as a firm capability: an integration of learning and transaction cost perspectives. *Acad Manage Rev* 2007;32(4):1060–77.
- Argyres N, Bercovitz J, Mayer KJ. Complementarity and evolution of contractual provisions: an empirical study of IT services contracts. *Organ Sci* 2007;18(1):3–19.
- Arino A, Reuer JJ. Designing and renegotiating strategic alliance contracts. *Acad Manage Exec* 2004;18(3):37–48.
- Barnett RE. A consent theory of contract. *Columbia Law Rev* 1986;86(2):269–321.
- Bazerman M, Baron J, Shonk K. You can't enlarge the pie: six barriers to effective government. New York: Basic Books; 2001.
- Becker M. Managing dispersed knowledge: organizational problems, managerial strategies and their effectiveness. *J Manage Stud* 2001;38(7):1037–51.
- Bigelow J. Developing managerial wisdom. *J Manage Inquiry* 1992;1:143–53.
- Biggart NW, Delbridge R. Systems of exchange. *Acad Manage Rev* 2004;29(1):28–49.
- Boisot M. Information space: a framework for learning in organizations, institutions and culture. London: Routledge; 1995.
- Bunge M. How does it work? The search for exploratory mechanisms. *Philos Soc Sci* 2004;34(2):182–210.
- Campbell D, Collins H, Wightman J, editors. Implicit dimensions of contract: discrete, relational and network contracts. *European Private Law Theory*Hart Publishing; 2003.
- Coase R. The problem of social cost. *J Law Econ* 1960;3:1–44.
- Coase R. Essays on economics and economists. Chicago and London: The University of Chicago Press; 1994.
- Collins H. The weakest link: legal aspects of network architecture of supply chains. In: Teubner G, Amstutz M, editors. *Networks: Legal Issues of Multilateral Co-operation*. Hart Publications; 2009.
- Conner KR, Prahalad CK. A resource-based theory of the firm: knowledge versus opportunism. *Organ Sci* 1996;7(5):477–501.
- Cook S, Brown JS. Bridging epistemologies: the generative dance between organizational knowledge and organizational knowing. *Organ Sci* 1999;10(4):381–400.
- Cornes R, Sander T. The theory of externalities, public goods and club goods. Cambridge: Cambridge University Press; 1986.
- Demsetz H. Some aspects of property rights. *J Law Econ* 1966;9:61–70.
- Dunne D, Narasimhan C. The new appeal of private labels. *Harv Bus Rev* 1999;77(3):41–9.
- Duxbury N. The nature and authority of precedent. Cambridge: Cambridge University Press; 2008.
- Dworkin R. The model of rules. *Univ Chic Law Rev* 1967;35:14–46.

- Easton G. Case research as a methodology for industrial networks: a realist apologia. In: Naude P, Turnbull PW, editors. *Network dynamics in international marketing*: 73–87. Oxford: Elsevier Science; 1998.
- Elsbach KD, Sutton RI, Whetten DA. Perspectives on developing management theory, circa 1999: moving from shrill monologues to (relatively) tame dialogues. *Acad Manage Rev* 1999;24:627–34.
- Faems D, Janssens M, Madhok A, Van Looy B. Towards an integrative perspective on alliance governance: connecting contract design, trust dynamics and contract application. *Acad Manage J* 2008;51(6):1053–78.
- Feldman D. The development and enforcement of group norms. *Acad Manage Rev* 1984;9(1):47–53.
- Ford D, Håkansson H. IMP: some things done, much more to do. *Eur J Mark* 2006a;40(3/4):247–58.
- Ford D, Håkansson H. The idea of interaction. *IMP J* 2006b;1(1):4–20.
- Foss K, Foss NJ. Value and transaction costs: how property rights economics furthers the resource-based view. *Strateg Manage J* 2005;26:541–56.
- Gergen MP. The use of open terms in contracts. *Columbia Law Rev* 1992;92(5):997–1081.
- Gibbert M, Ruigroek W, Wicki B. What passes as a rigorous case study? *Strateg Manage J* 2008;29(13):1465–74.
- Grant RM. Prospering in dynamically-competitive environments: organizational capability as knowledge integration. *Organ Sci* 1996;7(4):375–87.
- Grant RM, Baden-Fuller C. A knowledge accessing theory of strategic alliances. *J Manage Stud* 2004;41(1):61–84.
- Håkansson H, Ford D. How should companies interact in business networks? *J Bus Res* 2002;55(2):133–45.
- Håkansson H, Waluszewski A, editors. *Knowledge and innovation in business and industry. The importance of using others*. London, New York: Routledge; 2007a.
- Håkansson H, Waluszewski A. Interaction: the only means to create use. In: Håkansson H, Waluszewski A, editors. *Knowledge and innovation in business and industry. The importance of using others*. London, New York: Routledge; 2007b. p. 147–67.
- Håkansson H, Ford D, Gadde L-E, Snehota I, Waluszewski A. *Business in Networks*. Chichester: John Wiley; 2009.
- Halinen A, Törnroos JA. Using case methods in the study of contemporary business networks. *J Bus Res* 2005;58:1285–97.
- Hargadon A, Fanelli A. Action and possibility: reconciling dual perspectives of knowledge in organizations. *Organ Sci* 2002;13(3):290–302.
- Harrison D. Is a long-term business relationship an implied contract? Two views of a relationship disengagement. *J Manage Stud* 2004;41(1):107–25.
- Hayek FA. The use of knowledge in society. *Am Econ Rev* 1945;35(4):519–31.
- Hedstrom P, Swedberg R, editors. *Social mechanisms. an analytical approach to social theory*. Cambridge: Cambridge University Press; 1998.
- Henderson RM, Clark KB. Architectural innovation: the reconfiguration of existing product technologies and the failure established firms. *Adm Sci Q* 1990;35:9–30.
- Hingley M. Power to all our friends? Learning to live with imbalance in UK supplier–retailer relationships. *Ind Mark Manage* 2005;34(8):848–58.
- Johnson JL, Sohi RS. The development of interfirm partnering competence: platforms for learning, learning activities and competences of learning. *J Bus Res* 2003;56:757–66.
- Karamanos AG. Complexity, Identity and the value of knowledge-intensive exchanges. *J Manage Stud* 2003;40(7):1871–90.
- Kogut B, Zander U. Knowledge of the firm, combinative capabilities, and the replication of technology. *Organ Sci* 1992;3:383–97.
- Kotabe M, Martin X, Domoto H. Gaining From vertical partnerships: knowledge transfer, relationship duration and supplier performance in the U.S. and Japanese automotive industries. *Strateg Manage J* 2003;24(4):293–317.
- Loasby BJ. *Knowledge, institutions, and evolution in economics*. London: Routledge; 1999.
- Macaulay S. Non-contractual relationships in business: a preliminary study. *Am Sociol Rev* 1963;28:55–69.
- Macaulay S. The real and the paper deal: empirical pictures of relationships, complexity and the urge for transparent simple rules. *Mod Law Rev* 2004;66:44–79.
- Markovits D. Contract and collaboration. *Yale Law J* 2004;113:1417–518.
- Maskin E, Tirole T. Unforeseen contingencies and incomplete contracts. *Rev Econ Stud* 1999;66(1):83–114.
- Mayer KJ, Argyres N. Learning to contract: evidence from the personal computer industry. *Organ Sci* 2004;15(4):394–410.
- McLauchlan D. Rethinking agreement to agree. *N Z Univ Law Rev* 1998;18:77–98.
- Mehta J, Starmer C, Sudgen R. The nature of salience: an experimental investigation of pure coordination games. *Am Econ Rev* 1994;84(3):658–73.
- Mouzas S, Ford D. Managing relationships in Showery Weather: the role of umbrella agreements. *J Bus Res* 2006;59:1248–56.
- Mouzas S, Ford D. The constitution of networks. *Ind Mark Manage* 2009;38:495–503.
- Mouzas S, Furmston M. From contract to umbrella agreement. *Camb Law J* 2008;67(1):37–50.
- Mouzas S, Henneberg SC, Naudé P. Developing network insight. *Ind Mark Manage* 2008;37(2):166–79.
- Mowery DC, Oxley JE, Silverman BS. Strategic alliances and interfirm knowledge transfer. *Strateg Manage J* 1996;17:77–91.
- Nakamura M, Shaver JM, Yeung B. An empirical investigation of joint venture dynamics: Evidence from US–Japan joint ventures. *Int J Ind Organ* 1996;14:521–41.
- Narasimhan C, Wilcox RT. Private labels and the channel relationship: a cross-category analysis. *J Bus* 1998;71(4):573–600.
- Nayyar PR. Information asymmetries: a source of competitive advantage for diversified service firms. *Strateg Manage J* 1990;11(7):513–9.
- Nee V. Norms and networks in economic and organizational performance. *Am Econ Rev* 1998;88(2):85–9.
- Nickerson J, Zenger T. A knowledge-based theory of the firm: the problem-solving perspective. *Organ Sci* 2004;15:617–33.
- Ragin CC. Casing and the process of social inquiry. In: Ragin CC, Becker HS, editors. *What is a Case? Exploring the Foundations of Social Inquiry*. Cambridge University Press; 1992.
- Reuer JJ, Arino A. Strategic alliance contracts: dimensions and determinants of contractual provision. *Strateg Manage J* 2007;28:303–30.
- Romer PM. Endogenous technological growth. *J Polit Econ* 1990;98(5):71–102.
- Sabel C. Learning by monitoring: the institutions of economic development. In: Smelser NL, Swedberg R, editors. *The handbook of economic sociology*. Princeton, NJ: Princeton University Press; 1994.
- Schelling TC. *The strategy of conflict*. Cambridge, MA: Harvard University Press; 1960.
- Schwartz A. Relational contracts in courts: an analysis of incomplete agreements and judicial strategies. *J Legal Stud* 1992;21(2):271–318.
- Schwartz A, Scott R. Contract theory and the limits of contract law. *Yale Law J* 2003;113:541–619.
- Segal I. Complexity and renegotiation: a foundation for incomplete contracts. *Rev Econ Stud* 1999;66(1):57–82.
- Steyn J. Contract law: Fulfilling the reasonable expectations of honest men. *Law Q Rev* 1997;119:433–42.
- Stinchcombe AL. *When formality works*. Chicago and London: The University of Chicago Press; 2001.
- Sudgen RA. Theory of focal points. *Econ J* 1995;105:533–50. (May).
- Sullivan MW. Slotting allowances and the market for new products. *J Law Econ* 1997;40(2):461–93.
- Taylor TA, Plambeck E. Supply chain relationships and contracts: the impact of repeated interaction on capacity investment and procurement. *Manage Sci* 2007;53(10):1577–93.
- Tirole J. Incomplete contracts: where do we stand? *Econometrica* 1999;67(4):741–81.
- Tsoukas H. The validity of idiographic research explanations. *Acad Manage Rev* 1989;14(4):551–61.
- Tsoukas H. The firm as a distributed knowledge system: a constructionist approach. *Strateg Manage J* 1996;17:11–25.
- Villas-Boas JM, Zhao Y. Retailers, manufacturers, and individual consumers: modeling the supply side in the ketchup marketplace. *J Mark Res* 2005;42(1):83–95.
- Weick K, Browning L. Argument and narration in organizational communication. *J Manage* 1986;12:243–59.