LAPPEENRANTA
UNIVERSITY OF TECHNOLOGY

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THE ROLE OF POWER RELATIONS IN STRATEGIC SUPPLY MANAGEMENT – A VALUE NET APPROACH

Thesis for the degree of Doctor of Science (Economics and Business Administration) to be presented with due permission for public examination and criticism in Auditorium 1382 at Lappeenranta University of Technology, Lappeenranta, Finland, on the 27th of August, 2010, at noon.

Acta Universitatis
Lappeenrantaensis
393

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ISBN 978-952-214-955-8
ISBN 978-952-214-956-5 (PDF)
ISSN 1456-4491

Lappeenrannan teknillinen yliopisto
Digipaino 2010

ABSTRACT

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Lappeenranta 2010
263 p., 2 Appendices

Acta Universitatis Lappeenrantaensis
Diss. Lappeenranta University of Technology
ISBN 978-952-214-955-8, ISBN 978-952-214-956-5 (PDF)
ISSN 1456-4491

Supplier relationships are key elements of supply management and thus have attracted substantial research interest among academics and practitioners. The collaborative nature of relationships has been the focus of the mainstream research, and limited interest has been channelled towards power in buyer–supplier relationships. However, power is one of the key factors determining the outcomes in many business relations. Hence, one of the main objectives of this dissertation is to clarify how power may influence the nature of buyer–supplier relationships and, moreover, the depth of collaboration. Another main objective is to clarify the role of power relations in strategic supply management. Given the different nature of relationships, the firm needs divergent strategies in its supply management in order to handle them efficiently. Power has been identified as one of the factors that affect the nature of buyer–supplier relationships, and firms should thus develop strategies for handling power relations. Three research questions are addressed in pursuit of these objectives, the aim being to clarify the sources of power, the influence of power on collaboration, and the role of buyer–supplier relationships in the firm's supply strategy.

This dissertation has two parts. The first part provides a synthesis of the overall dissertation, and the second part comprises five complementary research papers. The qualitative research method is applied in an empirical case study from the Finnish food industry.

The main contribution of this dissertation is that it clarifies the role of power relations in strategic supply management in value nets, and discloses the nature of power as an influencing factor in supplier relationships. It extends the discussion on power in buyer–supplier relationships in highlighting the context of networks and raising the question of network effects on power relations. It also illustrates how power positions and power relations in value nets can be determined based on the sources of power of the network actors, and shows their influence on collaboration.

Keywords: supply management, supplier relationship, supply strategy, power relation, power position, sources of power, collaboration, value net, network, food industry

UDC 658.7 : 65.012.65

ACKNOWLEDGEMENTS

This type of project can never be completed alone. Thus it is time to thank the many people who have helped and supported me during this journey. First, I would like to thank my supervisor Professor Veli Matti Virolainen for the support he gave me during this process as well as for giving me the opportunity to join the research team of Supply Management. Further, I would like to thank the reviewers of this dissertation Professors Rainer Breite and Chris O'Brien for their valuable comments and suggestions for improvements.

I sincerely appreciate the support of the Supply Management research team. I would like to express my warmest gratitude to Katrina Lintukangas who has given me all her support and showed me the way how the dissertation can be done. Katrina, thanks for being my 'mentor'. I am also very grateful to my former colleague Heli Sissonen for her valuable advice. I wish to thank my other present and former colleagues Jukka Hallikas, Satu Peltola and Jani Mäkinen for providing the great and fun atmosphere in which it has been a pleasure to work. I also want to thank my friend and former colleague Nina Huuhtanen with whom I took the first steps in the world of research.

I would like to thank my other colleagues at the School of Business as well. Especially the moments and the discussions around cups of coffee have been memorable and fruitful. I would like to express my warm gratitude to Hanna Salojärvi and Liisa-Maija Sainio for sharing their thoughts in the fields of research and life. I also thank Pia Heilmann for her advice in the methodological issues of this thesis.

I appreciate the work of the researchers in the ETU research project. I especially thank Mari Tenkanen for cooperation. I am indebted to the case companies for their support and interviewees for their time and valuable insights.

I gratefully acknowledge the financial support received from Liikesivistysrahasto, Elintarvikkeiden tutkimussäätiö and Suomen Kulttuurirahaston Kainuun rahasto.

I would also like to thank Joan Nordlund and Minna Vierimaa for their professional help in revising the language of my work.

Finally, I would like to express my deepest and warmest thanks to my nearest and dearest: my family and friends. My mother Raija, father Kari and brother Jyrki, I am very grateful for you for giving me the best possible tools for life and great achievements like this thesis. I would like to thank my grandmother Anni who hoped that she could see the day when her grandchild will be a Doctor of Science and by these words gave me a push towards finishing this thesis. My dearest thanks go to Olli-Pekka: thank you for the patience, support and understanding – thank you for being there every time I needed you.

Lappeenranta, July 2010

Anni-Kaisa Kähkönen

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1. Ahtonen Anni-Kaisa and Virolainen Veli-Matti (2009). Supply strategy in the food industry – value net perspective. International Journal of Logistics: Research and Applications, Vol. 12, No. 4, pp. 263-279.

2. Ahtonen Anni-Kaisa, Sissonen Heli and Virolainen Veli-Matti (2008). Sources of structural power in value net. Proceedings of the 17th International Annual IPSERA Conference, 9-12 March 2008, Perth, Australia. Revised and further submitted version.

3. Ahtonen Anni-Kaisa (2008). The influence of power on the depth of collaboration. Proceedings of the 24th IMP (Industrial Marketing and Purchasing) Conference, 4-6 September 2008, Uppsala, Sweden. Revised and further submitted version.

4. Kähkönen Anni-Kaisa and Tenkanen Mari (forthcoming). The impact of power on information sharing in the Finnish food industry. To be published in the British Food Journal.

5. Kähkönen Anni-Kaisa (forthcoming). Power relations in supply strategies – a network approach. To be published in the International Journal of Procurement Management.

The contribution of Anni-Kaisa Kähkönen to the publications:

1. Made the research plan together with the co-author. Collected part of the data. Analyzed the data. Wrote most of the paper and was mainly responsible for revising the paper during the journal review process.

2. Made the research plan together with the co-authors. Collected part of the data. Analyzed the data. Wrote most of the paper.

3. Sole author.

4. Made the research plan together with the co-author. Collected part of the data. Analyzed the data together with the co-author. Wrote the paper together with the co-author. Was responsible for revising the paper during the journal review process.

5. Sole author.

PART I: OVERVIEW OF THE DISSERTATION

1 INTRODUCTION

The role of purchasing and supply management in firms has traditionally been a support activity characterized by transactional buying and short-term supplier relationships. Due to the increasing demands there have been developments in buying activities and supplier relationships. Several previous studies (see Carr and Smeltzer, 1997 and 1999; Cousins and Spekman, 2003; Ellram and Carr, 1994; Freeman and Cavinato, 1990; Kocabasoglu and Suresh, 2006; Rozemeijer, van Weele and Weggeman, 2003; Zheng et al., 2007) have found that those have produced a strategic function with the aim of competitiveness of the firm. Supply management has become an increasingly important success factor in many firms, and performance has improved significantly along with the recognition of the strategic nature of the function. Yeung (2008) found strategic supply management to be highly correlated with a firm's competitive advantage and business performance. According to Zsidisin, Ellram and Ogden (2003), the management's ability to control costs is critical to the firm's financial success. Moreover, because purchases comprise the largest single expenditure item in most firms, the ability to effectively manage and reduce costs may result in the accumulation of valuable, non-transferable and non-imitable resources that could provide significant competitive advantage. As Ellram and Carr (1994) state, strategically managed purchasing and supply management constitutes a potential value-added resource to the firm.

Current changes such as the increasing importance of knowledge, technological complexity, globalization and the availability of digital information technology are redefining the characteristics of business relationships, concepts, tools and strategic approaches (Möller, Rajala and Svahn, 2005; Parolini, 1999). The strategic approach has changed from an enterprise-focused perspective to one that is extended to include value-creating systems and networks (Parolini, 1999). According to Achrol (1997), one of the fundamental shifts in the 21st century is from the dyadic perspective of inter-organizational exchange relationships towards a network perspective on value creation involving different types of network organizations. Managing the implementation of strategies for capturing value from networks of suppliers is a key task for those in the firm responsible for supply relationships (Harland et al., 2004).

Utilizing long-term relationships with strategically important suppliers in the form of networks represents the current trend in supply management (e.g., Cousins et al., 2008). Furthermore, satisfying customers' needs and creating value more efficiently for all network participants are major issues in business and in supply management today (e.g., Lindgreen and Wynstra, 2005). Companies seek new ways in which to create value, and in the world of business networks the traditional perspective of value creation based on value chain thinking has moved towards value-creating networks. This approach utilizes the value net model in order to facilitate the analysis, description and study of value-creating systems, and takes activities rather than companies as the key elements of strategic analysis (Parolini, 1999).

Several researchers (Amit and Zott, 2001; Borys and Jemison, 1989; Bovet and Martha, 2000a; Dubois and Wynstra, 2005; Harrison and Håkansson, 2006) have found that unique value can be created when companies are collaborating and combining their competences and capabilities. Because the supply management is responsible for finding the most valuable and appropriate suppliers as well as for supplying raw materials and products efficiently, its significance in value creation is substantial. Even if the connection between collaborative buyer–supplier relationships and value creation has been identified and discussed in previous studies, the other side of relationships and situations in which collaboration is not possible have attracted less attention in the context of value creation and, moreover, of networks.

Networks do not necessarily comprise purely collaborative relationships, but extensive networks also include those that could not be called collaborative in nature. This does not mean that these relationships are purely transactional, so-called arm's length relationships (see e.g., Parker and Hartley, 1997) but they may as well be relationships in which the cooperation or collaboration may be at a very low level (see e.g., Bernardes and Zsidisin, 2008; Cousins and Spekman, 2003). This kind of relationship could, in fact, be more collaborative if there were no obstacles that decrease or even prevent the collaboration. Power between the parties in buyer–supplier relationships has been considered a significant factor in defining their nature (Cox, Lonsdale and Watson, 2003; McDonald, 1999). As Cox (2007) states, power is one of the major factors that determine outcomes in many, although not in all, business transactions. Hence, the issue of power clearly influences the outcomes and value-creation potential of the relationship.

The literature review reveals that the combination of power and collaboration in the network context is a neglected research area. Furthermore, including the value-creation approach and value networks widens the research gap even more. Given the increasing role of supplier relationships and supply management in many firms, and the consequent search for new business models through which value can be created and high levels of success and performance achieved, there is a need to study buyer–supplier relationships and supply management in the context of value nets. The focus in this thesis, therefore, is on the relation between collaboration and power relations in buyer–supplier relationships, and the roles of these power relations in strategic supply management in the context of value nets. The context of the empirical part of the study is the Finnish food industry and it comprises a case study based on semi-structured interviews. The thesis provides new insights into strategic supply management and the relationships established in value nets and networks.

1.1 Research gap

Harland (1996) categorized research in supply management on four levels, including the internal chain, the dyadic relationship, the external chain and the network. Buyer–supplier relationships are traditionally studied in the context of dyadic relationship, but there has been a gradual increase in research on networks. According to Anderson, Håkansson and Johanson (1994), in order to understand buyer–supplier relationships, more attention must be directed to the embedded context within which dyadic relationships exist. Veludo, Macbeth and Purchase (2006) suggest that the relationships in networks are being influenced by the network effects that flow through the network. Blankenburg Holm, Eriksson and Johanson (1996) found that network connections contribute to a single relationship (see also Blankenburg Holm, Eriksson and Johanson, 1999; Halinen and Törnroos, 1998). Dubois and Fredriksson (2008), in turn, stress the need to understand how one dyad in a triad affects the other dyads, and the same rationale applies to networks in which one dyad may affect the others. The conditions for efficiency and effectiveness in a single supply or value chain are determined by the way in which activities and resources are related to those in other chains, and this calls for a network perspective (Gadde and Håkansson, 2001). Furthermore, according to Batt and Purchase (2004), collaboration in networks is highly dependent on the network structure and position, which determine how collaboration will occur in the network and between which actors collaboration will take place. Andersen and Christensen (2005) further argue that despite the growing awareness of the management of supply networks, little is known about network dynamics or how they affect the position and roles of the individual actors.

The issues of power and dominance have been the focus of academic research since the 1950s and 1960s when French and Raven (1959), Dahl (1961), Emerson (1962) and Blau (1964) launched the discussion. Studies on power have their origins in the social sciences, but in the context of buyer–supplier relationships the research conducted in the field of marketing has played a significant role. Much of the research on the role of power applies to the context of marketing channels (see e.g., El-Ansary and Stern, 1972; French and Raven, 1959; Gaski, 1984), but there is also interest in the field of supply management given the trend towards outsourcing and concentration on core competences and capabilities, and the high relevance of supplier relationships (see Cox, 1999; Gelderman and van Weele, 2004; Ramsay, 1996; van Weele and Rozemeijer, 1999).

As well as the research on buyer–supplier collaboration the research of power has also traditionally been concentrated to study the issue from the perspective of chain or dyadic relationship. According to Stannack (1996), analyses of power in the context of the interaction relationship between buyer and supplier are too limited in perspective in that they fail to explain multiple interactions. Choi and Wu (2009) state that the dyadic framework fails to consider firms as nodes embedded in larger supply networks. Power is socially embedded, and the transactions and relationships that are embedded in networks should therefore also be considered. Cendon and Jarvenpaa (2001) argue that the role of power in a network is evident in terms of its impact on the strategic choices, governance structures, relative dependence, resources and activities performed, and according to Zolkiewski (2001), power is the central force in networks and thus affects the struggle for control over resources, the dynamics of the net, and the tension between collaboration and competition. Thus the issue of power is highly relevant to the discussion on networks.

According to Batt and Purchase (2004), firms do not operate in isolation and must seek to collaborate with other network actors in order to achieve their goals. Collaboration is the basis of networking, and by collaborating the actors are able to create competitive advantage and, moreover, unique value. However, a collaborative nature is not an obvious outcome of a relationship. The nature of the relationship and the depth of collaboration vary due to the different influencing factors. According to van Weele and Rozemeijer (1999), attempts to forge partnership relationships (i.e. collaborative relationships) often fail due to a lack of understanding of the power positions of the parties involved. Furthermore, McDonald (1999) suggests that power within relationships can provide a serious obstacle to effective partnerships. Hingley (2005a) found that the significance and role of power had been overlooked in investigations of relationships, and thus there appears to be a gap in knowledge in this respect. Moreover, Zolkiewski (2001) refers to the lack of research on the role of power in networks. Indeed, the literature review, which was based on searches in databases such as ABI/INFORM, EBSCO, ELSEVIER and EMERALD, revealed that the issues of power and collaboration in the network context have rarely been connected and discussed in relation to each other. This clearly constitutes a notable research gap given the implication that the relation between power and collaboration, in terms of the influence of power on collaboration is still an unexplored area.

The aim in this study, therefore, is to connect the issues of power and collaboration, and to extend this discussion in emphasizing the wider network perspective and network relations and the complicated nature of collaboration. The network approach is adopted in order to provide a sufficiently broad context in which to analyze power relations. The significance of network effects is highlighted by analyzing power relations and collaboration in the network context. Networks are much more complex than dyadic relationships or chains, and there are various influencing factors that characterise only networks. These so-called network effects that are caused by other actors, activities and connections beyond the dyadic relationship have powerful effects on the relationships embedded in them.

Lakemond, van Raaij and van Weele (2004) discuss the role of collaboration in value creation, basing their research on the assumption that value is created in a network and not just in one single company. Furthermore, they suggest that core competences are the key to delivering superior value. It is assumed in this study that one of the main goals of buyer–supplier collaboration is the maximization of value creation, which as Lakemond et al. (2004) argue, also justifies the adoption of the network context. Also Windahl and Lakemond (2006) argue that instead of focusing on the firm itself, it is important to focus on the value-creating systems where different actors work together to co-produce value. Given these assumptions, this study connects the discussion on collaboration with the discussion on value creation. Adding the network perspective, the approach of this study can be determined to be a value net approach. Hence, value nets provide the research context for the analysis of power relations and collaboration, the aim being to establish a target (i.e. maximization of value creation) for collaborative relationships. This highlights the effects of power not only on collaboration but also on value creation, which should be the ultimate goal of business. By doing this, the research manages to combine insights from the research on power, collaboration, value creation and networks.

Although there is still a limited amount of research on value nets, and the research gap is obvious, the aim in this study is not to narrow the research gaps of the value net research and value creation. This study uses value nets only as a research context, and partially increases the amount of value net research. However, there are thus far no studies on power in the context of value nets, and this research therefore breaks new ground. Overall, supply management is still a relatively recent research area, and more studies are needed given the increase in significance of purchasing and supply management in firms. The aim in this thesis is to reduce the research gaps related to supplier relationships and strategic supply management by analyzing the role of power relations in strategic supply management within value nets.

1.2 Research objectives

Given the research gaps discussed above, there is a clear need for more studies on power relations and collaboration in the context of value nets, especially from the perspective of supply management. The traditional focus in research on buyer–supplier relationships and, moreover, power relations is on dyadic relationships. The objective of this study is to extend the discussion by emphasizing the wider network perspective and highlighting the role of network effects. Buyer–supplier relationships constitute a core element of strategic supply management and, as previous studies have shown, there are various types of relationships depending on different factors. In supply management research, the type, nature or character of a relationship is often based on the level of collaboration, which in turn is affected by the power relation between the buyer and the supplier. Given these differences in relationship type and power relations there also has to be divergent strategies and actions when handling these relationships (see e.g., Svahn and Westerlund, 2009). Nalebuff and Brandenburger (1997) state that company should have strategy for every relationship in its value net. The main research question addressed in this thesis is thus:

How does the nature of the power relations influence the strategic supply management of a firm in a value net?

The main research question is divided into three sub-questions. The thesis comprises five complementary publications that, together, address this main research question through the specific goals set for each sub-question (see also Table 5).

Relationships between buyers and suppliers, which are one of the main elements of strategic supply management, are not always collaborative in nature. In fact, non-collaborative relationships are the most common form of relationships. The power balance and power relation between buyer and supplier is one factor that has an effect on the nature of the relationship (see Batt and Purchase, 2004; Cox, 2007; Cox et al., 2003; McDonald, 1999; van Weele and Rozemeijer, 1999). It is therefore important to know where power comes from and to define what the sources of power are for the supplier and what the sources of power are for the buyer. The focus in the existing literature has been on dyadic relationships or chains. However, as several researchers suggest (see Cendon and Jarvenpaa, 2001; Stannack, 1996; Zolkiewski, 2001), there is also a need to analyze sources of power in the context of networks. Therefore, it is important to ask:

Q1: *What are the sources of power for buyers and suppliers in value nets?*

The aim behind this sub-question is to define these sources in terms of structural power (for more, see section 2.5). Even if the sources of power are analyzed in the context of value nets, organizational level and relationship level sources of power cannot be neglected, and are therefore considered within this sub-question. However, the discussion is extended by emphasizing network relations and the significance of network effects. Therefore, the most important level of analysis is the network level.

It is crucial in strategic supply management not only to define sources of power but also to be aware of their effects. The existing literature suggests many kinds of sources of power which moreover define the power positions of the actors in the networks (see Ford et al., 1998; Gadde, Huemer and Håkansson, 2003; Johanson and Mattsson, 1992; Lilliecreutz, 1998; Möller and Svahn, 2003; Svahn and Westerlund, 2007; Wilkinson and Young, 2002). Effective strategic management of supply activities requires analysis of the effects of power positions on the nature of relationships and on the depth of collaboration. Hence, the second sub-question asks:

Q2: *How do power positions influence buyer–supplier collaboration in the value net context?*

The aim with this sub-question is to shed light on the influence of the power position of the network actor on the depth of collaboration between two actors. The focus is especially on the influence of power position on firm's willingness to form collaborative relationships and to commit to collaboration.

The next step in the discussion on power sources and positions is to consider power relations between network actors. Given the focus of this thesis on strategic supply management, sources of power and power positions would be inadequate research topics if the power relations between buyers and suppliers would not be studied. The discussion is thus extended to the discussion of power relations. This is an issue worth studying given the need to understand the role of power as an influencing factor in the formation, development and maintenance of relationships between buyers and suppliers. Because buyer–supplier relationships, which may have collaborative or power imbalanced characters, are one of the key factors in supply management, firms have to make strategic decisions concerning them and their management. Such decisions are commonly to be found in written form in the firm's supply strategy. Written strategy or not, the importance of buyer–supplier relationships in supply management is remarkable, and thus, it is asked:

Q3: *What is the role of buyer–supplier relationships in a firm's supply strategy?*

The aim with this sub-question is to clarify the content and concept of a firm's supply strategy, and to highlight the importance of buyer–supplier relationships as one of the elements of supply strategy and strategic supply management. The focus is on both power relations and collaborative relationships.

As stated in section 1.1, there is a gap in the research on the connection between power relations and collaboration in value nets, and on how power relations affect the firm's strategic supply management. The aim of this study is to clarify the role and influence of different natures of power relations on strategic supply management. A further objective is to enhance knowledge of power relations and their influence on collaboration between buyers and suppliers in the context of value nets. It is therefore argued that power relations influence collaboration between buyers and suppliers, and furthermore that the nature of power relation have an effect on strategic supply management, and require the application of divergent supply strategies depending on the nature and the level of power relation.

1.3 Definitions of the key concepts of the study

This section defines the conceptual foundations of the key concepts used in this thesis. The concepts of strategic supply management, supply strategy, power relation, collaboration and the value net are considered to be the main concepts of this study, and next these are defined more closely.

1.3.1 Strategic supply management

According to Cousins and Spekman (2003), firms have moved in management focus from the flow of goods and services into the organization (i.e. purchasing) to the supply process, which also affects decisions guiding the firm's future competitive position and the management of its internal and external resources (see also Cousins, 2002). Cousins and Spekman (2003, p. 20) determine that "Supply management is, therefore, concerned with the flow of goods and services through the organization with the aim of making the firm more competitive." Cox and Lamming (1997, p. 62) define supply management as "the strategic management of external and internal resources and relational competencies in the fulfilment of commitments to customers." This study complies with these definitions and at the same time incorporates the diverse terminology that characterises the research on purchasing and supply management. As discussed above, the term *purchasing* is too narrow concept for the purposes of this study, and therefore, the term *supply management* is used instead.

As Ammer (1989) states, purchasing cannot be involved in the firm's overall business strategy until it becomes a strategic function. According to Carter and Narasimhan (1996), the purchasing unit is becoming increasingly involved in the firm's strategic planning. The fact that supply decisions may have an impact on firm performance has been recognized for years (Carter and Narasimhan, 1996). Moreover, according to Ellram and Pearson (1993), given its access to information regarding the firm's strategy and its involvement in key decision-making issues the purchasing function can be a major contributor to the firm's overall success. Ferguson et al. (1996) refer to the purchasing function's participation in the strategic planning process as vital to long-range growth and success, and according to Carr and Smeltzer (1997, p. 201), "strategic purchasing is the process of planning, evaluating, and controlling strategies and operating purchasing decisions for directing all activities of the purchasing functions toward opportunities consistent with the firm's capabilities to achieve its long-term goals." Even if the above-mentioned studies use the term *purchasing*, they clearly refer to the whole supply process and not just the management of the flow of goods and services. When using the term *supply management* instead of *purchasing*, this same definition can be used to refer to *strategic supply management*. The concept of *strategic supply management* is therefore defined in this study according to Carr and Smeltzer's definition quoted above.

1.3.2 Supply strategy

A strategy could be described as a plan of action designed to achieve given goals and objectives (Corey, 1978). According to Pettigrew, Thomas and Whittington (2002), the core aspects of a firm's strategy are its direction, purpose, strategic leadership, organization and competitive performance. Both suppliers and buyers have strategies that define how they act in different situations.

The concept of a supply strategy is also defined in various ways. Corey (1978) describes it as a plan of action for obtaining supplies and dealing with sellers. According to Scheuing (1989, p. 140), a purchasing strategy is "a set of rules that guides the configuration of the firm's purchasing effort over time in response to changes in competition and the environment so as to permit the firm to take advantage of profitable opportunities. In other words, the entire process of formulating, implementing, and evaluating a purchasing strategy is directed at producing an optimum fit between a firm's corporate and purchasing resources on the one hand and its environmental constrains and opportunities on the other." Furthermore, Watts, Kim and Hahn (1992, p. 5) refer to the supply strategy as "the pattern of decisions related to acquiring required materials and services to support operations activities that are consistent with the overall corporate competitive strategy." Like other strategies it should always be integrated into the business strategy, and should be based on the firm's objectives and strategic principles (Cousins and Spekman, 2003; Ellram and Carr, 1994).

As Corey (1978) argues, supply strategies vary from one purchasing situation to another because each situation is unique. Thus, every strategy has to be tailored to the type of product being purchased, the stage of the procurement cycle, past purchasing history, the nature of the supply environment, and the buying company itself in terms of its resources, negotiation strength and purchasing policies (Corey, 1978). Harland, Lamming and Cousins (1999) relate the supply strategy to the integration of supply activities within firms, in dyadic relationships, in chains of firms and in inter-organizational networks. Faes and Matthyssens (2009) state that most of the previous research takes a static approach to supply strategy and considers the chosen option to be relatively stable over time. However, they continue that strategies do change and therefore, cannot be considered purely from stable perspective but the dynamic perspective should also be acknowledged.

Ellram and Carr (1994) define three distinct types of purchasing strategy: i) specific strategies employed by the purchasing function, ii) the purchasing function's role in supporting the strategies of other functions and of the firm as a whole, and iii) the utilization of purchasing as a strategic function of the firm. This study concentrates on the specific strategies employed by the supply function, and the supply strategy as a concept refers to *a decision-making plan related to the actions of the supply function*. The term *supply strategy* is used instead of *purchasing strategy* because the term *supply* is more suitable than the term *purchasing* (see the discussion in section 1.3.1).

1.3.3 Power relation

Another key concept in this study is that of *power relation*, meaning the relation between the power positions of two network or value net actors. Power relation is determined on the basis of *the difference in power positions between buyer and supplier*. The power of an actor is analyzed in relation to the other party's power, and it is assumed that the sum of supplier and buyer power is always set: only the power balance between them shifts (for a more detailed discussion, see section 2.5).

1.3.4 Collaboration

One strategic decision in organizations concerns their relationships with other organizations. Companies implement these relationships in many different ways depending on the nature and depth of the relationship. In the supply situation the company has to decide whether the relationship with the supplier will be collaborative in nature or, conversely, purely an arm's length relationship (see e.g., Cox, 1996; Forker and Stannack, 2000; Parker and Hartley, 1997). Cox et al. (2003, p. 5) define an arm's length relationship to consist of "interaction that merely consists of a level of contact necessary to exchange commercial details regarding placement, order fulfilment and payment." Ellram (1991, p. 2) on the other hand defines a partnership as "an agreement between a buyer and a supplier that involves a commitment over an extended time period, and includes the sharing of information along with a sharing of the risks and rewards of the relationship". This is the definition applied in this study, and it is used to explain the term *collaboration* or *collaborative relationship*.

1.3.5 Value net

Given the focus in this study on power relations and collaborative relationships in the context of value nets, the concept of a *value net* is of major significance. It is defined as *a dynamic, flexible network comprising the relationships between its actors, in which the actors create value through collaboration by combining their unique and value-adding resources, competences and capabilities* (Allee, 2003; Bovet and Martha, 2000a and 2000b; Parolini, 1999). Value creation, on the other hand, can be defined as "the process by which the capabilities of the partners are combined so that the competitive advantage of either the hybrid or one or more of the parties is improved" (Borys and Jemison, 1989, p. 241).

1.4 The Finnish food industry as an empirical research context

The empirical part of this dissertation addresses the research topic in the context of a value net from the Finnish food industry, in the form of a case study involving four case companies. The case situation is analyzed in a certain research context, and the background and characteristics therefore require clarification. The discussion in this section thus focuses on the Finnish food industry as an empirical research context for the analysis of the role of power relations in strategic supply management.

The food industry is Finland's fourth largest industry in terms of the gross value of production, and it is also the biggest manufacturer of consumer goods. The Finnish food sector is characterized by the limited number of large players as well as numerous small and medium-sized companies. In 2006 69 per cent of Finnish food industry actors had fewer than five employees. (Finnish Food and Drink Industries' Federation, 2008) The most important import countries in 2009 were Germany, Sweden and the Netherlands, and the most valuable export countries were Russia, Sweden and Estonia (Finnish Food and Drink Industries' Federation, 2010). The total share of grocery retailers' own private labels in Finland in 2005 was 10 per cent of retail sales, compared with 30 per cent in Germany, 28 per cent in the UK, 22 per cent in the Netherlands and 14 per cent in Sweden (ACNielsen, 2005). The significance of retailers' own private labels for both the retailers and the whole industry has increased. Fernie and Staines (2001) state that grocery retailers in Europe are no longer small, family-owned companies but large, multi-national public quoted corporations.

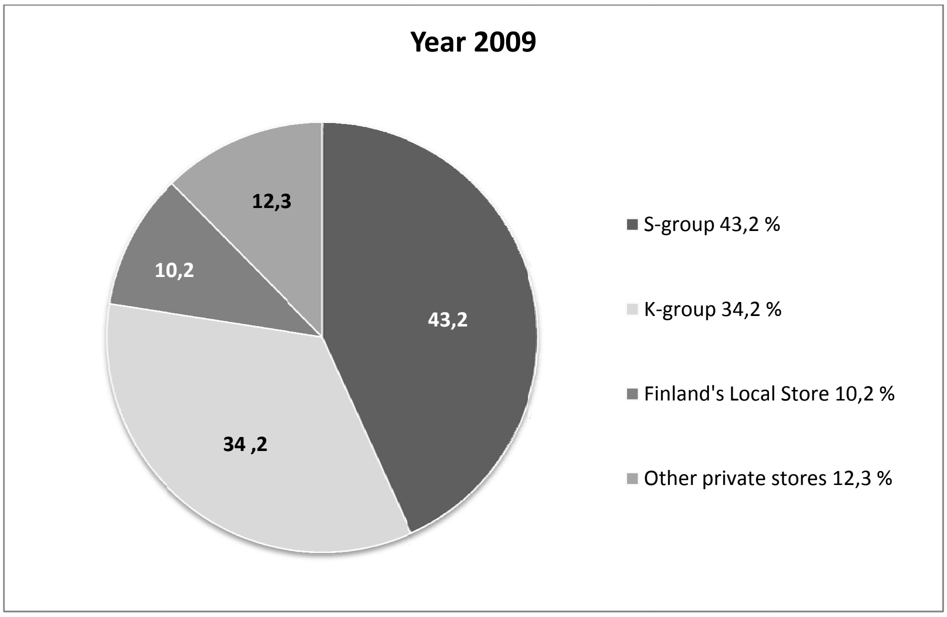

Figure 1. Market shares in the Finnish grocery retail market (ACNielsen, 2010)

The Finnish grocery retail market is highly centralized, with a few retail specialists that dominate the market with their significant buying volumes. As Figure 1 shows, the combined market share of the three biggest grocery retailers in 2009 was 87.6 per cent (ACNielsen, 2010). In 2007 the combined market share of the three biggest grocery retailers was 86.8 per cent (ACNielsen, 2008) and in 2008 87.4 per cent (ACNielsen, 2009). According to Aalto-Setälä (2002), concentration in grocery retailing has increased a great deal within the last few decades both in the U.S. and in Western Europe.

This same phenomenon has been noted in many studies, as has the high level of retailer concentration and the dominance of the food industry in several countries (see Collins and Burt, 1999; Dunne, 2008; Hingley, 2001 and 2005b; Hingley and Hollingsworth, 2003; Kumar, 1996 and 2005; Ogbonna and Wilkinson, 1996; Robson and Rawnsley, 2001). Ogbonna and Wilkinson (1996), Collins and Burt (1999), Robson and Rawnsley (2001) and Hingley and Hollingsworth (2003) analyzed power relations in the food industry in the UK and Ireland, and found that the power was in the hands of the retailers. Dunne (2008) found similar situation from Australia. Furthermore, Aalto-Setälä (2002), Uusitalo (2004) and Mikkola (2008), in the context of the Finnish food industry, also found evidence of retailer dominance. Given the many imbalanced power relationships worldwide, the food industry constitutes an interesting research context for this study.

Companies in the food sector are facing constant challenges. The Finnish food industry is no exception, having been subjected to massive transformation driven by changes in the business environment as well as technological advancement. The food sector has changed from traditional agriculture-based business with basic production procedures to a modern high-tech industry with fast-developing technology and business in general (Brännback and Wiklund, 2001). It was fairly protected and isolated (mainly because of its geographical position) at one time, but it is currently facing the challenges of globalization and increased competition (Brännback and Wiklund, 2001). Given its traditional roots in Finland, it is also facing other challenges in the form of mergers, changes in consumer preferences and requirements for increased efficiency, all of which put pressure on the companies (see e.g., Olsen, Harmsen and Friis, 2008).

Given the distances involved and the characteristics of the products the Finnish food industry also faces significant logistical challenges. Some of the products are highly perishable and the logistical processes need to be effective and reliable. The country's isolated geographical position is also challenging, and the climate with its cold winters creates its own restrictions. The Finnish food culture is unique, and it is worth noting that Finns prefer domestic rather than overseas products and raw materials. Of the raw materials used in the Finnish food industry 85 per cent are of domestic origin, and the market share of Finnish food products is 81 per cent (Finnish Food and Drink Industries' Federation, 2008). This is challenging in supply management terms as well.

High levels of product development and innovativeness are required because preferences are constantly changing and customers are becoming more demanding. A focus on the customer perspective, all-round flexibility and the ability to adjust to rapid changes are prerequisites for success in the food industry. Few food companies are able to meet these increased demands by themselves, and external resources are therefore necessary (van der Valk and Wynstra, 2005). Furthermore, the traditional adversarial trading relationships are slowly giving way to co-operation and co-ordination (Duffy and Fearne, 2004). The increasing demands have forced companies to develop their relationships further (Hingley, 2001; Olsen et al., 2008; van der Walk and Wynstra, 2005; Wilson, 1996), and it is clear that competition is increasingly taking place between networks rather than individual companies (Mikkola, 2008). Companies have been developing new business models in which customers and value creation have key roles, and thus the traditional relationships and supply networks have begun to resemble value-creating networks. It is therefore also important to study value nets in the food industry, hence the choice of the Finnish food industry as the empirical context in this thesis.

Thus far studies on value nets have concentrated mainly on the ICT (Information and Communication Technology) sector (Fjeldstad and Ketels, 2006) and there is a limited amount of research on the food industry, which is one of the biggest industries in the EU. The sector therefore offers a new empirical context in which to conduct research on value nets. Furthermore, success in supply management and supply activities is crucial. As stated earlier, the characteristics of the products and the fact that some of them are highly perishable challenge the development of supply management in firms. Research in this context is therefore highly relevant to business development in the food industry.

1.5 Outline of the study

The thesis consists of two parts (see Figure 2). The first part gives the theoretical background and an overview of the dissertation. Chapter 1 introduced the background of the study and identified the research gap. It also set out the objectives, defined the key concepts and described the empirical research context. Chapter 2 focuses on the theoretical foundations and presents the framework of the study. Chapter 3 describes the research methodology applied. Chapter 4 presents the results of the study with the introduction of the five complementary publications. Finally, Chapter 5 concludes the study in terms of answering the research questions, discussing the theoretical and managerial implications, acknowledging the limitations of the study and giving suggestions for further research.

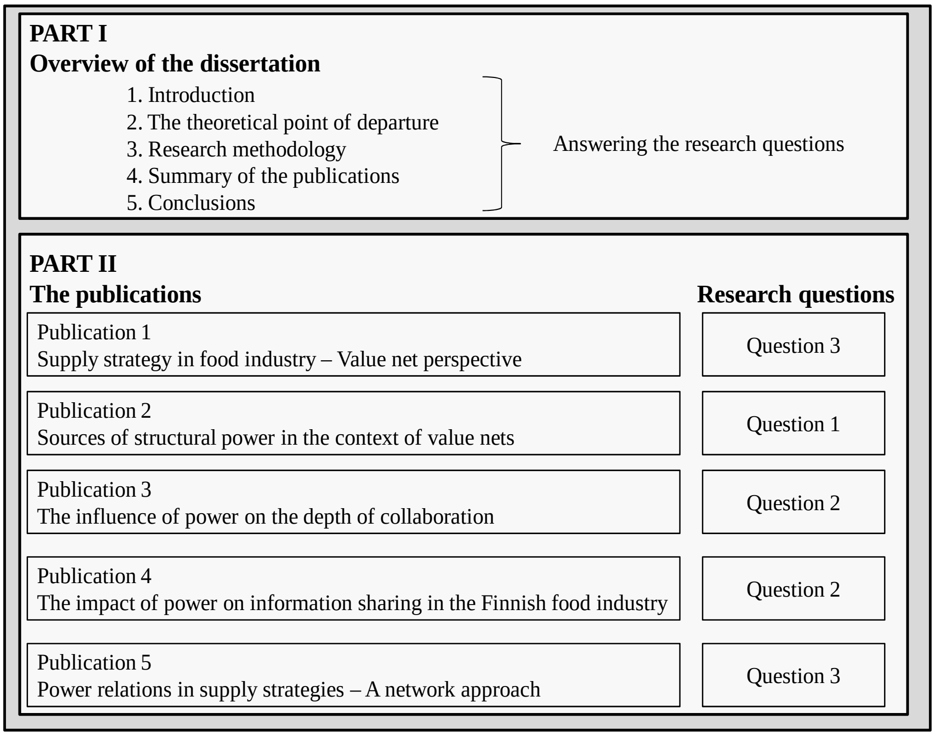

Figure 2. The outline of the thesis

The second part of the dissertation comprises five research papers addressing the research questions. Publication 1 introduces the supply strategy as a concept, determines its main elements, and highlights collaborative relationships in particular. Publication 2 focuses on the sources of structural power, and defines the sources of power for buyers and suppliers in the context of value nets. Publication 3 discusses the relation between power and collaboration, and examines the influence of power positions on the depth of collaboration in value nets. The focus in publication 4 is on information sharing as a realization of collaboration, and on the effects of power on the nature of collaboration and information sharing. Finally, publication 5 connects the discussions on power relations and supply strategies through an analysis of the role of power relations in a firm's supply strategy.

2 THE THEORETICAL POINT OF DEPARTURE

This chapter gives the theoretical background. The study combines two network approaches, the aim being to build an extensive theoretical basis and to obtain the best possible tools for studying different kinds of relationships in the context of value nets. Therefore, this study utilizes the approaches of the industrial network approach (e.g., Håkansson, 1986; Håkansson and Johanson, 1992) and the strategic value net approach (e.g., Jarillo, 1998; Parolini, 1999). The chapter also covers aspects of power and defines the perspective adopted. The theoretical basis of this study on resources and relationships among value net actors lies in the resource-based view (e.g., Barney, 1991; Penrose, 1959; Wernerfelt, 1984) and the resource dependency theory (e.g., Medcof, 2001; Pfeffer and Salancik, 1978), which suit the chosen research perspective. Furthermore, the theory of transaction cost economics (e.g., Coase, 1937; Williamson, 1975, 1981 and 2008) is relevant in the context of supply strategies and strategic supply management as well as to the analysis of buyer–supplier relationships. These theoretical points of departure are discussed in more detail in the following sections: the first three introduce the resource-based view, resource dependency theory and transaction cost economics, respectively, and then the focus moves to the network approaches and aspects of power. Finally, the theoretical and conceptual frameworks of the study are presented.

2.1 Resource-based view

According to the resource-based view of the firm (RBV), which has its origins in the work of Penrose (1959), firms are collections or bundles of resources, and growth of the firm depends on how these resources are exploited. It is a theoretical framework that enhances understanding of how competitive advantage within firms is achieved and how that advantage might be sustained over time through the acquisition of and control over resources (Eisenhardt and Martin, 2000). Competitive advantage, on the other hand, results when a firm implements a value-creating strategy that is not simultaneously being implemented by any current or potential competitors (Barney, 1991). According to Amit and Schoemaker (1993), firm-specific resources and capabilities are crucial in explaining performance, and the type, magnitude and nature of resources and capabilities are significant determinants of the firm’s profitability. As Stalk, Evans and Shulman (1992, p. 62) argue, “Competitive success depends on transforming a company’s key processes into strategic capabilities that consistently provide superior value.” As Teece, Pisano and Shuen (1997) point out, the RBV focuses on strategies for exploiting existing firm-specific assets, whereas Teece et al. (1997) also include strategies for developing new capabilities, and raise the question of dynamic capabilities (for more, see Teece et al., 1997).

Amit and Schoemaker (1993, p. 35) define *resources* as “stocks of available factors that are owned or controlled by the firm”, and according to Grant (1991, p. 118), “resources are inputs into the production process.” Teece et al. (1997, p. 516) add that “resources are firm-specific assets that are difficult if not impossible to imitate” and use the term firm-specific asset as a synonym for a resource. Furthermore, Wernerfelt (1984, p. 172) argues that a resource refers to “anything that could be thought of as a strength or weakness of a firm.” Thus resources comprise knowhow that can be traded, financial and physical assets, and human capital (Amit and Schoemaker, 1993). Barney (1991) similarly distinguishes between physical capital resources (the physical technology used, plant and equipment, geographical location, access to raw materials), human capital resources (the training, experience, judgment, intelligence, relationships and insight of the individuals in a firm) and organizational capital resources (the formal reporting structure, formal and informal planning, controlling, coordinating systems and informal relations), all of which can be used to implement value-creating strategies. Grant (1991), as well as Foss and Eriksen (1995), further separate tangible from intangible resources.

Although resources may be both tangible and intangible, according to Foss and Eriksen (1995) capabilities are always intangible. Grant (1991, p. 119) defines a *capability* as “the capacity for a team of resources to perform some task or activity”. In the view of

Amit and Schoemaker (1993, p. 359), on the other hand, “capabilities refer to a firm’s capacity to deploy resources, usually in combinations to effect a desired end”, and are firm-specific information-based tangible or intangible processes that develop over time through complex interactions among the firm’s resources. Stalk et al. (1992) suggest that capabilities are rooted in organizational practices and business processes, whereas Grant (1991) argues that whereas resources are the source of a firm’s capabilities, capabilities are the main sources of its competitive advantage. Unlike resources, capabilities are based on the development, carrying and exchange of information through the firm’s human capital (Amit and Schoemaker, 1993).

According to Medcof (2001), the basic premise of the RBV is that competitive advantage comes from having resources that create value and are unique. Amit and Zott (2001) argue that value creation comes from the unique combination of a set of complementary and specialized resources and capabilities, and Harrison and Håkansson (2006) continue that it is located in the combination of resources, no one resource having value in itself. Value comes from productive use when combined with other resources (Penrose, 1959). Barney (1991) identified VRIN resources (resources that are valuable, rare, inimitable and nonsubstitutable) as critical to value creation. Gulati, Nohria and Zaheer (2000) state that from the perspective of RBV an important source for the creation of value-generating resources lies in a network of relationships.

The RBV perspective is adopted in this study, and resources are considered crucial in value creation. Furthermore, as Lakemond et al. (2004) suggest, it is accepted that value is created in a network and not by a single company, and that core competences are the key in value creation. It is also assumed that value is created through combining the unique resources and capabilities of network actors. Therefore, given the aim to analyze sources of power, power relations and collaborative relationships in the context of value-creating networks, the RBV provides a solid theoretical basis for the study.

2.2 Resource dependency theory

As Medcof (2001) points out, the resource-based view is theoretically connected to the resource dependency theory (RDT), given the almost identical meaning of the fundamental concepts (i.e. valuable resource and the importance of resource; uniqueness and alternatives). According to RDT (Pfeffer and Salancik, 1978), organizations seeking to acquire resources must interact with those who control these resources, and the survival of an organization can be partially explained by its ability to ensure the continuity of necessary resources. The basic idea in the RDT is that organizations are dependent on the resources of other organizations. According to Pfeffer and Salancik (1978), the importance of the resource, the discretion over the resource allocation and use, and the extent of alternatives are critical when determining the dependence of one organization on another.

Medcof (2001) emphasizes the use of RDT in terms of understanding organizational power in the management of internationally dispersed technological units, given that the power of an organization depends upon its resource-dependency relationships with other organizations. If a focal organization is highly dependent upon another organization for a crucial resource, the latter will have power over the former (Medcof, 2001). As Hallén, Johanson and Seyed-Mohamed (1991) state, resources constitute a basis of power in terms of the dependency of one firm on another firm's resources, and the control of alternative sources. Furthermore, also Cox (1999) refers to the dominance inherent in a situation in which a dominant player owns and controls key resources that appropriate value.

RDT is highly applicable to this study because it is viewed that resources, capabilities and competences are important determinants in buyer–supplier relationships because they are defined to be the sources of power for both buyers and suppliers and they affect the relationships formed. Moreover, power and dependency go hand in hand (Pfeffer and Leong, 1977).

2.3 Transaction cost economics

In addition to RBV and RDT, the theory of transaction cost economics (TCE) is utilized as a theoretical background of this study. TCE is widely used in studies on governance structures in firms (Coase, 1937; Williamson, 1975, 1981 and 2008). Its origins lie in the work of Coase (1937) and his discussion on the existence of organizations. According to Coase (1937), the main reason why it is profitable to establish a firm would seem to be the existence of a cost of using the price mechanism. These costs are commonly called as transactions costs, and the basic idea is to find a governance structure with the lowest transaction costs. Chikán et al. (2007) discuss TCE in supply management and argue that two main branches of TCE are the contracting approach and the measurement approach: the former focuses on the boundaries of the firm, and according to Chikán et al. (2007), is a fundamental issue in supply management.

Transaction costs are the "costs of running the system" (Ellram and Billington, 2001, p. 16). Determinants of their level include bounded rationality, opportunism, information impactedness, frequency of transactions and asset specificity. Williamson (1985 and 1986) classifies transaction costs as *ex ante*, e.g., negotiation and writing up, and *ex post*, e.g., executing the contract and settling disputes. Distinction has also been made between search costs, contracting costs, monitoring costs and enforcement costs (Dyer, 1997; Williamson, 1975).

According to TCE, there are two main governance structures, markets and hierarchies, out of which a firm chooses the most efficient one. Williamson (2009, p. 147) states that the old ideological divide has been between markets *or* hierarchies, but Williamson specifies that "TCE examines markets *and* hierarchies in a combined way". The basic rationale according to Coase (1937) is that when the transaction costs deriving from the use of the free market are higher than the costs of hierarchy, the activity should be organized in-house, and vice versa. The hierarchy option, also called vertical integration, represents the failure of the free market to handle exchange relationships efficiently (Ellram and Billington, 2001). Moreover, when the markets are uncertain the buying company may not be willing to exploit them either. When neither markets nor hierarchies are suitable or optimal solutions for the buying company, the situation can be solved by using a contractual solution placed between vertical integration and free market forces (Ellram and Billington, 2001). Blomqvist, Kyläheiko and Virolainen (2002) suggest that intermediate governance structures are preferable when there are determinants that simultaneously favour insourcing (e.g., uncertainty, danger of opportunism, high asset specificity) and outsourcing (the need for high-powered incentives). This governance structure is based on collaboration between two or more organizations, and could be called a hybrid (see the works of Williamson), a partnership (see e.g., Blomqvist et al., 2002) or a network (see e.g., Jarillo, 1988; Thorelli, 1986).

From the perspective of supply management, the theoretical contribution of TCE is in laying the foundation for many of the decisions concerning strategic supply management. Given the crucial nature of the make-or-buy decision, asking what proportion and which parts should be operated in-house and which elements should be outsourced, in the supply strategy of a firm, this kind of strong theoretical background is a prerequisite for the study. TCE provides a theoretical basis for the decisions concerning buyer–supplier relationships and moreover, their types. It is applied in this study in the analysis of such relationships, and is used as a theoretical background in the discussion on supply strategies and strategic supply management.

2.4 The value net approach

The research context of this study is the value net. In adopting this approach the study combines the perspectives of networking and value creation, as other studies have done as well. For example, Möller and Svahn (2003), Svahn (2004), Möller, Rajala and Svahn (2005), Möller and Svahn (2006), Möller and Rajala (2007), and Svahn and Westerlund (2007) analyzed capabilities, network types and characteristics, the management of networks, value creation, and relationships by combining the approaches of industrial networks and strategic value nets. Whereas the former offers tools for studying network relationships, the latter focuses on value-creating systems.

2.4.1 Industrial network approach

The industrial network approach (Håkansson, 1986; Håkansson and Johanson, 1992), originally developed by the IMP (Industrial Marketing and Purchasing) group, defines a network as consisting of actors, resources and activities, and emphasizes the relationships and dependencies between the actors (Ford et al., 1998; Gadde and Håkansson, 2001; Håkansson, 1986; Håkansson and Johanson, 1992). Networks and their structures are analyzed through their main components (actors, resources and activities) (Anderson and Narus, 1999; Håkansson, 1986), which form the framework known as the ARA-model (see Figure 3).

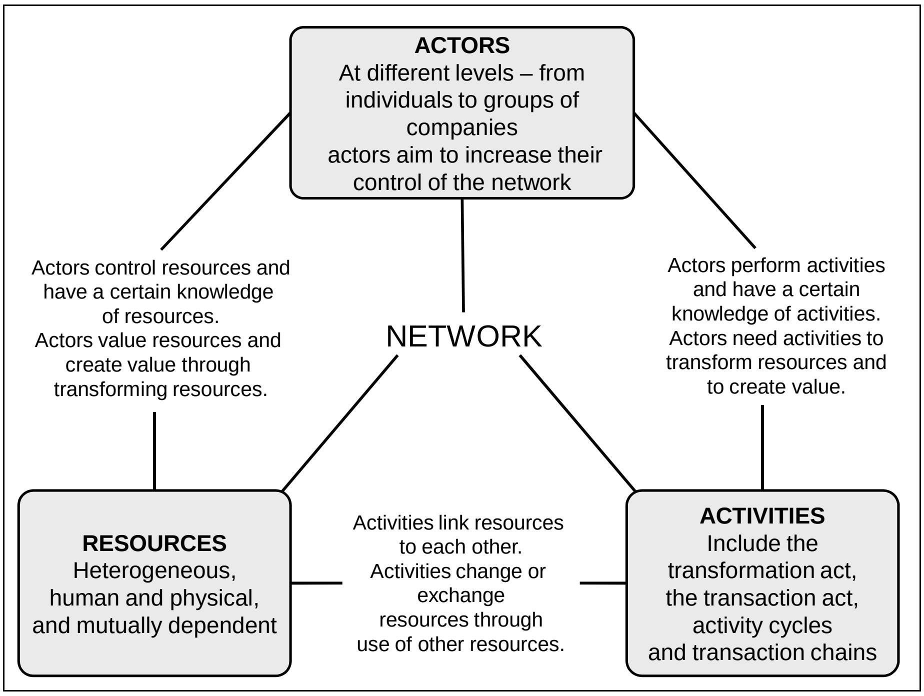

Figure 3. The ARA-model (Håkansson, 1986)

In the ARA-model, which can be used to describe network relationships, actors refer to individuals, groups of individuals, parts of firms, firms and groups of firms, i.e. the members of a network (Håkansson and Johanson, 1992). Actors are goal directed and act in line with their goals which are transformed into more specific intentions (Lenney and Easton, 2009). They perform activities, such as transactions, and create value through transforming resources (Anderson and Narus, 1999). Actors determine which activities to perform, how they are to be performed, and which resources are to be utilized, when performing the activities (Håkansson and Johanson, 1992). Actors base their activities on direct or indirect control over resources. Direct control is based on ownership and indirect control is based on relationships with other actors. (Håkansson and Johanson, 1992) Actors are connected to other actors via resources and activities, and they need activities in order to transform resources. An activity occurs when one or several actors combine, develop, exchange, or create resources by utilizing other resources (Håkansson and Johanson, 1992). Actors develop and organize their activities partly in response to how their customers and suppliers perform and organize theirs (Harland, 1996).

Actors control resources consisting of physical assets, financial assets and human assets (Håkansson, 1986). Resources refer to anything that actors explicitly value, and actors use them to generate greater value for themselves and other actors (Anderson and Narus, 1999). Lenney and Easton (2009) state that resources can be tangible or intangible, stable or unstable, valuable or worthless depending on their configuration. They are mutually dependent, which means that the use and value of a specific resource depend on how it is combined with other resources (Håkansson, 1986; Håkansson and Johanson, 1992). Actors form relationships through exchange processes, and hence obtain access to other actors' resources, which is the basic idea of networking (Håkansson and Johanson, 1992).

According to Håkansson (1986), the character and role of actors depend on the activities they perform or control, the resources they manage, and the knowledge they have about them and about the other actors in the network. All of these define their network position. An actor's identity and role comprise a unique combination of its resources and activities (Harland, 1996). Gadde et al. (2003) suggest that the potential to influence others is a function of the company's network position, and is defined by the characteristics of its relationships. Johanson and Mattsson (1992) also state that the relationships between the actors define their positions. Furthermore, the actor that owns or can control unique resources through which it is able to create unique value has a strong power position in a network. Resources that are valuable, rare, imperfectly imitable and non-substitutable (so-called VRIN resources) are highly valued and improve the position of the actor concerned (Barney, 1991).

Actors, their resources and relationships, as well as their roles and position, are the fundamental factors in the ARA-model. Given the focus in this study on the relationships and power relations between network actors, the ARA-model is adopted. Resources and capabilities are viewed from the resource-based perspective, in which it is assumed that value is created by combining the unique resources of network actors. Moreover, the assumptions of Håkansson (1986), Johanson and Mattsson (1992), Harland (1996), and Gadde et al. (2003) are shared in that resources and relationships are considered to determine actor positions and roles. The study adopted structural perspective on power (see Chapter 2.5), meaning that power is analyzed in terms of network structures and positions. Furthermore, Harland (1996) define that ARA-model is based on the RDT, which is one of the main theoretical foundations of this study as well. Therefore, the ARA-model based on the industrial network approach is applied as a theoretical background.

2.4.2 Strategic value net approach

Whereas the industrial network approach offers tools for the study of network relationships, the strategic value net approach (Jarillo, 1998; Parolini, 1999) focuses on value-creating systems. According to Parolini (1999), a value-creating system (VCS) is a set of activities that create value for consumers. Various resources are used in carrying out these activities, linked by various kinds of flows. Value-creating systems contain various economic players who may be involved in more than one VCS. Within the value net approach economic activity is conceived of not in terms of a set of economic players who internally perform a set of activities, but as a set of activities that create value for the final customers (Parolini, 1999).

Strategic value net approach has evolved from Porter’s (1985) value chain logic, presented in the value chain model. The model primarily concerns activities on the firm level, separated into primary and support activities. It identifies five primary activities, including inbound logistics, operations, outbound logistics, marketing and sales, and services. The secondary activities include procurement, technology development, human resource management, and firm infrastructure. According to Porter (1985, p. 36), “Every firm is a collection of activities that are performed to design, produce, market, deliver, and support its product.” Porter (1985, p. 34) state that “A firm gains competitive advantage by performing these strategically important activities more cheaply or better than its competitors.”

Several authors (Hines, 1993; Hines and Rich, 1997; Huemer, 2006; Kothandaraman and Wilson, 2001; Parolini, 1999) criticize the inadequacy of the value chain model, mainly due to its activity structure and customer perspective. Porter’s (1985) distinction between primary and support activities highlights the significance of individual companies. Kothandaraman and Wilson (2001) criticize Porter’s model on the grounds that it analyzes value-adding activities without exploring the links between the firms in the chain. These links, more precisely the relationships between the actors, are paramount in value creation and therefore the perspective of the individual company is too narrow. According to Normann and Ramirez (1993), companies cannot strategically concentrate exclusively on individual actors and should focus on the value-creating system as a whole (see also Normann and Ramirez, 1994).

Another reason why the value chain model is too narrow is that few firms are involved in only one value chain. The conditions for efficiency and effectiveness in a single chain are largely determined in terms of how the activities and resources are related to those in other chains, and this calls for a network perspective (Gadde et al., 2003; Gadde and Håkansson, 2001). According to Ehret (2004), in a growing segment of the economy dynamic value networks constitute the context for the creation of value and the management of relationships more than traditional value chains. The reason for this is to do with the nature of the current business environment, which requires companies to form flexible networks in which competences and capabilities are combined through collaboration, and end customers play a central role.

The role of end customers is one of the main concerns among critics of the value chain model. As Hines (1993) puts it, the focus of the model is on each firm's margin and profit and not on the customer's satisfaction. Prahalad and Ramaswamy (2004) add that in the traditional conception of value creation, customers are outside the firm. However, customers are the key to success, and businesses should therefore focus on maximizing created value for end customers. In doing so, the firms create value not only for the customers but also for themselves and their partners (see Bovet and Martha, 2000a and 2000b). This is the key principle behind the value net approach.

The fact that the value chain as a value-creation model is too rigid and sequential, and cannot respond to changes, led to the creation of the more flexible and agile value net model. A value net (or value network, value web, value-creating net) is a dynamic, flexible network in which the actors create value through collaboration (see Allee, 2003; Bovet and Martha, 2000a and 2000b; Jarillo, 1998; Möller et al., 2005; Parolini, 1999). The value net model was developed to facilitate the analysis, description and study of value-creating systems, and takes activities rather than companies as the key elements of strategic analysis (Parolini, 1999). Companies are regarded as complex nodes in complex interdependent value networks, where success comes through collaboration and creating a business environment in which each actor can be successful (Allee, 2003).

Given the criticism of the value chain model for not considering consumer satisfaction its primary object, the value net model begins with the customer and focuses on satisfying actual demand. The value net forms itself around its customers, captures their real choices in real time, and transmits them to other net participants (Bovet and Martha, 2000a). Because it is activated by real customer demand it is capable of responding reliably and rapidly to customer preferences (Bovet and Martha, 2000b). This makes the final product or service more valuable to the end customer than it would otherwise have been (Hines and Rich, 1997).

The concept of value, however, can be determined in various ways (see comprehensive literature reviews in Forsström, 2005; Lindgreen and Wynstra, 2005; Möller, 2006), but this study applies the definition of Walter, Ritter and Gemünden (2001, p. 366) who define that "value can be regarded as a trade-off between benefits and sacrifices." According to Forsström (2005), it is important to distinguish between value and value creation because while perceived value is a subjective assessment of the trade-off between benefits and sacrifices, value creation is the process through which the participants make use of each other's resources with the aim of creating value. Forsström (2005) further argues that there are three different perspectives in analyzing value which are i) the value of an offering (measuring value in monetary units), ii) the value of a relationship (not only monetary value but intangible issues as well), and iii) the value created in a relationship. In this study, the focus is on value creation that takes place in a relationship (i.e. value co-creation) and here value is measured not only in monetary units but intangible issues are significant as well. Allee (2003, p. 70) argues that "One of the major shifts at the strategic level involves rethinking value to include both monetary value and intangible value".

A value net (see Figure 4) comprises the relationships between its actors, i.e. customers, buyers and their suppliers as well as competitors (Bovet and Martha, 2000a; Brandenburger and Nalebuff, 1998). The actors create value by collaborating (Bovet and Martha, 2000a) and combining their unique and value-adding resources, competences and capabilities. The actors form collaborative relationships with actors who have complementary capabilities and resources through which the efficiency and utilization of their own capabilities are improved. According to Bovet and Martha (2000a, p. 82), "value nets place greater emphasis on managing overall performance rather than on each of the transactional activities, and these transactions should be carried out by whomever has the ability to execute them with superior efficiency and with the highest potential for adding value."

Normann and Ramirez (1993) argue that in a competitive environment, successful companies do not only add value, they reinvent it. The focus of strategic analysis is not the company but the value-creating system within which different actors work together to co-produce value. According to Fjeldstad and Haanæs (2001), in the value chain model the process of value creation is sequential and value is added at each step. In the value net, on the other hand, the actors create value by collaborating and combining their resources, competences and capabilities (Bovet and Martha, 2000a). In this study, the value creation is seen from the viewpoint of Normann and Ramirez (1993) and Bovet and Martha (2000a). In this view value is not only added in a sequential chain, but co-created by the network actors instead.

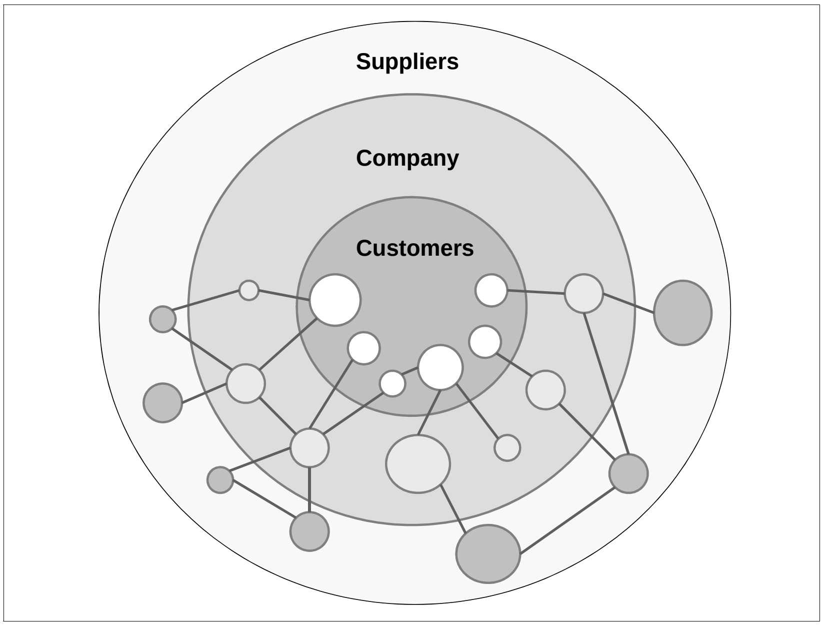

Figure 4. The value net (Bovet and Martha, 2000a)

Unlike value chains, value nets are future-oriented networks in which intangible assets play a crucial role (Allee, 2003 and 2008). Of these, knowledge and innovation are important, but the issue of power is very significant as well because it affects the nature of the relationship. According to Allee (2003), understanding the role of intangible assets is one of the most crucial business and economic questions. Moreover, intangible assets are dynamic rather than static, like physical assets. Given the focus in this study on the analysis of power, which is, moreover, a dynamic and intangible asset, the dynamic value net approach is more applicable than the traditional value chain perspective.

A critical issue in all types of networks is the ability to create value and the underlying system through which such value is produced (Möller and Rajala, 2007; Möller and Svahn, 2003; Svahn, 2004). Each product or service requires a set of value-creating activities performed by a number of actors forming a value-creating system (Möller and Rajala, 2007). The resource-based view is adopted in this study (see Chapter 2.1), and it is assumed that value is created when actors collaborate and combine their unique resources. Hence, there is a link between collaboration and value creation given that collaboration enables value creation. Moreover, because the ultimate corporate goal in the current dynamic business environment is customer satisfaction and value creation for them and other network participants, this study extends the discussion on networks to value-creating systems and value nets in which value and collaboration are paramount.

Both the industrial network and the strategic value net approach consider networks from a similar basis, the actors, their resources and activities, and their interrelationships playing the central role. Even though in the latter approach the activities of the value net are depicted in the form of nodes, and the relationships in the form of arcs, the basic idea in both is the same. The two are complementary, and in combination they provide the theoretical basis for the value net as a research context.

2.4.3 Network discussion

Previous studies witness the continuing debate on networks. According to Ritter (2007), in the context of relationships and networks the discussion concerns their positioning towards markets and hierarchies. Some authors see markets and hierarchies as extreme points on a continuum, and relationships and networks hybrid forms between them (e.g., Thorelli, 1986; Williamson, 1975), whereas in the view of others relationships and networks constitute a third, separate governance mode (e.g., Håkansson and Johanson, 1992; Powell, 1990).

Accordingly, Hingley (2005a) defines that transactional and relational exchanges are often seen as opposite ends of the spectrum and similar argument has been put forward for the constructs of power and collaboration. Hingley (2005a, p. 555) disagrees insisting that "power and collaboration are integral and coexist alongside one another." This study adopts the view that networks consist of different types of relationships, and thus they are not all collaborative in nature. Moreover, power may exist also in collaborative relationships. For example, according to Järvensivu and Möller (2009, p. 658), "some networks consist of players with more or less equal power of influence", which means that different kinds of power relations can be found from networks. Furthermore, in this study the concept of collaboration is not considered synonymous with the concept of network. Collaborative relationships are only one form of the relationships that are embedded in networks, although they constitute the most important building blocks of networks.

There is further debate related to the management of networks. Previous studies (see Harland and Knight, 2001; Järvensivu and Möller, 2009) identify two main schools of thought, but the roots of the debate go deeper. Harland and Knight (2001), for example, argue that these schools of thought also have different views on the concept of strategy (for a more detailed discussion, see Baraldi et al., 2007; Harland and Knight, 2001; Ritter, Wilkinson and Johnston, 2004). Several studies distinguish between the view of the "networks of organizations" and the view of the "network organization". The former view sees that networks cannot be managed by any single company and the latter sees that networks can and have to be managed (for a more detailed discussion, see Järvensivu and Möller, 2009; Möller and Rajala, 2007; Möller et al., 2005; Möller and Svahn, 2003).

The focus of this study is not on the management of networks, but in the management of the supply activities of a firm instead. These activities involve supplier relationships, and networks consist of relationships, but still the focus is on supply management. Consequently, the debate concerning the possibility of managing networks is not highly relevant, but it cannot be neglected because the roots go deeper than just in the management of networks. In this study the viewpoint of Harland and Knight (2001), Möller and Svahn (2006), Möller and Rajala (2007) and Järvensivu and Möller (2009) is shared, and acknowledged as Ritter et al. (2004, p. 177) state that "both of these points of view are relevant.” The need to have tools for the analysis of both network structures and relationships and value creation is acknowledged. Both aspects of business networks are therefore considered and adopted in part, thus forming a theoretical basis for the study of power relations in value nets.

2.5 Theoretical aspects of power

Power is an essential characteristic of a social organization, and an inevitable instrument for inter-organizational coordination (Achrol, 1997). Its many facets make it a very broad concept, which is hard to capture and concretize. It can be understood and defined in many ways depending on the context. Stannack (1996) distinguishes between physical and social power, the former referring to the ability to move tangible objects and the latter to intangible matters. The focus in this study is on social power. There is also a difference between total and relative power. Total power refers to the average of the parties’ dependence upon one another, in other words it results from full interdependence, and relative power to the difference between the two parties’ dependence, in other words it is the result of interdependence asymmetry (Caniëls and Gelderman, 2005; Stannack, 1996). Again, the focus in this study is on relative power.

Etgar (1976) further distinguishes between economic and non-economic power, whereas Hunt and Nevin (1974) and Gelderman, Semeijn and De Zoete (2008) discuss the difference between coercive and noncoercive influence strategies. According to Gelderman et al. (2008), coercive strategies motivate compliance on the basis of source-controlled rewards and punishments, and are believed to have a negative impact on distribution channels, for example. The non-coercive strategies, on the other hand, aim at changing the attitude of the other party, and they have been found to have a positive impact instead (Gelderman et al., 2008).

Distinctions have also been made between structural and behavioural power, power sources and uses, and the macro and micro perspectives. For example, Cendon and

Jarvenpaa (2001) distinguish between structural and behavioural power. The former takes a macro perspective (i.e. organizational structures), whereas the latter focuses on individual actions and the micro perspective. The behavioural (i.e. the micro) perspective focuses on the exercise of power (see Pettigrew and McNulty, 1995 and 1998) whereas the structural perspective focuses on its sources, which are the factors that enable one party to acquire power and possess it (Cendon and Jarvenpaa, 2001).

The structural (i.e. the macro) perspective is adopted in this study, and the focus is on the sources of structural power and the definition provided by Cendon and Jarvenpaa (2001) is shared. According to Cendon and Jarvenpaa (2001), from the structural perspective power is derived not from the actions of people but from organizational structures, which include resources, interconnections among actors and organizational positions. Power is analyzed here in terms of network structures and network positions, hence the research approach is the *structural perspective of power*. The micro perspective concerning individual actions and the exercise of power is not discussed. This study focuses on analyzing the sources of power and their influence on actors' positions in the network, and moreover, power relations between the actors.

2.5.1 The definition of power

Power has been defined as *the ability to manage the perceptions of the other party* (French and Raven, 1959), *the ability of an actor to impose its will on others* (Blau, 1964), *the ability to evoke* (Gaski, 1984), *the ability to influence* (Mohr, Fisher and Nevin, 1996), *the ability of a firm to affect decision-making and/or behaviour* (Wilkinson, 1996), and *the ability to control one's own or another entity's range of intended or actual actions* (Stannack, 1996). In the research made in the field of purchasing and supply management, Stannack (1996, p. 51) further defines supply chain management power as *the capacity to optimize the behaviour of suppliers and subcontractors in accordance with desired performance objectives,* and purchasing power as *the capacity to achieve a successful negotiated contractual outcome on behalf of an organization*. Power as analyzed in this study refers not only to the ability to achieve certain outcomes from negotiations, and thus the former definition is more appropriate and is adopted in part. Given all of the above-mentioned definitions and the research approach adopted, power is defined here as *the ability to influence the decision-making and actions of the other party*. Despite reference to the actions of another party however, the actions of people or organizations are not considered sources of power. The power is viewed to stem from organizational structures and could thereby be called structural power due to its sources.

The definition of power adopted is thus based on earlier definitions put forward by French and Raven (1959) representing the network perspective, Blau (1964) representing the so-called classic line, Gaski (1984) and Mohr et al. (1996) adopting the viewpoint of marketing, Wilkinson (1996) representing the perspective of distribution channel, and Stannack (1996) representing purchasing and supply management. It also reflects the assumptions in Cendon and Jarvenpaa (2001), who take a structural perspective. Moreover, French and Raven (1959) and Gaski (1984) belong to the camp addressing the fundamental question of “where power comes from”, which is applicable here. All these definitions are relevant given the scope of the study, and the definition that was adopted derived from them.

2.5.2 Power position and the power relation

It is assumed in this study that the different power sources of actors define their power positions in value nets. According to Wilkinson and Young (2002), a firm’s network position refers to its role and how it is linked directly and indirectly to the other firms involved. Andersen and Christensen (2005) consider the concepts of network position and network role complementary and, to some extent, dialectical, whereas Anderson et al. (1998) found that position located the actor in the relationship system relative to other actors, and that role referred to what the actor did in relation to other actors. The definition by Anderson et al. (1998) is adopted in this study.

Gadde et al. (2003) further suggest that the potential to influence others is a function of the company’s network position, and is defined in terms of the characteristics of its relationships. According to Medcof (2001), the power of an organization depends upon the resource-dependency relationships it has with other organizations. In the view of Johanson and Mattsson (1992), the relationships between actors define their positions in the network, and the firm's position depends on the nature of its direct and indirect relationships with the other actors: thus the concept of network position facilitates understanding of how an individual actor is related to, or rather embedded in the environment. Thereby, the power position in a network is defined in this study, in accordance with the above, as *a combination of the role the actor has in the network and the relationships it has with the other network actors*. This definition supports the assumptions behind the structural perspective of power as well as resource dependency theory and the resource-based view.

Easton (1992) (citing previous works of L.G. Mattsson, e.g., Mattsson, 1984 and 1987; Johanson and Mattsson, 1987) distinguishes between macro and micro network positions. Macro positions refer to relationships between individual firms whereas micro positions refer to the firm's relationship to the network as a whole. The focus in this study is on macro positions, which are characterized by the role of the firm in the network and the strength of the relationships with other firms, for example. This supports the other choices made, including the adoption of the structural (i.e. macro) perspective on power.

It is assumed that the power position of an actor is one determinant to be acknowledged in defining the concept of power relations. Power position refers to the actor's position in the network, whereas a power relation exists between the power positions of two value net actors. It results from the power situation or balance between the power positions of buyer and supplier. As stated earlier, power in this study refers to relative power, and the power of an actor is analyzed relative to the other party's power. Therefore, the sum of supplier power and buyer power is always set, and only the power balance between them shifts. This is referred to as the *power relation* in this study and it is viewed as the relation between two actors but analyzed in the network context.

2.6 The theoretical framework of the study

Given the aims of this study, an understanding of the different aspects of power as a concept is essential, but there is also a need for more general theories by way of theoretical background. Hence, the initial discussion was based on the resource-based view, resource dependency theory and transaction cost economics.

Transaction cost economics provides a basis for many strategic decisions in the context of supply management. In this study it is used mostly as a background for the discussion on supply strategy and the decisions concerning types of supplier relationships. It is a solid theoretical basis for the study of strategic supply management, and combined with the RBV and RDT it facilitates analysis of the role of power relations in collaboration and in strategic supply management.

In that the RBV connects VRIN resources to value creation it suits the purposes of this study. Moreover, VRIN resources could be considered significant determinants of power, which makes the RBV even more compatible with the theoretical assumptions. Wernerfelt (1984) connects the discussion on resources to the discussion on power, and several other authors (Cendon and Jarvenpaa, 2001; Cox, 1999; Cox, Sanderson and Watson, 2001; Doz and Hamel, 1998; Ford et al., 1998; Gelderman and van Weele, 2004; Håkansson, 1986; Medcof, 2001; Pfeffer, 1981; Pfeffer and Salancik, 1978; Ramsay, 1995 and 1996) also consider resources, competences and capabilities to be sources of power. Resources, competences and capabilities are relevant to this study on account of their significant role in value creation and collaboration, but also because of their role as power sources in relationships between organizations. This justifies the adoption of the RBV and RDT by way of theoretical background (see more about the classification of the theories Foss, 2005, p. 44).

Resources, competences and capabilities also have a significant role in the firm's supply strategy and strategic supply management, and as Figure 5 illustrates, the RBV and RDT therefore also offer theoretical insights for that part of the study. For example, a firm's core competences and capabilities are highly critical in making make-or-buy decisions, and also play a role in determining and seeking suppliers that would be suitable partners in collaborative relationships. Thus the RBV is particularly applicable to the study of supply strategies.

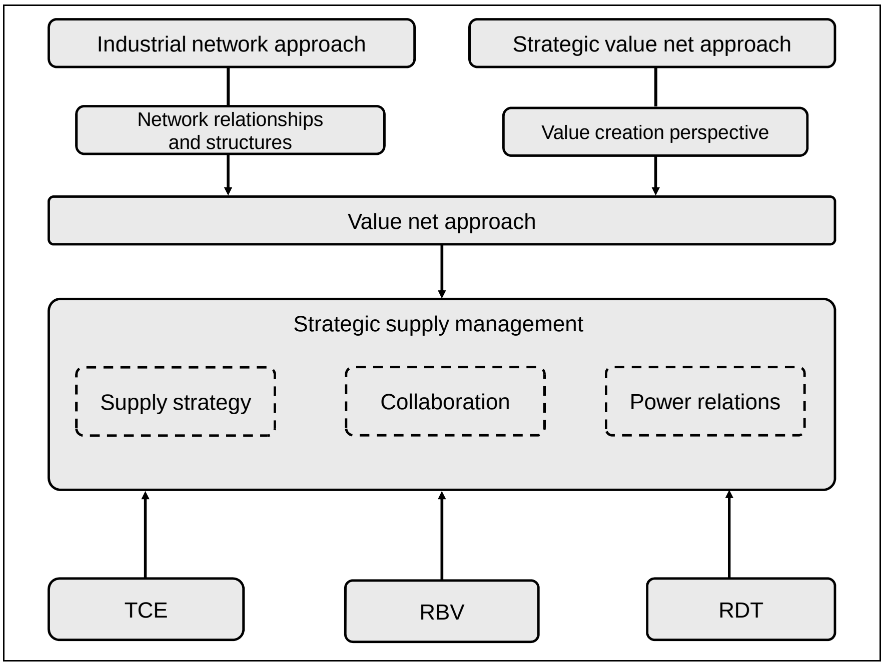

Figure 5. The theoretical framework of the study

In addition to TCE, RBV and RDT, network-related theoretical background is utilized in this study in order to create foundation for the research context of value nets (see Figure 5). The value net approach combines the industrial network and the strategic value net approaches. The former provide the tools for studying the components and structure of networks, and network relationships in the form of the ARA-model. The industrial network approach and the ARA-model were considered appropriate given the focus in this study on actors, their resources and the relationships between them. Furthermore, the strategic value net approach brought the value-creation perspective to the study, which is important in gaining the ultimate goal for the collaborative relationships.

2.7 The conceptual framework of the study

Figure 6 shows the connections between the main concepts and the research questions, and how the publications relate to these.

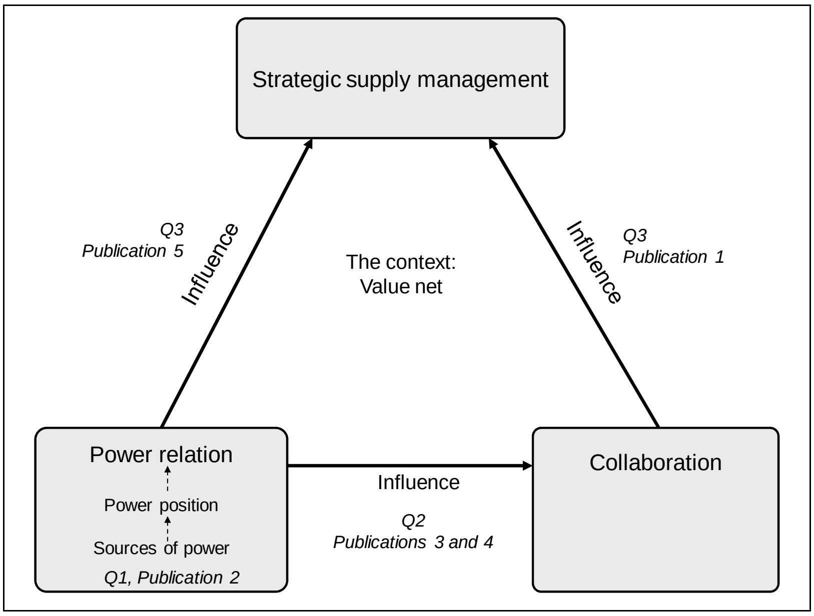

Figure 6. The relations of the research questions with the main concepts

The main research question concerns the influence of the nature of power relations on strategic supply management. Buyer–supplier power relations, based on sources of power and power positions, differ in nature and thus the study focus is on their role and influence on strategic supply management. Publication 1 examines collaboration as a form of buyer–supplier relationship in a firm's supply strategy which is a significant part of strategic supply management. Publication 2 determines the sources of buyer and supplier power, and this provides a basis for the study of power positions and, moreover, power relations. The relation between collaboration and power relation is examined in Publications 3 and 4, and their role and influence on a firm's supply strategies are analyzed in Publication 5. As Figure 6 shows, the research context is that of the value net. The empirical context, however, is the Finnish food industry. The following chapter describes the methodology applied to study the Finnish food industry.

3 RESEARCH METHODOLOGY

This chapter describes the empirical research context, the research strategy and the methods of data collection and analysis, and evaluates the quality of the research. Figure 7 depicts the overall research process.

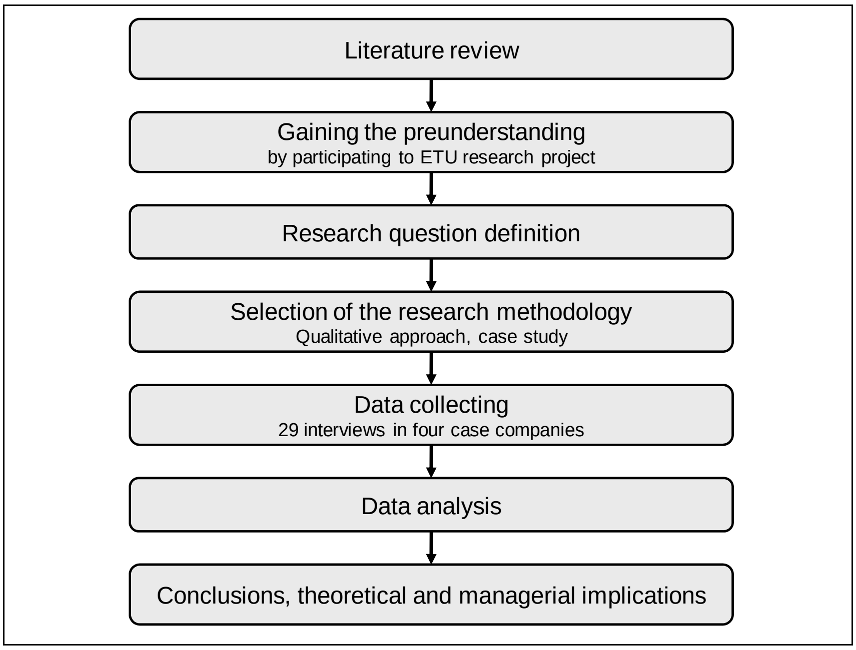

Figure 7. Research process

The research process in this study largely follows the model presented by Stuart et al. (2002, p. 420). As Stuart et al. (2002, p. 423) state, “All research starts from an examination of existing theory.” An extensive literature review started the process, and combined with the researcher’s participation in the research project gave a preunderstanding of the research topic. The choice of methodology and data collection method was based on the research questions. According to Voss, Tsikriktsis and Frohlich (2002, p. 201), research questions may evolve over time and the constructs may be modified, developed or abandoned. This is a potential strength because it allows the acquisition of more knowledge than if the questions were fixed. In this study the questions were modified during the process in order to formulate more focused research objectives. The collected data was analyzed based on the research questions, and conclusions and implications were drawn in the final stage.

3.1 Research strategy

This study is qualitative in nature. A case study strategy is adopted and the empirical evidence was collected through semi-structural interviews. Yin (2003) defines a case study as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between the phenomenon and the context are not evident and multiple sources of evidence are used. The different aspects of the case are understood in relation to one another as a coherent whole or configuration, rather than as modular assemblages of variables (Dubois and Araujo, 2007). According to Eisenhardt (1989, p. 534), "a case study is a research strategy which focuses on understanding the dynamics present within single settings."

According to Halinen and Törnroos (2005) and Järvensivu and Törnroos (2010), a case strategy is the most suitable for studying business networks. It allows investigation of a contemporary phenomenon that is difficult to separate from its context, and necessary to study within it in order to understand the dynamics in the setting (Halinen and Törnroos, 2005). The phenomenon in this study is the buyer–supplier relationship, which is studied in a network context. The relationship is embedded in the network and is affected by the network effects, and hence the boundaries between the context and the phenomenon cannot be clearly defined. Given that the main research question of this study - "How does the nature of power relations influence the strategic supply management of a firm in a value net?" - is a "how" question, a qualitative rather than a quantitative approach was appropriate (Yin, 2003).

Yin (2003) suggests four types of design for case studies: single or multiple cases examined from the holistic perspective with single units of analysis on the one hand,

and from an embedded perspective with multiple units of analysis on the other. This study encompasses the whole value net as a single case, on account of the network perspective adopted. Hence, it comprises one case. Four different buyer–supplier relationships are studied, and these comprise the units of analysis. Therefore, in accordance with Yin's (2003) suggestions the study could be described as an embedded single-case study with multiple units of analysis. The use of multiple units of analysis, as suggested by Dubois and Araujo (2007), strengthened the study.

Case studies may be exploratory, explanatory or descriptive (see Yin, 2003). The aim in an exploratory case study is to define questions and hypotheses for a subsequent study, or to determine the feasibility of the desired research procedure. A descriptive case study gives a complete description of the phenomenon within its context, whereas an explanatory case study comprises data based on cause-effect relationships, explaining how events happened (see also Seuring, 2008). This study could be defined as a descriptive case study, the aim being to explain and describe *how* the nature of power relations influences the strategic supply management of a firm.

According to Miles and Huberman (1994), flexibility, richness, holism, causality assessment, the possibility of locating meanings and the natural setting are some of the advantages of qualitative research. The case study method was chosen here in order to exploit these advantages, and because of the nature of the research topic and context. Single-case research such as this does not purport to produce findings that can be generalized in a statistical sense, but as Yin (2003) suggests, the findings will be valuable in an analytical sense if they clarify or extend understanding of the existing theory. Given the purpose of the study to achieve a deeper understanding of the nature of power relations and their influence on collaboration and strategic supply management, it was considered the most appropriate option. Moreover, the fact that a case study combined with interviewing allows more in-depth discussion in which *why* and *how* questions can be asked and the fundamental reasons behind and the background nature of the issues can be explained further justified the choice of method. The single-case design made it possible to gather rich empirical data and thereby to gain a deep understanding of the phenomenon.

3.2 Case selection

The case value net comprises several actors, and the four main ones were selected as the case companies. The case companies of this study are a Manufacturer company, two supplier companies (Supplier A and Supplier B) and a Retailer (see Figure 8). The value net ranges from raw materials and packaging all the way to end customers through grocery stores. These four companies were selected because i) they represent different nodes of this value net and hence have different roles in it, ii) there are different kinds of relationships between them, iii) they are all significant actors in the Finnish food industry, and iv) analyzing them will produce a comprehensive picture of the net in question. Furthermore, the fact that they had different roles, power positions and relationships in the network was relevant to the research aim of the study.

This dissertation is a part of a larger research project entitled “Renewing business in the food industry” (also called the ETU project). The research focus of the project was on the business of the food industry from the perspectives of supply management and marketing. This study represents research from the supply management side. Six researchers participated in the data collection process, i.e. six interviewers were used (see Appendix 1). The four companies comprising the case companies were also the case companies of the research project. It became clear during the project that it was possible to collect data from these companies and to utilize it in this kind of research. The research topic of this study is relevant to the context of the case value net and the case companies were able to provide relevant empirical data for the purposes of the research. Moreover, the topic was highly interesting to the case companies and they constituted an interesting research context for the empirical study.

3.3 Descriptions of the case companies and the case value net

The Manufacturer in this case study is one of Finland's leading food manufacturers and a market leader in many of its operational areas. Its product categories include many kinds of ready-prepared foods and different meat products. Its main market area is Finland and a considerable proportion of its raw materials come from Finnish suppliers. It has a long history and traditions, and therefore has indispensable knowledge about fresh ready-prepared food. It also has a very strong and well-known brand as well as marketing and manufacturing resources and capabilities, and active product development. This Manufacturer has the role of both buyer and supplier in the case value net (Figure 8). It is a buyer when it purchases raw materials and packaging materials from Suppliers A and B, and a supplier when it sells its end products to the Retailer.

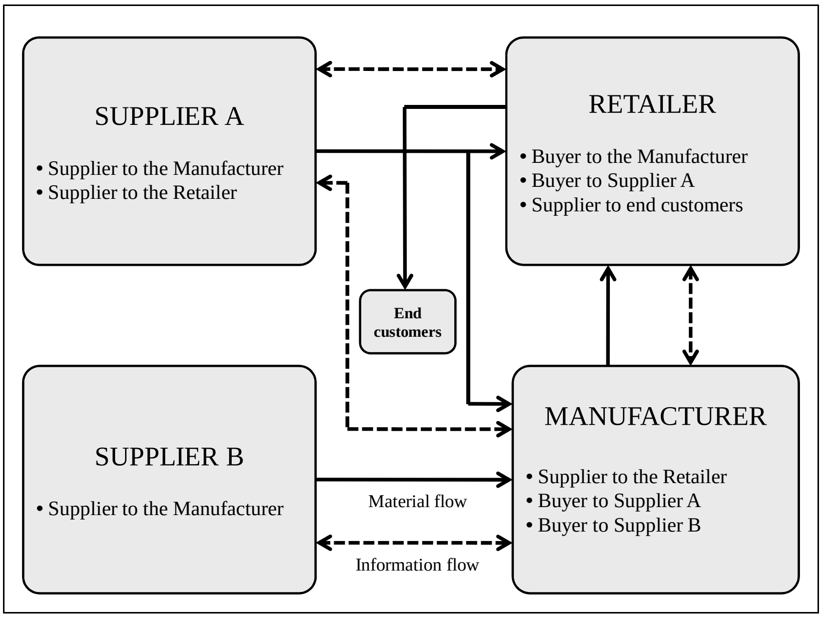

Figure 8. The case value net from the Finnish food industry

Supplier A, a market leader in pasta products in Finland, also sells and manufactures flour, flakes and grits, for example, as well as deep-frozen dough and pastry. It has manufacturing resources and capabilities and product development capabilities. It has a well-known brand and is the smallest case company in terms of turnover. It supplies both the Manufacturer and the Retailer. The Manufacturer purchases both basic and customized raw materials, and the Retailer purchases end products, from Supplier A.

Supplier B, on the other hand, is the supplier of packaging solutions to the Manufacturer. It offers and manufactures different kinds of packaging solutions for its customer companies. It has knowledge about packaging and packaging materials, is very innovative in product development and offers high-quality products. Supplier B is always in the role of supplier in the case value net, as is Supplier A. Supplier B does not currently have an exchange relationship with Supplier A and they are not competitors. Furthermore, Supplier B does not have an exchange relationship with the Retailer either because it does not supply it with anything directly; it supplies to the Manufacturer, which supplies to the Retailer.

The Retailer, which is in the role of a customer company in this value net, is the biggest case company in terms of turnover and number of employees. There are only three main retail specialists in Finland and the Retailer of this study is one of them. In fact, it has only one major domestic competitor in Finland, the others being much smaller (see Figure 1). Furthermore, the stores of this retail specialist comprise the most comprehensive store network in Finland. The Retailer has extensive knowledge about the selection and customer preferences, and about purchase and market prices. It also has control over and knowledge about the distribution channel because of its role and position in the case value net. The retailer is always in the role of buyer, having a supplier role only when it sells end products to end customers (i.e. consumers).

These four case companies are the participants of a certain value net in the Finnish food industry. The value net model places more emphasis on the role of customers than the traditional value chain model which makes it more applicable to the food industry. The case value net has several characteristics that are typical of a value net. Table 1 compares the characteristics of value nets described in the literature (Allee, 2003; Bovet and Martha, 2000a; Ehret, 2004; Fjeldstad and Ketels, 2006; Möller, Rajala and Svahn, 2004) with the evidence found from the case study.

Table 1. Characteristics of the case value net

Characteristics of value nets	Evidence from the case value net
Collaborative	"We have a collaborative partnership relationship with the Manufacturer." *(Supplier B)* "We have joint projects with Supplier B." *(Manufacturer)* "We have a collaborative partnership relationship with the Manufacturer." *(Retailer)* "The relationship with Supplier A could be developed further because there is a good basis for collaboration and the relationship has a long history." *(Manufacturer)* "Price is not a primary issue when making contracts with suppliers offering the materials in question." *(Manufacturer)* "The Manufacturer and the Retailer have joint projects and collaboration in product development and with private labels, for example." *(Supplier B)* "We have a relationship with a long history and a high level of commitment with the Manufacturer, and we have had this collaborative relationship for years." *(Retailer)* "We have a long history of relationships with the Manufacturer and the Retailer." *(Supplier A)* "We have common goals in this value net." *(Retailer)*
Flexible, agile	"…companies have flexible structures and are able to adjust to different changes." *(Manufacturer)* "We do not want our structures and actions to be rigid." *(Supplier B)* "Our relationship is not rigid." *(Manufacturer)*
Focus on end customers	"The perspective of the end customer has determined our strategies and our business idea." *(Supplier A)* "Our ultimate goal is to create value for the end customers." *(Retailer)* "We are dependent on end customers." *(Retailer)*
Use of technology	"We have modern technology and our solutions are highly developed." *(Supplier B)* "We use electronic communication in our relationships." *(Supplier A)*
Intangible assets	"Power between the value net actors is very significant in determining the relationships between us." *(Retailer)* "Some actors are more powerful than others, which has a lot of influence on the business." *(Supplier A)* "Knowledge is power." *(Manufacturer)* "Knowledge is one of the most important factors." *(Manufacturer)* "Knowledge is power." *(Supplier A)* "We are able to develop new innovations through networking." *(Retailer)* "We aim at creating value for the end customers." …"We have different kinds of customers who value different things." *(Retailer)* "One of the most critical assets of the Manufacturer for this value net is its ability to develop new product innovations." *(Retailer)*
Ability to respond rapidly	"We are able to develop new products rapidly and our customers value our ability to react so rapidly." *(Supplier B)* "Supplier A is able to react very rapidly when needed." *(Manufacturer)* "The value net has enabled us to develop the ability to react." *(Retailer)* "The structure of the value net is more rapid than other ones." *(Retailer)*

Information sharing	"The retailer distributes information to us, e.g., concerning consumer buying behaviour." *(Manufacturer)* "We have meetings with the Manufacturer at least once a month and we share critical information many times a week." *(Supplier B)* "Information sharing between us and the Manufacturer is two-way." *(Supplier B)* "We share information with the Supplier B every week." *(Manufacturer)* "Information sharing with Supplier B is flexible and smooth." *(Manufacturer)*
Focus on value-creating activities	"Our ultimate goal is to create value for the end customers." *(Retailer)* "We aim at creating value through our strategic supply management." *(Retailer)* "We aim at creating value for the end customers but also for all of the participants in the value net." *(Retailer)* "It is important that everyone gets something, and that the value is not only created for end customers." *(Supplier A)*
Future-oriented	"Our aim in our relationships is to achieve competitive advantage, which is in fact the main goal of our collaborative relationships." *(Retailer)*
Constant development	"We have joint product-development projects with Supplier B " and "we are constantly finding new areas of co-development." *(Manufacturer)* "We are constantly seeking new business models and ways of doing business in this value net, and logistical issues are being developed all the time in order to increase rapidity, for example." *(Supplier A)*
Other relevant information from the case study	"Our relationship with Supplier A is over 20 years old and it is our second biggest supplier of flour products." *(Retailer)* "Supplier A is very reliable and always keeps it promises with regard to quality and delivery times, for example." *(Retailer)* "We have shared goals with the suppliers in this value net." *(Retailer)* "Collaborative relationships are based on trust… trust decreases friction and increases value creation." *(Retailer)* "The goal of this value net is to enhance efficiency, customer-orientation and rapidity by collaborating and by sharing information." *(Retailer)*

The evidence from the case study presented in Table 1 in the form of interview quotations shows that this particular network from the Finnish food industry contains relationships in which collaboration at the different levels is evident. The end customers are in the central role and the companies aim at creating value for them and also for all network participants. Because of their agile and flexible structures and actions the companies are capable of reacting rapidly to change and to changing customer preferences. They are also constantly developing their processes and relationships, as well as their value activities.

The role of intangible assets such as knowledge, innovation, power and value are significant. Moreover, as one interviewee from the Retailer stated, they have different kinds of end customers, some of which emphasize the significance of monetary value whereas others prioritize intangible value. According to the Retailer representative, "*There are end customers who value social issues and social influencing whilst others value only low price. Some customers value a wide variety of product offerings whereas others value the closeness of the stores. There are also end customers who value the character of the product, for example diet products*." As Table 1 shows, this value net from the Finnish food industry constitutes an interesting context for the study of power relations and collaboration in value nets and, moreover, the role of different power relations in strategic supply management.

3.4 Data collection

Yin (2003) suggests that multiple sources of evidence should be used to establish construct validity and reliability of the study. According to Dubois and Araujo (2007), the use of multiple respondents makes it possible to capture a variety of perceptions and meanings, which is vital to the understanding of complex business relationships. Furthermore, having numerous and highly knowledgeable informants who view the focal phenomena from diverse perspectives should limit interview bias (Eisenhardt and Graebner, 2007). Therefore, several research informants and data from different sources (data triangulation) were used in this study.

According to Eisenhardt and Graebner (2007), the interview is a highly efficient way of gathering rich, empirical data. In this case 29 interviews were conducted with the case companies' personnel, of which 27 were face-to-face, semi-structured interviews. The other two were email-based interviews, the structured interview form being emailed to the interviewees and the questions focusing on the volumes of sales and purchases between the case companies. This information was collected in written form in order to ensure accuracy of the numerical data and to minimize the possibility of researcher misperception. Table 2 shows the numbers of interviews and interviewees in each case company, the number of relationships (from the case value net) in which the company was involved, and its role in the value net and in the relationships.

Table 2. Interviews in the case companies

Case company	Number of interviews	Number of interviewees	Number of relationships	Company's role in the value net
Manufacturer	16	7	3	Buyer, Supplier
Retailer	6	4	2	Buyer
Supplier A	5	1	2	Supplier
Supplier B	2	1	1	Supplier
Total	*29*	*13*		

As the table shows, there were 16 interviews in the Manufacturer, six in the Retailer, five in Supplier A, and two in Supplier B. The Manufacturer was the focal company of this value net and was involved in three relationships. It also represented both the buyer and the supplier side, which is why more interviews were carried out there. Given that the Retailer and Supplier A were both involved in two relationships and Supplier B only in one, the point at which new interviews did not provide new evidence (saturation point) was reached earlier in Supplier B than in the other case companies. In fact, the saturation point was used in determining the sufficiency of interviews. This is characteristic of case studies, and as Eisenhardt (1989) states, data saturation occurs when corroborating the existing interview data with more interviews would not bring any new information relevant to the research questions.

The research informants were selected and interviewed on the basis of their active involvement in buyer–supplier relationships, supply management and marketing. The interviewees from the buyer companies mostly represented purchasing and supply management (i.e. purchasing directors, supply managers), whereas those in marketing and selling (i.e. customer directors, sales managers) represented companies in the supplier role. In order to obtain additional information and complementary perspectives interviews were also conducted with informants from other company levels and in other positions (i.e. CEOs, commercial directors, quality managers) (see Appendix 1). Given that the Manufacturer was the focal company in the case value net and was in the role of both buyer and supplier, and in order to cover both perspectives, interviews were conducted with the purchasing director and supply manager, as well as with the customer director, for example. Table 3 gives the positions or titles of the informants and shows how many there were in each position.

Table 3. Informant profile

Position / Title	Number of interviewees
Purchasing director	2
Supply manager	4
CEO	3
Customer director	1
Sales manager	1
Director of commercial operations	1
Quality manager	1
Total	*13*

Given the focus on buyer–supplier relationships, the interviews covered both the buyer and the supplier side. Take the case of the relationship between Supplier B and the Manufacturer, for example. One interviewee represented sales and marketing management in Supplier B, which was in the role of supplier in this relationship, and another represented supply management in the Manufacturer because of its buyer role. The Manufacturer also represented the viewpoint of sales and marketing because it was in the supplier role in its relationship with the Retailer, whereas the Retailer interviewees represented the supply side. It was considered necessary to interview both sides from each relationship. This yielded interesting results on account of the different reactions in the companies to the same issue depending on the role they had.

Given the approach of this study, the structural perspective on power was also adopted in the interviews, and hence the questions concerned issues on the organizational (i.e. how the organization works) rather than the individual (i.e. individual behaviour) level (see Yin, 2003). The questions, which were based on the literature review and existing theory, covered the following: the roles of the firms, their resources, capabilities and competences, their power positions and power relations, the sources of these power relationships, the characteristics of the Finnish food industry, and the supply management, supply organization and the supply strategies of the firms. This part of the interviews covered the supply management perspective. Also information from the perspective of marketing was collected and it focused on information sharing and market orientation (see Appendix 2).

The interview questions were validated in a review process involving several researchers (researchers of the research project) who checked and modified the questions. They were then tested on a few key informants in the case companies, and the ones in which problems arose were modified. If possible, the wording and the order of the questions remained unchanged for all respondents. The interviewees were nevertheless allowed to talk freely, and the questions were adjusted accordingly with due consideration to the informant's role and position in the company. Questions concerning purchasing and supply were used mainly when the informant represented the supply side, and those covering information sharing and market knowledge were asked of informants representing marketing and sales (see Appendix 2).

The interviews were carried out during the years 2006 and 2007 (see Appendix 1). They lasted, on average, 52 minutes, varying from 20 minutes to one hour and 45 minutes. The participation of six interviewers in the data collection process facilitated investigator triangulation. According to Eisenhardt (1989), the use of multiple investigators has two key advantages: it enhances the creative potential of the study because researchers often have complementary insights that add to the richness of the data, and it increases confidence in the findings of the convergence of observations. The use of multiple researchers was beneficial not only in the data collection process but also in the data analysis: the researchers discussed the interpretations and findings, for example, and hence brought to light different perspectives and observations.

The study also incorporated data triangulation in the use not only of several informants but also of various types of data. The sources of the empirical data included: i) interview data, ii) data on sales and purchases, iii) company information taken from a database, iv) the case companies' annual reports, v) market information, and vi) reports and studies concerning the food business worldwide, provided by ACNielsen for example.

Quantitative data on the case companies was also used for validation purposes. According to Eisenhardt (1989), case study data may be qualitative, quantitative or both. As Tesch (1992, p. 55) posits, "qualitative data is any information the researcher gathers that is not expressed in numbers", whereas in the view of Miles and Huberman

(1994, p. 1) qualitative data is “a source of well-grounded, rich descriptions and explanations of processes in identifiable local contexts.” Both qualitative and quantitative data were utilized in this study, and the numerical quantitative data was gathered from a database that provides company information, including basic information about the case companies (turnover and numbers of employees, etc.), and other financial information. Numerical data on sales and purchases was collected directly from the case companies by means of email-based interviews. This data on sales and purchases was very useful, especially in determining the sources of power. This and the interview data comprised the primary data of the study. The secondary data comprised the database information as well as all other material mentioned above.

The secondary data came from many sources. There were several meetings and workshops at which it was possible to obtain complementary information about the case companies and their relationships. The company websites and annual reports as well as other written material concerning the case companies and the food industry were also useful. The websites of ACNielsen and the Finnish Food and Drink Industries’ Federation provided information about the food industry worldwide and in Finland, respectively.

3.5 Data analysis

All the interviews, except the two that were email-based, were audio-recorded, and notes were taken during them. The recordings were transcribed literally, and non-verbal occurrences such as laughter and long breaks were also indicated. The transcriptions produced 375 pages of data, 14 pages per interview. The two email-based interviews produced seven pages of data. The researchers involved in the research project produced the transcriptions. However, the author of this study transcribed the interviews the author conducted because these were of most relevance to this study. The detailed interview information is given in Appendix 1.

After the interviews were transcribed literally, the resulting qualitative data was read several times and notes were taken and pre-coding was done. The pre-coding of the data was based on the interview themes. This was done by using colour-coding and other notes in the transcriptions. Reading and re-reading the data helped to familiarize the researcher with it and started the process of structuring and organizing the data into meaningful units. This process heightens the researcher's awareness of the patterns, themes and categories of meaning embedded in the data (see Shaw, 1999). After reading the data thoughtfully, the data was colour-coded based on the interview themes. As Griggs (1987) suggests, abbreviations as codes were also used and marked in the margins of the transcripts.

The pre-coding provided the basis for the final coding. This followed the interview themes because it seemed to be a logical, systematic and reliable way of doing, it and secured the chain of evidence. The author of this study did the coding manually, and it was checked several times afterwards. Codes were used to bring order, structure and meaning to the raw data (see Shaw, 1999; Strauss and Corbin, 1998). Colour-coding, involving the allocation of a colour to each topic or theme, was used, and a total of 11 themes were identified. Table 4 shows the themes and colour-codes.

Table 4. Colour-coding themes and codes

Theme	**Colour-code**
Supply strategy	*yellow*
Purchasing organization	*dark turquoise*
Outsourcing	*dark blue*
Competences, capabilities, resources	*dark green*
Relationships between the case companies	*red*
Value net – general information and the development of the network	*pink*
The structure of the value net	*grey*
Company roles and positions in the value net	*light green*
Value creation	*light turquoise*
The role of supply management in the value net	*violet*
Information sharing	*dark yellow*

The coding provided a basis for the classification of the data, which was categorized by themes. According to Dey (1993), categorization causes the data to lose its original shape following its division into relevant blocks for analysis. Nevertheless, it facilitates more effective comparison. As Strauss and Corbin (1998) state, comparison has an important role in data analysis because it allows identification of variations in the patterns found. This process also represents a method of data reduction and provides an initial level of analysis (Miles and Huberman, 1994; Tesch, 1992). According to Miles and Huberman (1994, p. 10), data reduction refers to "the process of selecting, focusing, simplifying, abstracting, and transforming the data" and, as Griggs (1987, p. 20) adds, "should not be confused with throwing away or ignoring data." Data display, on the other hand, refers to the use of quotations, tables and matrices, for instance (Griggs, 1987).

The coded and categorized data was subjected to qualitative content analysis. According to Tesch (1992), the units in content analysis may be words, sentences, paragraphs or themes (see also Neuendorf, 2002). In this study they were sentences: a word was considered too narrow because the aim was to analyze the meanings qualitatively rather than to separate words from larger entities. Paragraphs also formed units of analysis because sometimes the meanings and the interviewee's key thoughts required more than one sentence to be fully understood. As Miles and Huberman (1994) and Griggs (1987) suggest, data reduction, data display, and conclusion drawing and verification were used as data-analysis techniques.

According to Yin (2003), the reliability of a study can be increased through the use of a case study protocol, developing a database and ensuring the chain of evidence and this advice was followed. The creation of a case study database facilitated the organization of the qualitative data and the maintenance of a chain of evidence. The coded and categorized data were put in separate documents in order to make the analysis easier. However, the original file containing all the interview data was preserved. The case study database comprised all this data, i.e. the original transcriptions, the coded and categorized data, the data from the email-based interviews, all other data used in the empirical study as well as the summaries, memos, matrices and mind maps.

The data was scrutinized separately in accordance with the main theoretical constructs (strategic supply management, collaboration, power relation, value net). However, the same data was used in several documents in order to confirm the relationships between the constructs. For example, the themes “Relationships between the case companies” and “Company roles and positions in the value net” were scrutinized together given the aims of the study to analyse these themes in relation to each other.

Mind maps also helped in identifying and analyzing the relations between the different constructs and themes, and in highlighting the relations between the case companies. This phase helped in creating a deeper understanding of the big picture. The data-analysis phase produced several summaries, mind maps, matrices and memos. The interview data was compared and complemented with the other empirical (secondary) data. Finally, all the data was considered in the light of the theoretical insights and interfaces were sought. This involved going back to the literature review and collecting complementary material in order to find support for the empirical results or to explain them. Tables and summaries were used in comparing the empirical data with the theoretical framework.

3.6 Validity and reliability of the study

According to Yin (2003), the quality of case research depends on the construct validity, internal validity, external validity and reliability of the research design. Stuart et al. (2002) suggest that the most important ones for the case study are construct validity and internal validity. It has to be noted that validity and reliability are considered from different standpoints in qualitative and quantitative research. Given the qualitative nature of this study, the validity and reliability of the study are considered from the perspective of qualitative research. Therefore, the definitions of Yin (2003) for example are approved and followed.

Voss et al. (2002) refer to *construct validity* as the extent to which the correct operational measures of the studied concepts are established. According to Yin (2003) and Stuart et al. (2002), construct validity can be ensured through the use of multiple sources of evidence, establishing a chain of evidence and asking key informants to review case study reports (see also Beverland and Lindgreen, 2010). Multiple sources of evidence (data triangulation) were used in order to strengthen the construct validity of the study. First, a variety of informants were interviewed. Secondly, data was obtained from the following sources: i) interviews, ii) sales and purchase records, iii) company information taken from a database, iv) the case companies' annual reports, v) market information, vi) reports and studies concerning the food business from ACNielsen, for example. Investigator triangulation was evident in that six researchers were involved in the interview and data-analysis processes. Furthermore, the chain of evidence strengthens the construct validity of this study: the steps of the research are well documented, and all the original evidence is available and carefully documented. As Seuring (2008) notes, even if the case study is often criticized for its lack of rigor (see also Ellram, 1996), case study research will continue to allow in-depth analysis of contemporary phenomena if the research process is carried out in a structured way and is well documented.

Furthermore, the interviewees reviewed the case reports and the results were presented to the informants in an attempt to prevent interview bias (see Jauch, Osborn and Martin, 1980). It should be emphasized that the interviewees were able to comment on possible researcher misperceptions but they could not change the results in their favour. Miles and Huberman (1994) recommend reviewing the results and interpretations with informants, but nevertheless retaining them in their original form. This suggestion was followed in this study. According to Yin (2003) this process enhances construct validity, and according to Hirschman (1986) this can be used to determine the *credibility* of the study.

Yin (2003) defines *external validity* as the domain in which a study's findings can be generalized, in other words how accurately the results represent the studied phenomenon (see Ellram, 1996). Neuendorf (2002) determines generalizability as the extent to which the findings may be applied to other cases. According to Stuart et al. (2002), one of the most serious charges against case research is that the samples are too small to allow generalization of the results, and that this criticism stems from confusion between two types of generalization - statistical generalization on which survey research relies and analytical generalization on which case studies rely. According to Stuart et al. (2002, p. 430), "with case research, generalization is from each case to broader theory not from samples to populations." This study aims at analytical generalization, and in terms of external validity the recommendations of Yin (2003) were followed. Yin (2003) also recommends increasing external validity through the use of theory in single-case studies. In this study the collection, coding and analysis of the empirical data were theory-based (see also Hirschman, 1986).

According to Yin (2003, p. 34), "*internal validity* refers to establishing a causal relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships", and further that it is only a concern in causal or explanatory case studies and is irrelevant in descriptive and exploratory studies. Hence, given that this study is mainly descriptive in nature, internal validity was not considered to be as important as other forms of validity. However, according to Stuart et al. (2002), with regard to a single case, pattern matching ensures the matching of the data patterns with the proposed patterns, thereby providing good evidence for a given proposition and increasing internal validity. Account was therefore taken of internal validity, and discussions with key informants helped in ensuring that a particular result was attributable to a particular phenomenon. In other words the reasons behind the issues were discussed, which was considered necessary given that the main research question was a "how" question.

In addition to the validity of the study, *reliability* is another evaluation criterion for judging research quality. According to Yin (2003), the reliability of a study reflects the extent to which its operations can be repeated and yield the same results. Näslund (2002) refers to the common definition of qualitative research as more *subjective* than quantitative research, which is consequently more objective (see also Morgan and Smircich, 1980). This often refers to the role of the researcher. Hirschman (1986) highlights the meaning of confirmability, suggesting that outside auditors should be used to judge whether or not the interpretations are drawn in a logical and unprejudiced manner. In the interests of confirmability this study complied with these instructions. Yin (2003) also mentions the utilization of several researchers in the context of study bias: in order to test for bias and the tolerance of contrary findings the preliminary findings should be reported to two or three critical colleagues, who in turn should offer alternative explanations. In this case several researchers, who were also involved in the research project, read and commented on the case reports. The research team also discussed the interpretations and the findings, and the results were also discussed with the case companies. As Yin (2003, p. 37) states, "The goal of reliability is to minimize the errors and biases in a study."

Again according to Yin (2003), using a case study protocol and developing a case study database could increase the reliability of the study: these recommendations were followed (see also Beverland and Lindgreen, 2010). According to Ellram (1996, p. 104), "a case study protocol includes the interview guide, as well as the procedures to be followed in using the test instrument." As mentioned above, a case study database was created: the evidence obtained, the stages of the research process and the interview questions and procedures are all carefully documented, thereby increasing the reliability.

4 SUMMARY OF THE PUBLICATIONS

This chapter introduces the research papers that constitute the second part of this dissertation. These five papers are complimentary and the aim is to provide answers to the research questions. Table 5 summarizes the questions addressed as well as the publications in which each one is examined.

Table 5. Research questions and publications of the study

Research questions	**P1**	**P2**	**P3**	**P4**	**P5**
Q1: *What are the sources of power for buyers and suppliers in value nets?*		**X**			
Q2: *How do power positions influence buyer and supplier collaboration in the value net context?*			**X**	**X**	
Q3: *What is the role of buyer–supplier relationships in a firm's supply strategy?*	**X**				**X**

Publication 1 (P1) and publication 5 (P5) address the third sub-question: "*What is the role of buyer–supplier relationships in a firm's supply strategy?*. Publication 1 focuses on collaborative relationships and Publication 5 on power relations. In Publication 2 (P2) the sub-question 1: "*What are the sources of power for buyers and suppliers in value nets?*" is discussed in detail because it concentrates on analyzing the sources of power in value nets. The second sub-question: "*How do power positions influence buyer and supplier collaboration in the value net context?*" is answered in Publications 3 and 4 (P3 and P4). Table 6 gives an overview of each publication, including the objectives, concepts, methodology and the main contributions.

Table 6. Summary of the publications in this thesis

	Publication 1	Publication 2	Publication 3	Publication 4	Publication 5
Title	Supply strategy in the food industry – value net perspective	Sources of structural power in the context of value nets	The influence of power on the depth of collaboration	The impact of power on information sharing in the Finnish food industry	Power relations in supply strategies – a network approach
Objective	To determine the elements of supply strategies and to discuss collaboration as one of them.	To determine the sources of structural power for a buyer and a supplier in the context of value nets.	To analyze the influence of power on the nature of buyer–supplier relationships and on the depth of collaboration.	To take further the analysis of the relation between power and collaboration by analyzing the effects of power on information sharing.	To examine the role of power relations in the supply strategy of a firm.
Theoretical perspective	Transaction cost economics, resource-based view, value nets	Resource-based view, resource dependency theory, value nets, power	Resource-based view, resource dependency theory, value nets, power	Resource-based view, resource dependency theory, value nets, power	Resource-based view, resource dependency theory, value nets, power
Methodology	Case study with 22 interviews	Case study with 29 interviews	Case study with 29 interviews	Case study with 29 interviews	Case study with 29 interviews
Main contribution	Presents a framework for the analysis of supply strategy elements.	Presents a framework incorporating sources of power on the levels of the network, the relationship and the organization. Shows that the network context is important in the analysis of power.	Argues that the depth of collaboration is affected by the power positions of the actors and the power relations in the value net. Power imbalance may increase or even prevent collaboration, and the dominant actor may not be willing to commit to it.	Reveals the twofold role of information. On the one hand it is a remarkable source of power, and on the other hand the power relation affects information sharing. Powerful actors use information as a source of power and are not willing to share it openly.	Reveals that power relations are not as evidently highlighted in supply strategies than collaborative relationships. Shows that the nature of the power relation determines the strategy used.

4.1 Supply strategy in food industry – value net perspective

Main objective

In many firms the supply strategy determines the basis of the strategic supply management and the decisions regarding supplier relationships. The strategy refers to certain strategic decisions related to single sourcing and multiple sourcing, for example. However, it can also refer to a larger overall plan of actions of supply organization. This paper focuses on the overall supply strategy, which comprises several smaller components or elements. The objective of the study was to determine what elements the supply strategy of a firm should include, and which ones are the most important. One of the main elements, supplier relationships, is discussed in the context of value nets. In terms of this thesis a further aim was to provide a basis for the study of strategic supply management.

Main contribution

This paper enhances understanding of strategic supply management, and especially of the role of the supply strategy. The elements of supply strategy were collected together and analyzed in the empirical context of the Finnish food industry. As a result of this study, a framework for the analysis of supply strategy elements was presented and illustrated how the supply strategy can be formed and what kinds of elements it should contain. The results of the study indicated that the main elements include strategic decisions concerning the make-or-buy decision, the firm's core competences and capabilities, the size of the supply base, the geographic area of supply activities, collaboration with suppliers in the form of partnerships and networks, collaboration with other buyers, and the levels of centralization and decentralization.

It is argued that the elements presented are the main components of every supply strategy. This is the main contribution of this study because previous studies have failed to collect these elements together. In identifying the main elements this study contributes to the literature on supply management in firms. The framework is useful especially to firms creating their supply strategies.

4.2 Sources of structural power in the context of value nets

Main objective

This study extended the traditional discussion on power in dyadic buyer–supplier relationships with its emphasis on a wider network perspective, highlighting the network effects and the complicated nature of the relations. The objective was to determine the sources of structural power for the buyer and the supplier in value nets. The study adopted a structural perspective on power, the implication being that power stems from organizational structures and could thereby be called structural power due to its sources. Even if the sources of power in buyer–supplier relationships are discussed in earlier research in the field of purchasing and supply management, the perspective should be broadened from dyads to networks, and this was another main objective of the study.

Main contribution

The outcome of this study was the creation of a theoretical framework for the analysis of sources of structural power on the network, the relationship, and the organizational level. The results showed that sources resulting from the network effects and related to other network participants beyond the dyadic relationship are highly significant because they may crucially determine the power position of one actor in relation to other network actors. On the organizational and relationship levels they provide the building blocks for the sources on the network level, which are argued to be the most crucial. It is also argued that the sources of structural power stemming from the different levels influence each other, and that those on the organizational and relationship levels reinforce those on the network level. The study gives clear evidence of the importance of the network context in the analysis of power.

The paper enhances knowledge of sources of power in determining which ones are the most important for a buyer and a supplier in the value net context. The three-level framework resulting from the extensive literature review created a basis for the further study of power in the context of this thesis, specifically with regard to power positions and relations.

4.3 The influence of power on the depth of collaboration

Main objective

The actors in the value net are connected to each other through different relationships. Some of these are intensive and trust-based whereas others are based more or less on traditional arm's length relationship and therefore cannot be called collaborative. There are various reasons why collaboration does not occur, but power imbalance may be one influencing factor. The objective of this study was to analyze the influence of power on the nature of buyer–supplier relationships and, moreover, on the depth of collaboration. This was an issue worth studying given the need to understand the role of power as an influencing factor in the formation, development and maintenance of collaborative relationships between buyers and suppliers. Moreover, power exercised in a highly dominating manner may create an impossible environment for collaboration. The importance of the network context in research on power and collaboration was emphasized.

Main contribution

The contribution of this paper to the research on power relations and collaboration lies in the analysis of the relation between collaboration and power in buyer–supplier relationships and networks. It seems that collaborative relationships can only grow when there is a certain balance of power between the parties, and that the power positions clearly affect the nature of the relationship. The study showed how actors in a value net form collaborative relationships with other actors who have complementary capabilities and resources with a view to improving their own capabilities. These capabilities and resources define the actor's role in the value net and, furthermore, determine the power positions because they are considered essential sources of power. The relationships between the actors also have an influence on the power positions in the network, which in turn determine the nature and especially the depth of the relationships.

It could be concluded from this paper that the depth of collaboration is highly affected by the actors' power positions and power relations in the value net. It seems that power imbalance may increase or even prevent intensive collaboration, and the actor in a dominant power position may not be willing to form collaborative relationships with other actors. On the contrary, powerful actors may be eager to sustain their power positions and therefore avoid intensive collaboration. In situations in which the power is balanced, however, the actors have the incentive to collaborate and are willing to form collaborative relationships. Because they cannot dominate the other actor, power is not a key issue, and the existing power balance rather facilitates and increases collaboration. Hence, it was argued on the basis of the results that the actor's role and position in the value net may crucially determine the nature of the power relation if the positions would otherwise be balanced. Moreover, this emphasizes the importance of the network perspective in explaining why power and collaboration should be analyzed in the network context rather than in the context of dyadic relationships.

4.4 The impact of power on information sharing in the Finnish food industry

Main objective

The main objective of this paper was to take further the analysis of the relation between power and collaboration in the context of value nets. Previous studies have shown that one of the main characteristics of collaborative relationships is information sharing, and that the parties share information openly. Information sharing was the focus of the analysis, the aim being to find a concrete form in which the collaboration could be executed. It was assumed that if actors share information openly and have joint projects, for example, they are indeed having a collaborative relationship.

Relational characteristics such as trust, power and conflict may affect the depth of collaboration and the amount of information exchange in the value net. It has also been argued in previous research that when the network actors are unequal in power the less powerful might actively withhold information as a way of gaining countervailing power. The objective of this paper was thus to analyze how power affects information sharing between a buyer and a supplier in the value net context.

Main contribution

This paper enhances understanding of the influence of power relations on information sharing in value nets. It seems that the role of the information is twofold. On the one hand it is one of the main resources of a firm and thereby is a notable source of power, and on the other hand it could be argued that the power relation affects information sharing. It also seems that an imbalance in market intelligence may have an influence on collaboration among firms in a value net. The actors may be reluctant to share information openly because they fear losing their power, or they may try to prevent the other party from gaining competitive advantage in the markets.

The influence of power on information sharing was found to be particularly visible in the quality and quantity of the information disseminated, but also in the direction of the flow. It was found that power increases as the distance from the end-markets decreases: the closer the firm is to the end customers, the more power it has and the more independent it is in generating market intelligence. The results showed that firms that communicate little with their end customers have to rely on the information they get from their partners. It could thus be argued that powerful actors use information as a source of power and are not willing to share it openly. Moreover, powerful actors may be anxious to sustain their power positions and therefore do not share information, which has negative effects on collaboration. In this case the opportunity to create value and achieve competitive advantage through collaboration is not exploited efficiently.

4.5 Power relations in supply strategies – a network approach

Main objective

The emphasis in this paper was on power relations between buyers and suppliers and, moreover, the role of power relations in the supply strategy of a firm. Previous research has focused on collaboration, and the phenomenon of power has been neglected in this context. The aim, therefore, was to clarify the role of the power relations among value net actors in the supply strategies they use. The objective was to find out how the different natures of power relations, i.e. the different levels of power imbalance, affect the supply strategies used.

Main contribution

This paper clarifies the role and influence of power relations in the supply strategy of a firm and in supply management. The results suggest that the issue of power and power relations between buyers and suppliers is not as obviously highlighted as collaborative relationships, for example. It seems that the interface between power relations and the supply strategy is less obvious than that between collaborative relationships and the supply strategy. Thus, due to the lack of focus on power relations in comparison to collaboration, it seems that power is a hidden element in supply strategies. In other words, when firms adopt competitive strategies or form other relationships in which collaboration is at a very low level, power may be one of the most crucial factors behind these strategic decisions. Given that buyer–supplier relationships comprise one of the main elements of the supply strategy, power relations are as important as collaborative relationships. It was also found that the nature of the relationship significantly influences the actions and decisions of supply management, and determines the strategy used. In other words, strategies and actions vary depending on the level of power.

5 CONCLUSIONS

The aim of this dissertation was to clarify the role of power relations in a firm's strategic supply management in the context of value nets. This chapter presents the conclusions of the study in terms of answering the research questions, assesses the theoretical contribution and managerial implications of the results, acknowledges the limitations of the study and gives suggestions for further research.

5.1 Answering the research questions

The main research problem addressed in this dissertation was divided into three sub-questions. The first of these concerned *the sources of power for buyers and suppliers in value nets*. A structural perspective on power was adopted. Sources of structural power in the context of value nets were identified on three main levels, the organizational, the relationship, and the network levels. On the organizational level they included resources, capabilities and competences and their uniqueness and importance, the size of the firm, its economic base and expertise, and the technology owned. On the relationship level power was related to market power and buyer–supplier concentration, control of information, relationships with others and their significance, dependencies, types of products, brands, control of important technology, switching costs, investments and lock-ins, alternatives, sales and purchase volumes, as well as delivery times, costs and quality. Finally, on the network level the roles and positions of the actors were seen as important sources of structural power.

The network context turned out to be significant in that the sources of structural power that emanate from network effects and are related to other network participants beyond the dyadic relationship may crucially determine the power relation between two actors. The findings support the insights of Stannack (1996), Cendon and Jarvenpaa (2001) and Zolkiewski (2001) who demanded for the research of power in networks. The organizational and relationship level sources constitute the building blocks of the sources on the network level, which were found to be the most crucial in defining the power relation. Moreover, those stemming from different levels influence each other and the organizational and relationship level sources reinforce those on the network level and thereby have a supportive function.

The focus in the second sub-question was on *how power positions influence buyer–supplier collaboration in the value net context*. It was found that the depth of collaboration is affected by the actors' power positions. The findings supported the notions of McDonald (1999), van Weele and Rozemeijer (1999), Cox et al. (2003) and Cox (2007) who argue that power has an effect on the nature of relationships. In this study it was found that power imbalance may prevent intensive collaboration, and the actor in a dominant power position may not be willing to form collaborative relationships with other actors. It seems that powerful actors may be eager to sustain their power positions and therefore avoid intensive collaboration. In situations in which the power is balanced the actors have the incentive to collaborate and are more willing to form collaborative relationships. Because they cannot dominate each other the existing power balance rather facilitates and enhances collaboration. Interestingly, it was also found that the actors' roles in the network crucially determine their power relations. The closeness of the end customers turned out to be a significant factor, and power seemed to increase as the distance from the end markets decreased: the closer the firm is to its customers the more power it has. The implication is that the actors who are in the buyer role in the value net and are therefore closer to the end customers are less willing to form collaborative relationships than those in the supplier role. Moreover, it was found that when these same actors were in the supplier role they were more willing to commit to collaboration.

The aim with the third sub-question, "*What is the role of buyer–supplier relationships in a firm's supply strategy?*" was to analyze buyer–supplier collaboration and power relations in the firm's supply strategy. It was found that buyer–supplier relationships were not only one of the main elements of the supply strategy but also a major component of strategic supply management. A framework incorporating the main elements of a supply strategy was presented the purpose being to create a basis for the analysis of strategic supply management and the role of different relationships in it. It was found that the nature of the relationship significantly determined the actions and decisions of supply managers, and therefore also the strategies used. Power and power relations between buyers and suppliers were not as heavily emphasized as collaborative relationships, for example, and were found to be more of an underlying element. The implication is that power is a crucial factor behind strategic decisions related to the adoption of competitive strategies and arm's length relationships. In conclusion, it seems that power relations have a significant role in the firm's supply strategy, but the significance is often unacknowledged.

It can be concluded from the findings of the theoretical and empirical study as well as from previous studies that the nature of the power relations significantly determines the actions and decisions of supply managers, and therefore also the strategies used. Power as a concept has attracted much less attention in the context of supply strategies and strategic supply management than collaborative relationships. According to the results of this study, collaboration is a significant and very visible element of the supply strategy. Power and issues related to it such as sources, power positions and power relations, are also significant but are less visible and more pervasive. However, power relations between the value net actors were found to influence the actions and decisions of supply management and therefore to have significant role in strategic supply management.

Thus, in response to the main research problem concerning *how the nature of power relations influences the strategic supply management of a firm in a value net* it could be said that supply management uses divergent supply strategies in different power situations. When the power relation between the value net actors is in balance there is a good basis for a collaborative relationship and for the adoption of strategies based on collaboration. Balanced power relation does not inhibit but rather encourages the use of a collaborative strategy, whereas inequality in terms of power and imbalance in the relation may prevent it. The more powerful party may not be willing to adopt a strategy based on collaboration and may prefer to sustain its power position. Given the various levels of power relations, the strategies vary from intensive collaboration to pure competitive strategies with arm’s length relationships.

Buyer–supplier relationships lie at the core of strategic supply management, and as previous studies have shown there are many different types of relationship depending on the factors involved. In the context of supply management the type, nature or character of the relationship is often determined based on the level of collaboration, which in turn is affected by the power relation between the buyer and the supplier. These different kinds of relationships require different kinds of strategies and actions when handling these relationships.

5.2 Theoretical contributions

This study focused on power relations and collaboration in the context of value nets, and moreover on the roles of value net actors’ power relations in a firm’s strategic supply management. It thereby contributes to the literature on buyer–supplier relationships and strategic supply management in five ways.

Firstly, it has proved from several angles that because buyer–supplier relationships are embedded in networks, the network level as a level of analysis is important. These results go in line with the research of Anderson et al. (1994), Blankenburg Holm et al. (1996 and 1998), Halinen and Törnroos (1998), Veludo et al. (2006), Dubois and Fredriksson (2008) and Choi and Wu (2009) who highlight the significance of the network context in the analysis of buyer–supplier relationships. Whereas most previous studies on the phenomenon of power have concentrated on the analysis of dyadic relationships, this study has raised the question of network effects as also Stannack (1996), Cendon and Jarvenpaa (2001) and Zolkiewski (2001) demanded. The network context was found to be particularly relevant in determining the sources of structural power for buyers and suppliers, and in defining the relation between collaboration and power relations. The reasons given for analyzing power and collaboration in the network context rather than in the context of dyadic relationships between buyer and supplier strengthened the significance of the network perspective. Focusing purely on the relationship ignores the network effects, which may be the most crucial power determinants. Thus, this study contributes by extending the discussion on networks and value nets.

Secondly, the study raised the question of the sources of structural power on different levels. A three-level analytical framework was developed. It was shown that the power sources stemming from the different levels influence each other, and that organizational and relationship level sources reinforce the network level sources. The sources of structural power at the organizational and relationship level are important because they are the driving force behind and the building blocks of the network level sources. In shedding light on the relations between sources of power this study thereby contributes to the discussion on power in networks and value nets.

Thirdly, one of the main aims of the study was to analyze the relation between collaboration and power relations, which has been somewhat neglected in previous research. To the author’s knowledge, there are no existing studies analyzing power relations and collaboration in combination, and discussed from the value net perspective. It was found that the depth of collaboration was strongly affected by the actors’ power positions and relations in the network, which shows that it is an issue worth studying. There was also evidence that the value net actor’s roles and power positions are defined in terms of sources of power, and that the power positions determine the power relations between the actors. Furthermore, in line with studies of McDonald (1999), van Weele and Rozemeijer (1999), Cox et al. (2003) and Cox (2007) it was found that power relations influence the nature of the relationship. In analyzing this chain of effects of the power sources, positions and relations the study contributes to the research on power between buyer and supplier.

Fourthly, the study showed that the resources, competences and capabilities of network actors are paramount in determining their power positions, power relations and collaborative relationships. Furthermore, in accordance with previous research (e.g., Cendon and Jarvenpaa, 2001; Cox, 1999; Pfeffer and Salancik, 1978; Ramsay, 1996) they were found to be remarkable sources of structural power, and to have critical roles in value nets given that value is created through their unique combination. Hence, they constitute the key factor in value creation as well. Thus the study took part to the discussion on firm resources, competences and capabilities, and in line with previous research (e.g., Amit and Zott, 2001; Barney, 1991; Lakemond et al., 2004; Medcof, 2001) showed the multidimensional meaning of those.

Fifthly, the study contributes to the research on supply management in determining and gathering together the main elements of a firm's supply strategy and discussing the role of power relations in strategic supply management. There are many studies on the elements of supply strategies considered separately: in this one they were collected into one framework. Moreover, whereas previous research has focused on the role of collaborative relationships in supply strategies and supply management, this one addresses the role of power relations in supply management, thereby highlighting another side of the relationship. The research combines aspects of supply strategy, strategic supply management and power relations in focusing on the role of power relations on the strategic and management levels, thereby clarifying the role of power and contributing to the literature in this field.

Relationships between buyers and suppliers have been the subject of a lot of research in the area of supply management. However, research gaps were identified. The contribution of this study to the research lies in the evidence it produces of the importance of the network context in the analysis of power relations. More precisely, in considering value creation the ultimate goal of the network and adopting a value net approach it enhances understanding of value nets. It also contributes to the discussion on the relation between collaboration and power. Finally, in determining the main elements of the supply strategy of a firm and discussing the role of power relations it contributes to the research on supply management in general.

5.3 Managerial implications

The results of this thesis carry implications for managers and practitioners in terms of shedding light on the relation between power and collaboration and the role of the power relations among value net actors in strategic supply management. Managers need to be aware of their power sources, their power relations and the strengths and weaknesses, and of their collaborative relationships. In determining the sources of structural power for buyers and suppliers in the context of value nets the study enhances management knowledge about the factors that determine relationships with other organizations. In order to analyze and manage buyer–supplier relationships it is necessary to understand the background behind them. The sources from which the power stems are concealed behind the power positions and relations, but are the most critical factors to be taken into account in attempts to develop relations or enhance the power position of the company. Attempts to change power relations should actually be attempts to change power sources because the sources define power relations and power positions. Analysis of the power sources is a prerequisite for the analysis of power positions and power relations.

Managers should also acknowledge the effects of power on the nature of their relationships and, moreover, on the depth of collaboration. This enhances their ability to determine their positions in relation to other companies and to develop relationships offering opportunities for deeper collaboration. If collaboration is lacking, it may be due to power imbalance between the organizations, and it is important to acknowledge this. Collaboration requires certain conditions, and power imbalance partially prevents collaboration.

This study draws attention to the significance of the network perspective, and it is obvious that managers should also be able to view their relationships in the wider context. Network-related sources of power and so-called network effects were found to be highly significant. It is therefore evident that networks are of critical importance for firms in today’s business environment, and that network effects should be considered in their management, their decisions and their actions.

This study clarifies the concept and content of the supply strategy of a firm in determining its main elements. It is acknowledged that the elements are still quite blurred in some firms. By creating a framework of the supply strategy elements, this study develops the knowledge of supply management about the formation and contents of a supply strategy. The findings enhance understanding of strategic supply management and emphasize the importance of supply action, activities and management in firm success and performance. Hence, one of the main aims of the study in terms of managerial implications is met: it highlights the importance of supply management and its potential contribution to the development of more efficient operations and business models.

Given the empirical context in this research of the Finnish food industry, the results are of interest to food industry companies operating not only in Finland but also worldwide. The food industry is one of the biggest industries in the EU and in Finland, and the role of supply management as well as the issue of power are highly significant in the industry. Thus the implication is that more managerial attention should be given to improving the supply management and to developing buyer–supplier relationships in the food sector.

5.4 Limitations of the study

Like all research this study has some limitations that need to be discussed, not least with regard to the generalization of the findings. A couple of points are worth making. First, the single-case study does not aim at statistical generalization. Instead, as Stake (1995) notes, for instance, the objective is to create a detailed picture of the studied phenomenon, and the term particularization should be used instead of generalization. Secondly, Yin (2003) refers to “analytic generalization,” meaning that the developed theory is the level on which the generalization of case findings will occur. In common with most qualitative studies, this one is an in-depth analysis of a single phenomenon in a specific situational context, and the findings cannot be generalized as such. Single-case research such as this does not purport to produce findings that can be generalized in a statistical sense, but as Yin (2003) suggests, they will be valuable in an analytical sense if they clarify or extend understanding of the existing theory.

Another point worth making in the context of limitations is the fact that power is only one factor that influences the depth of buyer–supplier collaboration, and there may be other influencing factors as well. Given the focus on power in this study, the other factors and their influences were not examined. This could be considered a limitation.

The study focused only on one value net with four case companies. The factors that may affect the network and its actors outside the value net were not discussed in detail. This could be seen as a limitation. However, the study is a case study and in the beginning of the research process it was decided that the focus will be only on a certain value net.

Finally, the focus of the discussion and analysis was exclusively on structural power. Aspects such as the use or the exercise of power were not discussed, which could also be considered a limitation. However, this was noted at the beginning of the research process. The decision was made to narrow the focus in order to obtain an extensive analysis, and the perspective of structural power was considered the most appropriate.

5.5 Suggestions for future research

Certain opportunities for future research arose during this process. Given the few studies on power relations and collaboration in the context of value nets from the perspective of supply management, there are still many research gaps in this area. *Firstly*, further research could focus on value creation and collaboration in value nets. It would be interesting to study the value creation emanating from collaboration between buyers and suppliers, and the role of resources and capabilities in this. The role of collaboration and resources and capabilities is worth studying in that efficient value creation is facilitated through collaboration and combining actors’ complementary resources and capabilities. *Secondly*, there is a need for more research on power relations, sources of power and their influence on company performance: it would be interesting to conduct an extensive survey on the influence of sources of power in this respect. *Thirdly*, there is a need for comparable studies on power relations and value nets in other fields: it would be useful to find out whether power relations have the same dynamics in other industries. One approach would be to use quantitative research methods, and it would therefore be interesting to conduct a survey on power and collaboration in the network context. *Fourthly*, it would be interesting to conduct a longitudinal study concerning the changes in supply strategies when power relations change as well.

Finally, even if the changing and expanding role of purchasing and supply management is widely recognized by many academic researchers, the role of strategic supply management has not attracted extensive discussion in the context of value creation. It has been noted that strategically managed purchasing and supply is a potential value-added resource for a firm (Ellram and Carr, 1994), and that value is an increasingly relevant concept from the perspective of supply management (Lindgreen and Wynstra, 2005). Therefore, value creation in networks should be examined more closely, especially from the perspective of strategic supply management and by focusing on the value creation opportunities arising from it.

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PART II: PUBLICATIONS

PUBLICATION 1

Ahtonen Anni-Kaisa and Virolainen Veli-Matti (2009)

SUPPLY STRATEGY IN THE FOOD INDUSTRY
– VALUE NET PERSPECTIVE

International Journal of Logistics: Research and Applications,
Vol. 12, No. 4, pp. 263-279

International Journal of Logistics: Research and Applications
Vol. 12, No. 4, August 2009, 263–279

Supply strategy in the food industry – value net perspective

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(*Received 21 January 2008; final version received 9 September 2008*)

The role of supply has become more strategic, which has led to changes in supply management. The role of supply strategy has also increased, and it is essential nowadays that companies have supply strategies to define their actions in the supply system. The supply strategy consists of several elements, and its most focal components are examined in this study. Based on transaction cost economics and the resource-based view, we discuss supplier relationships, which form one main element of the supply strategy from the value net perspective. The elements and the role of supply strategy are analysed in a case study of the Finnish food industry value net.

Keywords: supply strategy; value net; core capability; food industry

1. Introduction

The strategic role of supply has changed because the business environment is constantly changing. The increasing importance of knowledge, technological complexity, globalisation and the availability of digital information technology are driving this change (Möller et al. 2005). Current changes are redefining the characteristics of business relationships, concepts, tools and strategic approaches (Parolini 1999). The strategic approach is changing from an enterprise-focussed perspective to one that is extended to include value-creating systems and networks (Parolini 1999). Companies are forced to seek new business models and sources of competitive advantage, and therefore they are forming networks and aiming for more efficient supply (see e.g. Cousins and Spekman 2003). Furthermore, while the role of supply management has increased, the role of supply strategy has also become more significant.

The objective of this study is to examine the kinds of elements the supply strategy should include and, therefore, the study aims to answer the following research question: 'What elements are the most important ones in a firm's supply strategy?'. Hence, this study describes the key elements of the supply strategy. Complementary theories concerning supply management and value nets form the theoretical framework against which we compare the results of the empirical study. Transaction cost economics (TCE) and the resource-based view (RBV) are used as the theoretical background, and the most crucial elements, which should be included in every supply

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ISSN 1367-5567 print/ISSN 1469-848X online

DOI: 10.1080/13675560903076107
http://www.informaworld.com

strategy, are discussed. These components include strategic decisions concerning the make-or-buy decision, the firm's core competency and capabilities, the size of the supply base, the geographic area of supply activities, collaboration with suppliers in the form of partnership and network, collaboration with other buyers, as well as the level of centralisation and decentralisation. It can be argued that the presented elements are the main ones in every supply strategy.

So far research on value nets has mostly concentrated on the ICT sector, and there are a limited number of studies in the food industry which is, however, one of the biggest industries in the EU. The business environment is changing, and companies in the food industry are forced to develop new business models and strategies. They are forming value creating networks, and trying to achieve benefits and efficiency through these and by developing their supply management. Because the role of supply strategy and the role of networking have also become important issues for the companies of the food industry it is important to study value nets and supply strategies in the context of the food industry. Therefore, our empirical case study discusses the supply management and the role of supply strategy in a Finnish food industry value net.

To the authors' knowledge there are no existing studies where the supply strategy elements are gathered together and discussed in the context of the food industry. Furthermore, these issues are rarely examined from the viewpoint of networks and value nets. Thereby, this study contributes to research conducted in the field of supply management but it also contributes to value net research and to research concerning the business of the food industries. The aim of this study is to help companies create and develop supply strategies by highlighting the most essential components of supply strategies.

2. Elements of supply strategy

A strategy can be seen as a plan of action designed to achieve given goals and objectives (Corey 1978). According to Pettigrew et al. (2002), the core aspects of strategy are the direction, purpose, strategic leadership, organisation, and competitive performance of organisations. Both sellers and buyers have strategies that define how they act in different situations. According to Ellram and Carr (1994), there are three distinct types of *purchasing strategy* which are (1) specific strategies employed by the purchasing function, (2) the purchasing's role in supporting the strategies of other functions and those of the firm as a whole and (3) the utilisation of purchasing as a strategic function of the firm. Even though these issues are related, they are distinct areas in terms of their execution and impact on the purchasing function (Ellram and Carr 1994). This study concentrates on examining the specific strategies employed by the purchasing function and especially the elements of these strategies.

Nollet et al. (2005) who discussed the concept of strategy in supply management have stated that a clear definition and formulation of a supply strategy might present a number of challenges. Furthermore, the concept of supply strategy has been determined in various ways in several studies. Corey (1978) has stated that supply strategies can be seen as plans of action for obtaining supplies and for dealing with sellers. According to Scheuing (1989, p. 140), the purchasing strategy can be described as 'a set of rules that guides the configuration of the firm's purchasing effort over time in response to changes in competition and the environment so as to permit the firm to take advantage of profitable opportunities. In other words, the entire process of formulating, implementing, and evaluating purchasing strategy is directed at producing an optimum fit between a firm's corporate and purchasing resources on the one hand and its environmental constraints and opportunities on the other'. Furthermore, Watts et al. (1992, p. 5) have stated that the purchasing strategy can be viewed as 'the pattern of decisions related to acquiring required materials and services to support operations activities that are consistent with the overall corporate competitive strategy'. Therefore, the supply strategy should always be integrated into the business strategy and with other company strategies such as the production strategy, and it should be based on the objectives and strategic principles of the firm (e.g. Ellram and Carr 1994, Cousins and Spekman 2003). According to Harland et al. (1999), supply strategy relates to the integration of supply activities within firms, in dyadic relationships, in chains of firms and in inter-organisational networks. Supply strategies vary from one purchasing situation to another because each situation is unique. Thus, every strategy has to be tailored to the type of product being purchased, the stage of the procurement cycle, the past purchasing history, the nature of the supply environment and the buying company itself: its resources, negotiation strength and its purchasing policies (Corey 1978).

The theoretical basis for supply decisions can be created through the theory of TCE and the RBV which both lay the foundation for the make-or-buy decision, collaboration, consortium sourcing and the decision concerning centralisation and decentralisation. According to traditional TCE, there are two main governance structures, markets and hierarchies, out of which a firm may choose the most efficient one (Coase 1937, Williamson 1975). Markets refer to outsourcing (*buy*) and hierarchies to insourcing (*make*). The basic rule in TCE maintains that when the marginal costs of using markets are higher than the costs of running the company, the transaction should be organised within the company and vice versa (Coase 1937). Vertical integration represents the failure of the free market to handle exchange relationships efficiently (Ellram and Billington 2001). Also, when the markets are uncertain, the buying company does not want to exploit markets either. When neither markets nor the hierarchies are optimal solutions for the buying company, the situation can be solved by using a contractual solution placed between vertical integration and free market forces (Ellram and Billington 2001). This governance structure can be called a hybrid (Coase 1937), partnership (e.g. Blomqvist, et al. 2002) or network (e.g. Thorelli 1986, Jarillo 1988). This governance structure is based on the collaboration between a buyer and a supplier.

2.1. *Make or buy*

In the business world, there has long been an increasing interest in outsourcing as a potential source of competitiveness and value creation (Leavy 2004). The decision of whether to produce in-house or buy externally has been a fundamental issue ever since the industrial revolution. However, it has not been seen as a strategic issue until recently (Gadde and Håkansson 2001). Quinn and Hilmer (1995) have stated that there are two strategic approaches, which when properly combined will bring benefits for a company. These strategic approaches are as follows: (1) to concentrate the firm's own resources on a set of core competencies where it can achieve definable pre-eminence and provide unique value for customers, and (2) to strategically outsource other activities for which the firm has neither a critical strategic need nor special capabilities. Together these two approaches form one main element of the supply strategy, and this element is called the make-or-buy decision (Figure 1).

In this very aggregative framework (Figure 1), which is actually built for the analysis of the basic choice between the markets and hierarchies, the rise of different governance options can be interpreted as follows. First, *vertical integration* is the best option, when uncertainty, the danger of opportunism, complexity and asset specificity are high and there are only few providers of complementary capabilities, and trust between partners is lacking. Second, the *market option* is preferred when the degrees of uncertainty and complexity are minor and the danger of opportunistic behaviour is small, there are many potential partners available, and transactions do not need any specific investments (Blomqvist et al. 2002).

Quinn and Hilmer (1995) see similar issues essential to make-or-buy decisions. According to them, the key issues in insourcing versus outsourcing can be illustrated by two questions. First, is

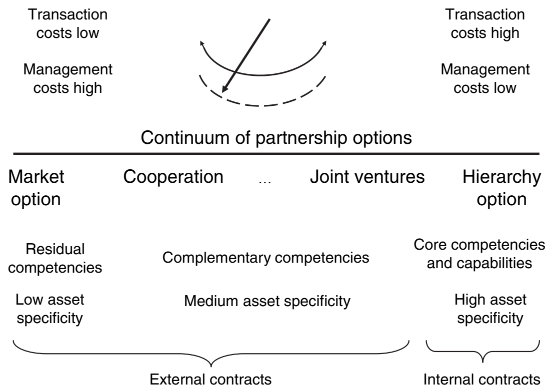

Figure 1. Continuum of possible sourcing options (adapted from Blomqvist et al. 2002).

the company able to achieve a sustainable competitive edge by performing an activity internally, for example more economically, better or with some unique capability, on a continuing basis? Second, is the company able to perform that function uniquely well? If the answer to both questions is 'yes' and one or more dimensions mentioned in the first question are critical to the customer, then the activity should be kept in-house (Quinn and Hilmer 1995). However, if the answer is negative, then the activity should be outsourced. Ellram and Billington (2001, p. 16) have defined outsourcing as 'the transfer of the production of goods or services that have been performed internally to an external party'. According to Leavy (2001, p. 47), 'strategic outsourcing substantially lowers costs, risks and fixed investment while greatly expanding flexibility, innovative capabilities and opportunities for creating higher value-added and shareholder returns'. According to Jaafar and Rafiq (2005), for example, many firms outsource their logistic functions to reduce costs and to avoid investments. It has to be noted, however, that outsourcing is not a risk-free option. Leavy (2001) has stated that two of the most important risks related to outsourcing are the risk of opportunism and the risk of losing key capabilities.

According to Blaxill and Hout (1991) and McIvor et al. (1997), many firms make sourcing decisions primarily on the basis of overhead costs. The choice of which components to outsource is made by ascertaining what will save most on overhead costs, rather than what makes the most long-run business sense (Humphreys et al. 2000). When companies base their outsourcing decision only on cost issues, they do not necessarily consider their core competence. King (1994) stated that major outsourcing decisions are strategic and should be made after other key choices pertaining to a vision, a mission, core competencies and key success factors. A make-or-buy decision should at least be based on core competencies and cost and benefit issues. As Arnold (2000) has stated, TCE and the core competence approach both help to decide whether the make decision or the buy decision is the optimal alternative for a company.

In the long run, competitiveness is derived from the ability to build, at a lower cost and faster than competitors, core competencies that spawn unanticipated products. Core competencies can be defined as 'the collective learning in the organisation, especially how to coordinate diverse production skills and integrate multiple streams of technologies' (Prahalad and Hamel 1990, p. 82). Core competence refers to a unique set of knowledge and skills, not products or functions (Quinn and Hilmer 1995). Core competence is difficult to imitate and it creates value for the customers and is therefore the key to the firm's success. Core competencies are capable of adapting to changes and they refer to areas where the company can dominate (Quinn and Hilmer 1995).

The RBV is a theoretical framework for understanding how competitive advantage within firms is achieved and how that advantage might be sustained over time through the acquisition of and control over resources (Eisenhardt and Martin 2000, Rungtusanatham et al. 2003). According to the RBV, the firm can be seen as a collection of resources, and the growth of the firm can be explained through exploiting these resources (Penrose 1959). In line with Penrose, Jahre and Fabbe-Costes (2005) who have claimed that a supply chain or network is a set of more or less closely connected resources. These resources include both tangible and intangible assets that facilitate the production and delivery of goods and services (Rungtusanatham et al. 2003).

The traditional RBV has been developed further by focussing on the identification and analysis of resources that are superior to others (see, e.g. Wernerfelt 1984, Barney 1991). The dynamic capability view complements the basic RBV, as it helps us to understand how capabilities are developed and modified in a dynamic environment. Dynamic capabilities can be defined as the firm's ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments (Teece et al. 1997). It can be argued that core competencies and capabilities create a strong foundation for the continuity of the firm's existence and success, and therefore firms should never outsource their core competencies and capabilities. Furthermore, Cox (2001) has stated that organisations should concentrate on their core competencies and outsource all those aspects of their business that are non-core to suppliers. Moreover, one of the primary driving forces for companies to rely increasingly on outsourcing is gaining access to the resource collections of specialised actors. This gives the buying firm a chance to concentrate on its own resources and especially on its core competencies (Gadde and Håkansson 2001).

2.2. *Consortium sourcing, centralisation and decentralisation*

The decision on whether to utilise only individual sourcing or consortium sourcing as well is a very significant one for a buying company. Individual sourcing is a strategic decision with the aim of building a strong individual demand position in the supply markets, and it ignores the advantages of consortium sourcing (Arnold 1998). As an alternative for individual sourcing, companies can utilise consortium sourcing (for a more detailed discussion see, e.g. Essig 1998, 2000, Tella and Virolainen 2005), which refers to horizontal supply alliances where buyers combine their purchases and the collaboration exists between two or more buying companies. When companies design and form their supply strategies, they should decide whether to utilise purchasing consortia or not. Many companies utilise a combination of these two options.

Another way of benefiting from horizontal cooperation is the use of centralisation. In purchasing this means that the procurement operations of the company's different business units are handled by a common headquarters function. The opposite of centralisation is decentralisation, where the different business units are responsible for their own purchases (Gadde and Håkansson 2001). In some companies, centralisation might be the first step along the road towards creating purchasing excellence. The benefits of centralisation are, for example, increased efficiency, increased knowledge about purchasing and the items, increased negotiation power, quantity discounts and savings on time, resources and costs (e.g. Scheuing 1989, Arnold 1999, Faes et al. 2000, Lysons and Farrington 2006). Even though many companies prefer centralisation, there are also arguments in favour of decentralisation. Through decentralisation benefits like close cooperation between local buyers and users, faster service and shorter delivery times can be obtained (e.g. Arnold 1999, Faes et al. 2000, Lysons and Farrington 2006). Companies should try to find a balance between centralisation and decentralisation because a full centralisation or decentralisation is seldom an optimal choice. Therefore, firms often utilise the combination of the two.

2.3. *The size and location of the supply base*

A main part of the supply strategy focuses on suppliers and supplier relationships. It is a widely known argument that in most companies the number of suppliers should be reduced. Large supply bases are often seen as inefficient (Cousins 1999). Due to this, firms reduce their supply bases because they want to be more efficient, achieve cost savings and control their suppliers. Firms can achieve benefits such as increased quality and leverage, decreased uncertainty and better communication and information sharing through supply base reduction (Ogden 2006). According to Corey (1978), a company should consider two issues when making this decision. First, there should not be numerous suppliers so that the buying company is no longer perceived by each supplier as an important customer. Second, there should not be only few suppliers so that competition between the suppliers diminishes.

One way to reduce the number of suppliers is the use of single sourcing where only one supplier is responsible for delivering a specific part or raw material (Arnold 1998). Single sourcing will be chosen when close supplier–customer relationships are required. Through single sourcing, advantages such as better quality control, cost reductions and price advantages can be obtained (Gadde and Håkansson 2001). In single sourcing, the buyer always has alternative suppliers, but if the buyer is forced to purchase from one supplier, then the supplier concept is called sole sourcing. Sole sourcing is not an optimal solution for a buying company because of the monopolistic character of the situation.

If a company does not want to use single sourcing, it can use multiple sourcing, where many suppliers are used. Through multiple sourcing, companies can try to avoid supply risks, and the competition between the suppliers is also amplified (Arnold 2000). If the benefits of both single and multiple sourcing are to be obtained, then parallel sourcing can be used. In parallel sourcing, the buyer has two or more suppliers for one component, and it can choose how much each supplier will be used (for a more detailed discussion see, e.g. Gadde and Håkansson 2001).

In addition to the number of suppliers, the supply strategy should also include the decision whether the company will use domestic or overseas suppliers. This decision defines the geographic area for the sourcing activities. Many companies use both local and global suppliers. This decision can be based, for example, on price or quality issues or on the character of the object of purchase. Purchasing from local suppliers can create benefits like ensured delivery, shorter delivery time, lower transportation costs and better communication and coordination; but when the purchases are made from global suppliers, the company can, for example, get access to larger resources and capabilities (Scheuing 1989). The company should decide about the kinds of benefits that can be obtained, and the identification of the best sourcing area for each item.

2.4. *Competitive strategy or collaboration*

The decision on whether to collaborate with suppliers or use a competitive strategy is a very significant one for a buying company. The company has to decide when it will form collaborative relationships with suppliers and when it is more preferable to form only arm's length relationships (e.g. Cox 1996, Parker and Hartley 1997, Forker and Stannack 2000). When neither markets nor the hierarchies are suitable or efficient options, the firm should utilise partnerships and other collaborative relationships (Figure 1). In that TCE-based (Blomqvist et al. 2002) interpretation, the *partnership solutions* can be best regarded as strange hybrids between a well-defined market and hierarchies. Intermediate governance structures are most preferable when there are determinants, which simultaneously speak both for *insourcing* (e.g. uncertainty, danger of opportunism, high asset specificity) and for *outsourcing* (the need for high-powered incentives). A typical precondition for the emergence of partnership is also the pursuit of economies of scale and scope at the same time. When making the supplier relationship decision, two particular issues should be considered: whether the supplier is suitable to be a partner, and whether collaboration should be utilised for the item.

2.4.1. *Kraljic's purchasing portfolio*

Decisions concerning supplier relationship strategies can be based, for example, on the character of the item. Companies can categorise their purchased items, using Kraljic's purchasing portfolio, which according to Lamming and Harrison (2001) remains the foundation of the purchasing strategy for many organisations across different sectors. According to Kraljic (1983), a firm's supply strategy depends on two factors: profit impact and supply risk. The general idea of Kraljic's portfolio is to minimise the supply risk and make the most of the buying power.

In Kraljic's purchasing portfolio, the items are classified into four categories. The first category is leverage items where the importance of the purchase is high and the complexity of the supply market is low. With these items the buyer should exploit their purchasing power because these items can be purchased from various suppliers (Kraljic 1983), and competitive bidding is the purchasing policy that should be pursued. The second category is strategic items where both the importance of the purchase and the supply risk are high. Strategic items can only be purchased from one supplier, which causes a significant supply risk (Caniëls and Gelderman 2005). With these items, the buyer should collaborate with suppliers (Kraljic 1983) because through collaboration, the supply risks can be decreased. Supplier selection has a significant role in collaboration and potential suppliers should be evaluated closely (e.g. Bevilacqua and Petroni 2002).

The third category includes non-critical items where both the supply risk and profit impact are low. These items have many alternative suppliers, and efficient processing should be ensured (Gelderman and van Weele 2002, Caniëls and Gelderman 2005). Bottleneck items constitute the fourth category of the purchasing portfolio. These are items where the importance of the purchase is low and the supply risk is high, and the supply should be ensured (Caniëls and Gelderman 2005, 2007). If companies want to manage these purchases effectively, they should try to standardise their purchases or find substitutes if possible (Olsen and Ellram 1997).

Kraljic's purchasing portfolio is useful when a company is deciding whether to utilise competition between the suppliers or form collaborative relationships with the suppliers. According to the purchasing portfolio, supplier relationships should be intensive and collaboration should be utilised with strategic items, whereas the competitive strategy should be used especially with non-critical and leverage items.

2.4.2. *Collaborative relationships*

In order to remain competitive, the firm must continuously develop activity structures and processes in interaction with other actors (Heide et al. 2008). This collaboration can be done in the form of a dyadic exchange relationship where two companies collaborate (e.g. Ellram 1991). However, due to the dynamic business environment, companies can no longer concentrate only on dyadic relationships but they are forced to form networks. Competition is increasingly taking place between networks rather than individual companies, and networks consist of *several* companies that are collaborating. Dyadic relationships are the building blocks of networks and are therefore essential to the existence of networks. Nowadays many companies and networks are focussing more and more on customers, and the role of value creation has become more significant. Networks focussing on value creation are called value nets (Jarillo 1998, Parolini 1999, Bovet and Martha 2000, Möller et al. 2005). Companies in these networks have observed that effectiveness can be improved through the enhancement of the value proposition and efficiency through waste elimination (see, e.g. Zokaei and Simons 2006, Zokaei and Hines 2007).

The value net model has been extended from Porter's (1985) value chain model. Because of the current business environmental changes, several authors (e.g. Hines 1993, Hines and Rich 1997, Parolini 1999, Amit and Zott 2001, Kothandaraman and Wilson 2001) have criticised the inadequacy of the value chain model. The strategic approach is changing from an enterprise-focussed perspective to one that is extended to include value-creating systems and networks. The value net model has been developed to enable the analysis, description and study of value-creating systems (Parolini 1999). A value net is a dynamic, flexible network, which is called a value net because it creates value for all of its participants and because these participants operate within a collaborative network (Bovet and Martha 2000). A value net is formed around customers and it captures the customers' real choices in real time and tries to satisfy actual demand (Bovet and Martha 2000). In other words, a value net is activated by real customer demand and it is capable of responding reliably and rapidly to customer preferences.

In the value net, the core competencies and capabilities that are relevant to the network and create value are collected together (e.g. Knight 1999). These capabilities and competencies form the input of the value net. The companies offer their own core competencies and capabilities, and when all these are combined, unique value is created through collaboration. Collaboration between the value net actors and the actors' core capabilities and competencies are highly critical to the success and the value creation ability of the network. Therefore, collaboration, networking and core competencies and capabilities have crucial roles in supply management, and decisions concerning these issues should be included in the supply strategy. It is important to determine the kinds of relationships that will be formed, what kind of a supplier is suitable for being a partner, how relationships are developed and evaluated, when networks will be utilised and what kind of roles will be taken in the networks.

Figure 2 presents the theoretical framework for the analysis of supply strategy elements and illustrates how the supply strategy can be formed and what kinds of components it should contain. In an ideal situation, the formation of the supply strategy starts from the make-or-buy decision but the real business situations are seldom optimal and the strategy formulation can also be started from other supply strategy components. However, the business strategy of the firm as well as other firm strategies should always be the basis and the background for the firm's supply strategy. Next these elements of supply strategy are discussed in the Finnish food industry.

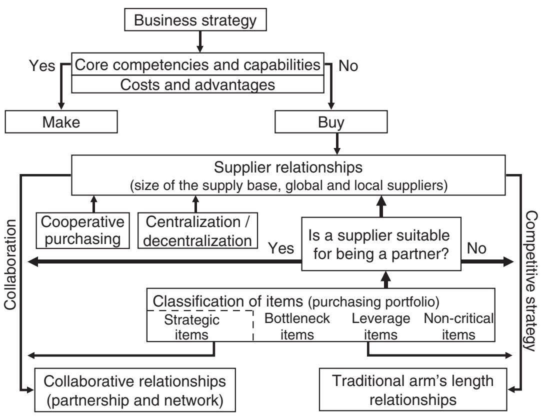

Figure 2. Formation of supply strategy.

3. Supply strategy in the Finnish food industry

The case study discusses supply management and the elements of supply strategies in the Finnish food industry value net. The case value net is composed of several actors, and the four main actors, representing different nodes of the value net, are the case companies of this study. The case companies are a manufacturing company, two supplier companies and a retailer in the role of a customer company, and they are all significant actors in the Finnish food sector. These case companies are selected to be the case companies of this study because by studying these actors the complete view of this value net can be formed. There are several value nets in the Finnish food industry, and this case value net represents a network that is remarkable in the context of the whole industry. The case value net ranges from raw materials and packaging materials all the way to the end-customers through grocery stores. The aim of this value net is to increase efficiency, rapidity and customer orientation.

3.1. *Research method and data collection*

According to Yin (2003), a case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context, when the boundaries between the phenomenon and context are not evident and multiple sources of evidence are used. In case research, the different aspects of a case are understood in relation to one another in a coherent whole or configuration, rather than modular assemblages of variables (Dubois and Araujo 2007). In this empirical study, the qualitative case study method is used. The main argument for the case study research method (Yin 2003) here is that the research problem is complex in its nature because it includes many variables and concepts that are not easy to grasp with a quantitative study. Furthermore, as the empirical research context is a contemporary event, it leads to multiple sources of evidence, such as interviews, introductory and informative sessions in the case companies and the use of company-specific documentation.

The case study is a result of interviews, and thus the data is mainly qualitative. However, according to Yin (2003), multiple sources of evidence can be used to increase the validity of the study and therefore, here the qualitative data was validated by using quantitative data that was gathered from a database that includes company information. The data concerning the amount of sales and purchases of the case companies were utilised as well. However, the main empirical data were collected in 24 semi-structured interviews conducted with the case companies' personnel. Research informants were selected and interviewed on the basis of their active involvement in the buyer–supplier relationships and supply management, and for example, supply managers, CEOs and buyers were interviewed. The topics of the interview questions concerned supply management, supply strategies and the value net actors' power positions, sources of power, the roles and capabilities, the relationships and the structure of the Finnish food industry. During the interviews, notes were taken and the interviews were taped. The recordings were transcribed and the transcriptions contained altogether 322 pages. The resulting qualitative data was coded and the data was analysed by content analysis and classification. Coding and analysis were done manually by one researcher. After the data was analysed, it was compared with the theoretical framework and interfaces were searched.

3.2. *The description of the research context*

The Finnish food industry has been subject to massive transformations driven by changes in the business environment as well as the technologies used within the industry. From having been fairly protected and isolated (mainly because of its geographical position) it is today facing the challenges of globalisation and increased competition (Brännback and Wiklund 2001). The Finnish food industry is also facing other challenges, such as company mergers, changes in consumer preferences and requirements for increased efficiency, which create pressures for the companies. Furthermore, companies are facing logistical challenges because the distances in Finland are significant. Some of the industry's products are easily perishable and the logistic processes need to be effective and reliable. Collaboration is needed because, for example, high levels of quick response and efficient consumer response performance are argued to be possible with increasing inter-firm collaboration and the transfer of inventory responsibility (Emberson and Storey 2006).

The food industry has several specific features that create special demands for the business. For example, the manufacturing processes and logistic processes are facing remarkable challenges. Furthermore, product development and innovativeness are required because customer preferences are constantly changing and becoming more demanding. The Finnish food culture is unique and it has some special features (Figure 3), and it is worth noting that Finns prefer domestic rather than overseas products and raw materials. Of the raw material used by the Finnish food industry, 85% is domestic, and the market share of Finnish food products in Finland is 81% (Finnish Food and Drink Industries' Federation 2008). The Finnish food sector is characterised by the limited number of large players as well as numerous small- and medium-sized companies. In 2006, 69% of the Finnish food industry actors employed less than five employees (Finnish Food and Drink Industries' Federation 2008).

The Finnish grocery retail market is characterised by centralisation, and there are only few retail specialists that are remarkably dominating the market with their significant buying volumes. The combined market share of the three biggest grocery retail firms in Finland in 2007 was almost 87% (ACNielsen 2008). According to Aalto-Setälä (2002), concentration in grocery retailing has increased a great deal within the last few decades both in the USA and in Western Europe. Furthermore, many researchers (e.g. Ogbonna and Wilkinson 1996, Collins and Burt 1999, Robson and Rawnsley 2001, Hingley and Hollingsworth 2003) have observed that in the food industry there is a high level of retailer concentration and the retailers are dominating the business of the industry. Fernie and Staines (2001) stated that grocery retailers in Europe are no longer small, family-owned companies but large, multi-national public quoted corporations. The significance of grocery retailers' own private labels for both the retailers and the whole industry has increased. The total share of private labels in Finland in 2005 was 10% of the retail sales, whereas in Germany the share was 30%, in the UK 28% and in Sweden 14% (ACNielsen 2005). In Finland, the retail

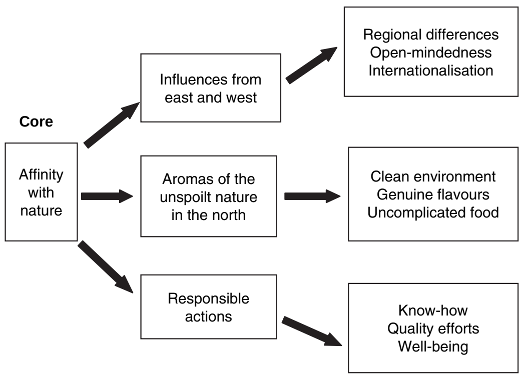

Figure 3. Special features of the Finnish food culture.

firms are constantly developing their private labels and forming collaborative relationships with manufacturers.

3.3. *The descriptions of the case companies*

The manufacturer company of this case study is one of Finland's leading food manufacturers and a market leader in many of its operational areas. Its product categories include many kinds of ready prepared foods and different meat products. Its main market area is Finland and a considerable part of its raw materials comes from Finnish suppliers. The manufacturer has many capabilities and resources that are essential to the case value net. Because of its long history and traditions, the manufacturer has indispensable knowledge about fresh ready prepared food. It also has a very strong and well-known brand, which is a remarkable power source for the company. Furthermore, it has marketing and manufacturing capabilities and active product development.

Supplier company A is a supplier both to the manufacturer and the retailer. The manufacturer purchases both basic and customised raw materials from supplier A and the retailer purchases end products from it. Supplier A, which is a market leader in pasta products in Finland, also sells and manufactures, for example, flour, flakes and grits as well as deep-frozen dough and pastry. The most significant capabilities and resources that supplier A has are its manufacturing resources and capabilities, and product development capabilities. Supplier A also has a well-known brand.

Supplier company B, on the other hand, has indispensable know-how in food packaging and is the supplier of packaging materials to the manufacturer. It offers and manufactures different kinds of packaging solutions for its customer companies. Supplier B has knowledge about packaging and packaging materials and this know-how is one of its main capabilities in this value net. The company is very innovative in product development and offers high-quality products.

The retailer who is in the role of a customer in this value net is the biggest case company when measured with its turnover and the number of employees. In Finland there are only four main retail specialists and the retailer of this study is one of those. More particularly, the retailer of this study has only one major competitor in Finland because the other two retail specialists are much smaller. Furthermore, the stores of this retail specialist form the most comprehensive store network in Finland. The retailer negotiates the purchasing contracts for its stores and utilises its buying volume by using centralised purchasing. It has to be noted that in 2005, the share of private labels of the retailer's total retail sales was 14%. Even if the retailer does not manufacture anything, it has several resources and capabilities that are extremely relevant and significant to the case value net. It has extensive knowledge about the selection and customer preferences, as well as purchase and market prices. The most important resource of the retailer is, however, the control it has over the distribution channel. Because the retailer has control over and knowledge about the distribution channel, the other value net actors are dependent on it.

3.4. *Relationships in the case value net*

In the Finnish food industry value net, the case companies have different roles and power positions. Suppliers A and B are always in the role of a supplier in the case value net. The retailer, on the other hand, is always in the role of a buyer. It is in the role of a supplier only when it sells end products to the end customers. In the case value net, the manufacturer is the actor that has roles, both of a buyer and supplier. It is a buyer when it purchases raw materials and packaging materials from suppliers A and B and a supplier when it sells its end products to the retailer. Supplier B and supplier A do not have an exchange relationship at the moment and they are not competitors. Furthermore, supplier B does not have an exchange relationship with the retailer because it does not supply anything directly to the retailer; it only supplies to the manufacturer who supplies to the

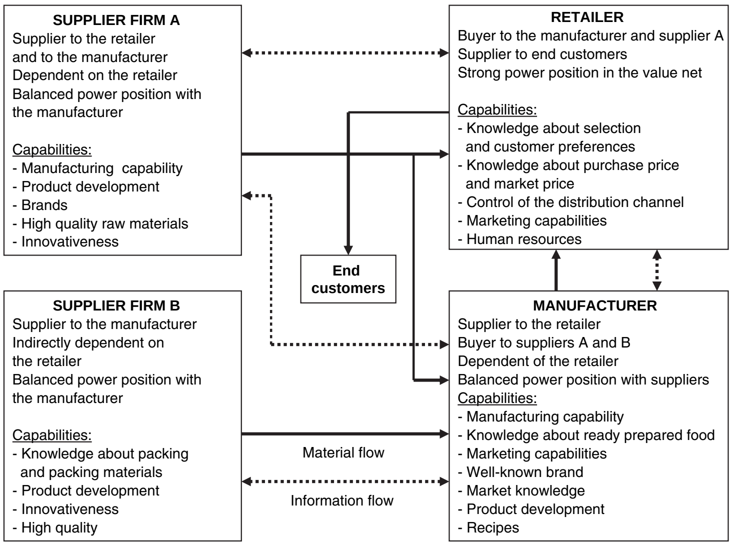

Figure 4. The Finnish food industry value net.

retailer. These roles of the value net actors are defined on the basis of their exchange relationships to each other.

In the Finnish food industry value net, the role and the power position of the retailer is very significant (Figure 4). The power of the retailer mainly stems from its market power. In Finland there are only a few retail specialists, and the retailer of this case study is one of these. In other words, there are only few companies dominating the market. The retailer's power also derives from the size of the company (when measured with the turnover or with the number of employees), from the amount of purchases and from its resources. Even though the power position of the retailer is remarkable, the strong net of suppliers, the suppliers' specific core capabilities and the suppliers' well-known brands decrease its power.

The relationship between the retailer and the manufacturer has a long history and they both conceive each other as important partners and have categorised their relationship as a strategic partnership. Because the manufacturer has a well-known brand and indispensable products, the retailer is at some level forced to purchase end products from the manufacturer. The manufacturer, on the other hand, is forced to sell its products to the retailer because of the retailer's dominating role in the Finnish food market. It is vital for the manufacturer that the retailer sells its products because the retailer's market share in the Finnish grocery market is irreplaceable. Therefore, the manufacturer is dependent on the retailer's buying volumes and strongly dependent on the retailer. Supplier A is also dependent on the retailer because of the retailer's buying volumes. However, the retailer does not see supplier A as a possible partner for strategic collaboration, and the relationship between them to a great extent represents a pure arm's length relationship based on a competitive strategy.

Supplier A has a more collaborative relationship with the manufacturer than it has with the retailer. The manufacturer does not have as much power towards supplier A as the retailer does. The manufacturer is at some level dominating the relationship because there are only few manufacturers of ready-made meals but several suppliers of the raw materials in question. However, the supplier's ingredients are significant for the manufacturer and the companies are important business partners to each other. Because the manufacturer does not have a very strong power position and as the supplier is not dependent on the manufacturer and the relationship is also important for the manufacturer, there is some collaboration between them. There is a collaborative relationship also between the manufacturer and supplier B, and they are in balanced power positions and not dependent on each other. The relationship is significant for both of them, and they are collaborating and have joint projects, for example, in product development. It is evident that suppliers A and B have power over the manufacturer in the case of bottleneck items, when the manufacturer does not have substitutive suppliers. In the case of leverage items, when the manufacturer has many alternative suppliers and substitutes, the suppliers are more dependent on the manufacturer.

3.5. *The role of supply management*

In the case value net, the role of strategic supply is crucial and the case companies aim to achieve benefits and efficiency through supply. However, the case companies have diverging views concerning the role of supply. The retailer sees supply as a strategic and crucial part of their action and the supply strategy as a significant part of their business strategy. The manufacturer, on the other hand, does not have a supply strategy at all. It has not noticed widely enough that advantages could be achieved through strategic supply. Their supply methods are old-fashioned and inefficient, and they have not categorised their purchased items. The inefficiency of one case company decreases the efficiency and competitiveness of the whole value net because the efficiency of the value net depends on its actors.

Because the case companies have different views about supply management, their supply decisions are also different. As mentioned earlier, outsourcing decisions should always be based on core competencies and cost and benefit issues. In the case value net, the retailer is the only one who clearly sees the connection between outsourcing and core competencies and who utilises outsourcing in order to be able to concentrate on its core business, and to obtain more efficient operation. The retailer has also recognised the role of resources and capabilities in the value net, and noticed that superior value can be created and various benefits can be achieved by combining different capabilities and resources in the network. The retailer is more advanced in supply management than the other value net actors and it has acknowledged that sustainable competitive advantage and ability to be competitive can be achieved through strategic and efficient supply.

One problem in supply management in the case value net may be the highlighting of cost issues. Some of the case companies only focus on costs, and their supply decisions are purely based on price and cost issues. When strategic supply decisions only stem from costs, the roles of core competencies and capabilities are not considered widely enough. The core competencies and capabilities should be considered when making make-or-buy decisions and when deciding about supplier-relationship issues. By doing this, efficient and successful business is more likely achieved. Companies should observe the overall efficiency and try to think more comprehensively than only about direct costs. If all the supply decisions are only based on costs, it will decrease the value creation ability of the value net.

Consortium sourcing is not widely utilised in the case value net because of competition laws. Centralisation, instead, has a significant role for the value net actors, and the retailer and the manufacturer who utilise centralisation have made strategic decisions concerning centralisation and decentralisation. The case companies are seeking, for example, savings on time, resources and costs, increased efficiency and economies of scale through centralised purchasing, and they are aware of these benefits. However, their viewpoint may be quite narrow because the manufacturer does not see any risks or disadvantages in centralisation. When there are benefits there are also disadvantages, and it is important to recognise these as well, because problems will arise if disadvantages and risks are disregarded. Therefore, companies should also consider the disadvantages and risks of sourcing concepts when making decisions and when creating and developing supply strategies.

Supplier relationships and their management are important issues for the case companies and they have made several decisions concerning, for example, the number of suppliers and the geographic area of suppliers. It is common for all of the case companies that the number of suppliers should be reduced. Even if they try to reduce their suppliers by using single sourcing and by collaborating, there are some items with which multiple sourcing is used, for example, to reduce the supply risk. Moreover, all the case companies try to form collaborative relationships with the most important suppliers and there are collaborative relationships also between the case companies. However, collaboration requires long-term commitment, and information must be shared openly; indeed some of the case companies (for example, the manufacturer and the retailer) are not willing to share information unreservedly, and trust, commitment and transparency are inadequate in some of the relationships. In the Finnish food industry, value net actors in the supplier role are very willing to form collaborative relationships but when they are in the role of a buyer the willingness to commit to collaboration decreases. Owing to this attitude, the possibility to create value and to achieve competitive advantage through collaboration is not utilised efficiently enough.

Some case companies, for example, the retailer has defined very strictly when they will utilise partnerships and with whom partnerships will be formed. They have also defined benefits, such as the decrease of transaction costs and access to partner's knowledge, which they try to obtain through collaboration. However, some case companies have made hardly any strategic decisions about partnerships and collaboration. The companies should define the basic principles for collaboration in their supply strategies and pay attention especially to the relationships and collaboration in the value net.

4. Conclusions and discussion

This study discussed the elements of supply strategies in the value net context. The theoretical basis for the study of supply strategy elements was created by utilising TCE and the RBV. As a result of the theoretical study, a framework that contains the main elements of every supply strategy was presented. The purpose of the theoretical framework was to create a basis for the analysis of the case study that discussed strategic supply management and supply strategy in a Finnish food industry value net.

When the findings of the empirical study were analysed and compared to the theoretical framework, similarities could be found. Most of the elements that were mentioned to be the most essential components of supply strategies in the theoretical study were also discovered as significant elements in the case study. For example, the make-or-buy decision, the core competencies and capabilities, supplier relationships, the size of the supply base, the geographic supply area, centralisation, decentralisation and collaboration were mentioned to be the main elements of supply strategy both in the theoretical study and in the empirical case study. It is worth noting, however, that purchasing consortia that were established as one main element of the supply strategy in the theoretical study were not found as a significant element in the empirical study. One major reason for this difference noticed between the theoretical and the empirical study can be the special character of the Finnish food industry (for example competition laws).

Many researchers have noticed that in the food industry there is a high level of retailer concentration and that the retailers dominate the business of the industry. Collins and Burt (1999), Hingley and Hollingsworth (2003), Ogbonna and Wilkinson (1996) and Robson and Rawnsley (2001) have explored power relations in the food industry in the UK and Ireland, and they have noticed that the power is held by the retailers. Furthermore, Aalto-Setälä (2002), Mikkola (2008) and Uusitalo (2004) who have studied the Finnish food industry have also found evidence for the retailers' dominance in Finland. The case study presented in this paper also indicates that in the Finnish food industry the retailers are dominating the market. Furthermore, the retailer, who is in a predominant power position in the case value net, is more advanced in supply management than the other value net actors and has acknowledged that sustainable competitive advantage and ability to be competitive can be achieved through strategic and efficient supply.

As a result of this study, it can be argued that the supply strategies in the Finnish food industry value net require further development. Some case companies (e.g. the retailer company) have recognised that supply is a strategic function through which sustainable competitive advantage can be achieved. The efficiency and value creation ability of this value net could, however, be improved, if all of the value net actors realised the strategic role of supply and developed their supply strategies in order to create better conditions for collaboration between the value net actors. Collaboration between the value net actors is in a focal role, and the supply actions in this value net should be based on collaboration, and partnerships should be utilised further. The actors should not try to gain benefits only for themselves, but in strategic supply decisions the whole value net should be considered. Therefore, the buyer should always consider issues from the supplier's point of view and vice versa. This is the prerequisite for the collaboration and success of the value net.

The objective of this study was to analyse what issues are the most important elements in a firm's supply strategy and therefore, we have described the key elements of supply strategies. To the authors' knowledge there are no existing studies where the supply strategy elements are gathered together and discussed in the context of the food industry. Furthermore, these issues are rarely examined from the viewpoint of networks and value nets. Thereby, this study contributes to research conducted in the field of supply management but it also contributes to value net research and to research concerning the business of the food industries.

Further research should be directed especially towards the influence of strategic supply on the companies' performance. More particularly, the role of strategic supply management in value creation in the value nets should be analysed. The relation between collaboration and the actors' power positions could also be studied more closely. In particular, the influence of power on companies' willingness to form collaborative relationships could be researched. Furthermore, it would be interesting to study the sources of power for the suppliers and buyers in the value net context, not to mention value creation enabled by collaboration between the value net actors and the role of capabilities in value creation in the value net. The role of collaboration and capabilities in value creation should be investigated because efficient value creation is enabled through collaboration and by combining the actors' complementary capabilities.

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PUBLICATION 2

Ahtonen Anni-Kaisa, Sissonen Heli and Virolainen Veli-Matti (2008)

SOURCES OF STRUCTURAL POWER IN VALUE NET

Proceedings of the 17th International Annual IPSERA Conference, 9 – 12 March 2008,
Perth, Australia

A revised and further submitted version.

Sources of structural power in the context of value nets

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Abstract

The study discusses power relations between buyers and suppliers in value nets, focusing on the sources of structural power among the network players. Power is viewed to stem from organisational structures, and the discussion on power in dyadic buyer–supplier relationships is extended to the wider network perspective in which the network effects are highlighted. The study contributes by developing a framework for the analysis of sources of structural power on the network, the relationship, and the organisational level. Moreover, the study raises the question of network effects by discussing the significance of networks as research contexts in studies on power. The results of a case study from the Finnish food industry indicate that buyers and suppliers have several sources of structural power and the network effects have significant role when determining the power relations.

Keywords

Structural power, power source, value net, food industry

1. Introduction

The issues of power and dominance have been the focus of academic research since 1950s and 1960s when French and Raven (1959), Dahl (1961), Emerson (1962) and Blau (1964) launched the discussion. Studies on power have their origins in the social sciences, but when studying power in buyer–supplier relationships the research conducted in the field of marketing has played a significant role. Much of the research on the role of power applies to the context of marketing channels (see El-Ansary and Stern, 1972; French and Raven, 1959; Gaski, 1984). Because of the ongoing trend on outsourcing and concentration on core competences and capabilities and the high importance of supplier relationships, the power theme has also attracted interest in the supply management literature (see Cox, 1999; Gelderman and van Weele, 2004; Ramsay, 1996; van Weele and Rozemeijer, 1999). However, power in buyer–supplier relationships or the power positions of buyers and suppliers towards each other can not be fully understood if the factors from which their power stems from have not been explored. Therefore, the aim of this study is to analyse the sources of power for buyers and suppliers.

According to Stannack (1996), studies analysing power in the context of interaction relationships between buyer and supplier are too limited in perspective in that they fail to explain multiple interactions. Choi and Wu (2009) have stated that dyadic framework fails to consider firms as nodes that are embedded in larger supply networks. Power is socially embedded, and the transactions and relationships that are embedded in networks should therefore also be considered. According to Dubois and Fredriksson (2008), it is important to understand how one dyad in the triad affects the other dyads, and the same rationale can be utilised with networks in which network effects occur because one dyad can affect other dyads. Zolkiewski (2001) stated that power is the central force in networks and thereby affects the struggle for control over resources, the dynamics of the net, and the tension between collaboration and competition. Cendon and Jarvenpaa (2001) argue that the role of power in a network is evident in terms of its impact on the strategic choices, governance structures, relative dependence, resources, and activities performed. According to Andersen and Christensen (2005), despite the growing awareness of the management of supply networks, little is known about the network dynamics or how they affect the position and roles of the individual actors. Based on previous arguments it can be concluded that the issue of power is highly relevant to the discussion on networks. The network approach is adopted in this study in order to provide a sufficiently extensive context in which to analyse power and its sources, and buyers and suppliers are seen as network actors. Moreover, this study highlights the significance of network effects by analysing how network as a context affects power relations. Veludo, Macbeth and Purchase (2006) have stated that the relationships in networks are being influenced by the network effects that flow through the network. Due to the various actors and multidimensional relationships between them, networks are much more complex systems than dyadic relationships or chains and, hence, there are several influencing factors that are characteristic only for networks. These so-called network effects that are caused by other actors, activities and connections beyond the dyadic relationship have powerful influence, for example, on the relationships embedded in networks.

The aim to satisfy customers' needs and to create value more efficiently to all participants of the network is a key issue in business and in firm's supply management today (Lindgreen and Wynstra, 2005). According to Harland, Zheng, Johnsen and Lamming (2004), managing the implementation of strategies for capturing value from the networks of suppliers is a key task for those responsible for supply relationships in the firm. The value net model (see Bovet and Martha, 2000; Jarillo, 1998; Möller, Rajala and Svahn, 2005; Parolini, 1999) offers a new dynamic business model through which collaborative value creation can be fostered. It is an extension of Porter’s (1985) value chain model, which has been criticised due to the inadequacy of its activity structure and customer perspective (e.g., Hines and Rich, 1997; Kothandaraman and Wilson, 2001; Parolini, 1999). The value chain model has been criticised for not considering consumer satisfaction its primary object, whereas the value net model begins with the customer and focuses on satisfying actual demand. Furthermore, the value chain model has too narrow viewpoint because few firms are involved in only one value chain. To a large extent the conditions for efficiency and effectiveness in a single chain are determined in terms of how the activities and resources are related to those in other chains, and this calls for a network perspective (Gadde and Håkansson, 2001; Gadde, Huemer and Håkansson, 2003).

The value net forms around its customers, captures their real choices in real time and transmits them to other net participants (Bovet and Martha, 2000). Because the net is activated by real customer demand it is capable of responding reliably and rapidly to customer preferences. A value net comprises the relationships between its actors, i.e. customers, buyers and their suppliers as well as competitors. The actors create value by collaborating (Bovet and Martha, 2000) and combining their unique and value-adding resources, competences and capabilities. The actors form collaborative relationships with actors who have complementary capabilities and resources through which the efficiency and utilisation of their own capabilities are improved (e.g., Ford et al., 1998; Gadde et al., 2003; Håkansson and Johanson, 1992). The actors have different roles and power positions, and the power relations and sources of power between them vary. Unlike value chains, value nets are future-oriented networks in which intangible assets play a crucial role (Allee, 2003). Of these, knowledge and innovation are important, but the issue of power is very significant one because it affects the character of the relationship. Previous research has shown that the power relation between a buyer and supplier affects the nature of the relationship between them and, moreover, determines the depth of collaboration (e.g., Batt and Purchase, 2004; McDonald, 1999; Sanderson, 2004; van Weele and Rozemeijer, 1999; Veludo et al., 2006). Van Weele and Rozemeijer (1999) argue that partnerships, i.e. collaboration, can only grow when there is a certain balance of power between the parties and McDonald (1999) continues that unequal power provides an obstacle to effective partnerships. Cox (2007) moreover defines that power is one of the major factors that determines outcomes in many business transactions. According to Allee (2003), understanding the role of intangible assets has become one of the most important business and economic question. Allee (2003) has determined that intangible assets are dynamic not static like physical assets. Because this study focuses on the analysis of power which moreover is a dynamic and intangible asset, the dynamic value net approach is therefore applicable for this study.

Lakemond, van Raaij and van Weele (2004) discuss the role of collaboration in value creation, and based their research on the assumption that value is created in a network and not just in one single company. Furthermore, they suggest that core competences are the key to delivering superior value. Also Amit and Zott (2001) and Medcof (2001) have argued that resources are crucial to value creation. In this study, it is assumed that one of the main goals of buyer–supplier collaboration is the maximization of value creation. Based on the research of Lakemond et al. (2004), it can be argued that the network context is needed from this reason as well. Hence, value nets provide the research context for the analysis of sources of power, the aim being to establish a target (i.e. maximization of value creation) for collaborative relationships. This highlights the effects of power not only on collaboration but also on value creation, which should be the ultimate goal of business. This study applies a viewpoint that networks consist of different types of relationships, and thus, they are not all collaborative in nature. For example, Järvensivu and Möller (2009, p. 658) have stated that "some networks consist of players with more or less equal power of influence", which means that different kinds of power relations can be found from networks. In supply management research, the type, nature or character of relationship is often determined based on the level of collaboration. This level of collaboration, on the other hand, is affected by the power relation between the buyer and supplier.

This study therefore extends the traditional discussion on power in dyadic buyer–supplier relationships with its emphasis on a wider network perspective highlighting the network effects and the complicated nature of the relations. The aim is to examine the sources of structural power for buyer and supplier in value nets. The objective of this paper is therefore twofold. On the one hand, it determines the sources of structural power for buyers and suppliers. On the other hand, it discusses the significance of networks as research contexts in studies on power. As a consequence, it therefore addresses two main research questions: *What are the sources of structural power for buyers and suppliers in value nets? How network as a context affects power relations?*

The study applies a structural perspective on power which means that power is viewed to stem from organisational structures and can thereby be called a structural power due to its sources. Even if sources of power in buyer–supplier relationships have been discussed in earlier research made in the field of purchasing and supply management, the perspective should be broadened from dyads to networks, and this is one of the main objectives of this study. The study contributes by defining the sources of structural power in buyer–supplier relationships and by broadening the discussion of power to the context of networks.

The paper is structured as follows. The next section clarifies the concept of structural power as well as gives an overview of sources of structural power in value nets and creates a theoretical framework for the analysis of the case study. Third section discusses research setting and methodology and presents the empirical findings. Finally, discussions, conclusions and managerial implications as well as limitations conclude the paper.

2. Sources of structural power

The concept of power can be understood and defined in many ways depending on the context. Power can be defined as *the ability to manage the perceptions of the other party* (French and Raven, 1959), *the ability of an actor to impose its will on others* (Blau, 1964), *the ability to evoke* (Gaski, 1984), *the ability to influence* (Mohr, Fisher and Nevin, 1996), *the ability of a firm to affect decision-making and/or behaviour* (Wilkinson, 1996), or *the ability to control one's own or another entity's range of intended or actual actions* (Stannack, 1996). In research made in the field of purchasing and supply management, Stannack (1996, p. 51) has further defined supply chain management power as "the capacity to optimize the behaviour of suppliers and subcontractors in accordance with desired performance objectives" and purchasing power as "the capacity to achieve a successful negotiated contractual outcome on behalf of an organization". In this study, power does not refer only to the ability to achieve certain outcomes from the negotiations and thus, the definition of SCM power is closer and can partly be adopted in this study.

When discussing the concept of power, further distinctions can also be made. Stannack (1996) has distinguished between physical and social power in which physical represents an ability to move tangible objects and social refers to intangible issues. Following Stannack's definition, the power in this study refers to social power. The distinction can also be made between total power and relative power where former refers to average of the parties' dependence upon one another or in other words, power which is the result of full interdependence of both parties on each other (Caniëls and Gelderman, 2005; Stannack, 1996). The latter one, on the other hand, refers to the difference between the two parties' dependence or power which is the result of interdependence asymmetry (Caniëls and Gelderman, 2005; Stannack, 1996). As well as Stannack (1996) and Caniëls and Gelderman (2005) in their studies, this study focuses on relative power. Furthermore, Etgar (1976) has distinguished between economical and non-economical dichotomy grouping reward and coercive sources in the economic category. Hunt and Nevin (1974) and Gelderman, Semeijn and De Zoete (2008) have discussed about the difference between coercive and noncoercive influence strategies. According to Gelderman et al. (2008), coercive strategies motivate compliance on the basis of source-controlled rewards and punishments, and are believed to have negative impacts, for example, on distribution channels. The noncoercive strategies aim to change the attitude of the other party, and are found to have positive impact instead (Gelderman et al., 2008).

Several distinctions have also been made between structural and behavioural power, power sources and uses, and the macro and micro perspectives. For example, Cendon and Jarvenpaa (2001) distinguish between structural and behavioural power. The former takes a macro perspective (i.e. organisational structures), whereas the latter focuses on individual actions and the micro perspective. The behavioural (i.e. the micro) perspective focuses on the exercise of power (see Pettigrew and McNulty, 1995 and 1998) whereas the structural perspective focuses on its sources, which are the factors that enable one party to acquire power and possess it (Cendon and Jarvenpaa, 2001). The structural (i.e. the macro) perspective is adopted in this study, and the focus is on the sources of structural power and the definition provided by Cendon and Jarvenpaa (2001) is shared. According to Cendon and Jarvenpaa (2001), from the structural perspective power is derived not from the actions of people but from organisational structures, which include resources, interconnections among actors and organisational positions. In this study, power is analysed from the perspective of network structures and positions and hence, the research approach is the *structural perspective* of power.

Constructing from all of the above-mentioned definitions and given the research approach adopted, power is defined here as *the ability to influence the decision-making and actions of the other party*. This power is viewed to stem from organisational structures and can thereby, be called a *structural power* due to its sources.

2.1. Literature review

The determinants of power of this study are commonly used in research on purchasing and supply management (e.g., Bates and Slack, 1998; Caniëls and Gelderman, 2005; Cox, 1999, 2001a, 2001b; Cox et al., 2001a; Doran et al., 2005; Gelderman and van Weele, 2004; Ramsay, 1995), whereas the traditional approach to power in marketing channels emphasises the actions that reflect it: rewards, coercion, legitimate and referent (e.g., French and Raven, 1959; Gaski, 1984).

Power depicts the different roles or positions each company has in a network: obviously the nodes or focal companies have more power over their partners than lower-tier component suppliers (Cox, 1999; Doz and Hamel, 1998). According to Pfeffer (1981), the network position is a structural determinant of power (see Figure 1). Furthermore, the actors' capabilities and resources determine their power relations and positions as well as their roles.

According to Håkansson (1986), the character and role of actors depend on the activities they perform or control, the resources they manage and the knowledge they have about these and about the other actors in the network, and all of these define their network position. Gadde et al. (2003) suggest that the potential to influence others is a function of the company's network position, and is defined by the characteristics of its relationships. Johanson and Mattsson (1992) also state that the relationships between the actors define their positions.

Cox (1999) describes a hierarchy of structural dominance as a situation in which a dominant player owns and controls the key resources that appropriate value. According to Ramsay (1996), the buyer's power stems from a combination of the attractiveness of its own resources and the supplier's freedom to obtain resources from other organisations. The supplier's power, on the other hand, is derived from the attractiveness of its own resources and the buyer's freedom to obtain resources from other organisations. Ford et al. (1998) suggest that actors' financial and positional resources influence their power relations. Hence, it could be argued that the resources, competences and capabilities that actors own are significant sources of power (see Cendon and Jarvenpaa, 2001; Cox, 1999; Cox et al., 2001a; Doz and Hamel, 1998; Ford et al., 1998; Gelderman and van Weele, 2004; Håkansson, 1986; Medcof, 2001; Pfeffer, 1981; Pfeffer and Salancik, 1978; Ramsay, 1995 and 1996). The actor that owns or can control unique resources through which it is able to create unique value has a strong power position in a value net. Moreover, resources that are valuable, rare, imperfectly imitable and non-substitutable (VRIN resources) are highly valued and improve the position of the actor concerned (Barney, 1991; Svahn and Westerlund, 2007).

The dependencies and relationships between network actors are considered sources of power in many studies (see Caniëls and Gelderman, 2005 and 2007; Cendon and Jarvenpaa, 2001;

Cox, 2001a; Cox et al., 2001b; Doran et al., 2005; Gadde et al., 2003; Johanson and Mattsson, 1992; Medcof, 2001; Pfeffer, 1981; Ramsay, 1995). According to Caniëls and Gelderman (2005), the supplier's dependence on the buyer is a source of power for the buyer, and vice versa. Furthermore, the degree to which the activities of an actor are connected with the workflow of others is one notable power determinant (Cendon and Jarvenpaa, 2001). The relative power of one actor over another is the result of the net dependence between them (Pfeffer, 1981). As Medcof (2001) utilising the resource-dependency perspective states, the power of an organisation depends upon the resource-dependency relationships it has with other organisations.

Studies in which power relations are discussed in the context of Kraljic's (1983) purchasing portfolio (e.g., van Weele and Rozemeijer, 1999; Caniëls and Gelderman, 2005 and 2007) consider the type of product as a source of power. Moreover, Ford et al. (1998) and Porter (1985) utilised the type or uniqueness of the product to measure power (see also Doran et al. 2005; Porter, 1985; Ramsay, 1995 and 1996; Thorelli, 1986). According to Ford et al. (1998), the actor's ability to design and manufacture unique products and to build brands influences its power. Porter (1985) claims that the supplier is powerful when the product is unique and only a few companies dominate the market, whereas the buyer is powerful when the products being supplied are standard or undifferentiated and purchases are large in terms of volume.

In fact, the volume of sales and purchases as a power source has been highlighted in several studies (see Bates and Slack, 1998; McDonald, 1999; Ramsay, 1995 and 1996; Sanderson, 2004; Thorelli, 1986), and according to Ramsay (1996) the key issue in measuring power is the proportion of the buyer's purchases of its suppliers' products or capacity. The more important the partner is in terms of the volume of supplies or sales, the more dependent on it the company usually is (McDonald, 1999). The company’s market power (e.g. Cox, 2001a and 2001b; Ford et al., 1998; McDonald, 1999; Porter, 1985; Ramsay, 1995; Sanderson, 2004; Thorelli, 1986) and size (measured in terms of the number of employees or turnover) (e.g. Bates and Slack, 1998; McDonald, 1999; Stannack, 1996; Thorelli, 1986) also determine its power and positions. According to Bates and Slack (1998), the power balance shifts from buyer to supplier when the customer is significantly smaller than the supplier and the business represents a small proportion of its turnover, but a large proportion of the customer’s costs. As Thorelli (1986) states, the number of alternatives (see also Cox, 2001a and 2001b; Cox et al., 2001b; Doran et al., 2005; Gelderman and van Weele, 2004; Medcof, 2001; Pfeffer, 1981; Pfeffer and Salancik, 1978; Porter, 1985; Ramsay, 1996; Sanderson, 2004; van Weele and Rozemeijer, 1999) and the switching costs (see also Cox et al., 2001a and 2001b; Porter, 1985; Ramsay, 1996) also determine power relations.

In several studies (see Cox, 2001b; Cox et al., 2001a; McDonald, 1999; Mohr and Nevin, 1990; Pfeffer, 1981) the control of information and information as a source of power are seen significant, especially on the relationship and network levels. In networks, the economic base, technology, expertise, trust and legitimacy are sources of power for its actors (Thorelli, 1986), which is manifested in its differential advantage in one or several of these areas. The technologies owned are also relevant, and the combination of product, process and market technologies influences the power relations between network actors (Ford et al., 1998). According to McDonald (1999), strategically important technology can be considered a source of the actor’s power (see also Bates and Slack, 1998; Ford et al., 1998; Porter, 1985; Thorelli, 1986). Furthermore, in a situation of up-front investment and lock-in (the supplier has specific expertise that results in high switching costs for the customer) the power balance shifts from the buyer to the supplier (Bates and Slack, 1998) (see also Cox, 2001a; Ramsay, 1996). Firms in high-involvement relationships are strongly interdependent, which gives rise to lock-in effects caused by the development of relationship-specific assets and activity adaptation that narrow the firm's field of vision and potential to develop alternative relationships (Gadde et al., 2003). Table 1 shows the structural sources of power as described in the literature and next these sources are discussed in the context of the Finnish food industry.

INSERT TABLE 1

2.2. Levels of analysis

In this study sources of power mentioned in Table 1 are considered on three levels, the network, the relationship and the organisation level. On the organisational level sources of structural power such as resources, competences and capabilities, and size are seen as internal to a single organisation. The second level includes the dyadic relationship of an organisation with another organisation. Hence, on the relationship level the power sources of the two organisations (i.e. parties of the relationship) are compared. For example, the market power between the parties of the relationship, alternative sources available and the volume of sales and purchases determine the power relation between them. The network level incorporates all three levels, thereby including sources of structural power from the organisational, dyadic relationship and network perspectives. The organisation's resources, competences and capabilities determine its role and position in the network (Cox, 1999; Håkansson, 1986). Its relationships, control of information and market power also define its network position (Forker and Stannack, 2000; Johanson and Mattsson, 1992; Mohr and Nevin, 1990). Moreover, Anderson et al. (1998) have argued that the interplay between position and role exists and is highly significant in networks. Therefore, it can be argued that the power sources stemming from different levels have influence on each other and for example, organisational and relationship level sources reinforce the network level sources and thereby, are the enhancing force in the background of network level sources. Because networks consist of organisations and relationships between them, analysis of the sources of structural power on the network level requires analysis of the power sources on the levels of the organisation and the relationship.

INSERT FIGURE 1

Further distinction can be made between primary and secondary sources of power. Primary sources refer to power determinants on the organisational and relationship levels. They are only related to a certain relationship or organisation. Secondary sources, on the other hand, are the result of network effects, in other words they are related to other network participants beyond the dyadic relationship (i.e. third parties). In Figure 1, roles of actors, positions of actors, number of actors and level of domination are secondary sources of power which are caused by network effects. Because previous studies have found that it is important to study power in the context of networks, in this study it is argued that in some cases these secondary sources may be even more important than the primary sources if they crucially determine the power position of the network actor, and moreover the power relation between two actors. The network context offers new perspectives on the study of power because there are more actors in a network than in a chain or relationship. Furthermore, these actors are connected to each other in more complex ways than in a sequential chain. The network perspective makes it possible to analyse the significance of secondary sources of power. In the next section, the theoretical framework shown in Figure 1 is discussed and tested by using a case study from the Finnish food industry.

3. Research setting and methodology

3.1. The empirical research context

The food industry has been subject to massive transformation driven by changes in the business environment as well as the technological developments. From having been fairly protected and isolated the Finnish food industry is currently facing the challenges of globalisation and increased competition (Brännback and Wiklund, 2001). The Finnish grocery retail market is characterised by centralisation, with a few retail specialists heavily dominating the market. The combined market share of the three biggest grocery retail firms in Finland in 2008 was approximately 87 percent (ACNielsen, 2009). According to Aalto-Setälä (2002), concentration in grocery retailing has increased a great deal within the last few decades in both the U.S. and Western Europe. This same phenomenon has been noted in many studies, as has the high level of retailer concentration and the dominance of the industry in several countries (e.g., Collins and Burt, 1999; Hingley, 2001 and 2005; Hingley and Hollingsworth, 2003; Ogbonna and Wilkinson, 1996; Robson and Rawnsley, 2001). The food industry offers an interesting research context for studies on power given the many imbalanced relationships on the global level.

Networking has become one of the key factors for survival and success in many industries. Among them is the food industry, which has changed from a traditional agricultural industry with basic production procedures to a modern high-tech business with fast-developing technology and processes. Food industry companies form collaborative networks through which to create their unique value. Value creation for the end customers has assumed even more importance because of the increasing competition and demanding customer preferences. The value net model, with its emphasis on the role of end-customers, is therefore highly applicable to the food industry. Moreover, it facilitates the joint development and innovation which are critical in the business of the food sector because of the constantly changing customer preferences. However, it appears from previous studies that the research on value nets has mostly concentrated on the ICT (Information and Communication Technology) sector (see Fjeldstad and Ketels, 2006). Given the increasing significance of technology and the use in food industry companies of these new and more competitive business models, there is a need to study them in this context as well, thereby adding to the limited amount of research and offering a new empirical context.

3.2. The descriptions of the case companies

The case value net of this study comprises several actors, and the four main ones were selected as the case companies. The Manufacturer is one of Finland's leading food manufacturers and its product categories include many kinds of ready prepared foods and meat products. The Retailer, which is in the role of a customer company in this value net, is the biggest case company in terms of turnover and number of employees. There are only four main retail specialists in Finland and the Retailer is one of them. In fact, it has only one major domestic competitor because the other two retail specialists are much smaller. It purchases end products from Supplier A which also sells both basic and customised raw materials to the Manufacturer. Supplier A, which is the market leader in pasta products in Finland, also sells and manufactures flour, flakes and grits as well as deep-frozen dough and pastry. Supplier B, on the other hand, offers and manufactures different kinds of packaging solutions for its customers, and is the supplier of packaging materials to the Manufacturer.

These four companies were selected because they represent different nodes of a certain value net, they are significant actors in the Finnish food industry, and analysing them will produce a complete picture of the net in question. Furthermore, they have different roles and power positions in this value net, which was relevant to the research aim of the study. There are several value nets in the Finnish food industry, and this case value net represents a network that is significant in the context of the whole industry, ranging from raw materials and packaging all the way to end customers through grocery stores. It has several features that are typical of a value net. It is agile and the end customers play the central role, thus it is capable of reacting rapidly to changes. Furthermore, the actors are constantly developing their processes, activities and relationships. The role of intangible assets such as knowledge and innovations is significant because the actors are creating new value activities. Therefore, this value net in the Finnish food industry offers an interesting research context.

3.3. Research method

Halinen and Törnroos (2005, p. 1286) have stated that "a case strategy is most suitable for the study of business networks. It allows the study of a contemporary phenomenon, which is difficult to separate from its context, but necessary to study within to understand the dynamics involved in the setting". In this study, the studied phenomenon is buyer–supplier relationship and the phenomenon is studied in the network context. The buyer–supplier relationship is embedded in the network and is affected by the network effects, and hence the boundaries between the context and phenomenon cannot be clearly defined. The study is thus an embedded single-case study with multiple units of analysis and according to Dubois and Araujo (2007), using multiple embedded units of analysis in a single-case design can strengthen the study. Because the empirical research context is a contemporary event there are multiple sources of evidence, including interviews, introductory and informative sessions in the case companies, and company-specific documentation (see Ellram, 1996; Yin, 2003). According to Miles and Huberman (1994), flexibility, richness, holism, causality assessment, the possibility of locating meanings and the natural setting are among the advantages of qualitative research. The case study method was chosen in order to exploit these advantages and because of the nature of the research topic and context. It allows the setting and limiting of the scope of the research design to a specific group of companies, and an in-depth understanding of the phenomenon under investigation. In fact, because a case study with the interview as a data collection method provides an opportunity for more in-depth discussion in which the questions *why* and *how* can be asked and the most fundamental reasons and backgrounds behind the issues can be explained, the method was chosen for this study. It was important to gain insights into the specifics and conditions of power relations and sources of power in the value net context. Given the purpose of the study to achieve a deeper understanding of the nature of power sources, it was considered the most appropriate method.

3.4. Data collection

The case study comprises 29 individual semi-structured interviews conducted with the case companies' personnel. The research informants were selected on the basis of their active involvement in buyer–supplier relationships, supply management, marketing and selling. Both the buyer and supplier perspectives were investigated. The interviewees from the buyer companies represented the purchasing and supply management side (purchasing directors, supply managers, buyers), whereas those in marketing and selling (marketing director, customer director, sales manager) represented companies in the supplier role. In order to obtain additional information and complementary perspectives interviews were also conducted with informants from other company levels and in other positions (CEOs, commercial directors, quality manager). Given the approach of this study, the structural perspective on power was also adopted in the interviews, and hence the interview questions concerned issues on the organisational (i.e. how the organisation works) rather than the individual (i.e. individual behaviour) level (see Yin, 2003). The questions concerned the roles and capabilities of the firms, their power positions and sources of power, relationships, information sharing, and the nature of the Finnish food industry. Notes were taken during the interviews, which were audio-recorded. The recordings were transcribed literally, producing 375 pages of data.

Yin (2003) suggests that multiple sources of evidence should be used to establish construct validity and reliability, and according to Dubois and Araujo (2007), the use of multiple respondents makes it possible to capture a variety of perceptions and meanings, which is vital to the understanding of complex relationships. Furthermore, having numerous and highly knowledgeable informants who view the focal phenomena from diverse perspectives should limit interview bias (Eisenhardt and Graebner, 2007). Therefore, several research informants and data from different sources (data triangulation), as well as investigator triangulation were used. Data on sales and purchases was used to validate the interview data.

INSERT TABLE 2

The number of interviews in the Manufacturer company was higher than in the other case companies because the Manufacturer is both in the buyer and supplier role and is involved in several relationships (see Table 2). Hence, the point at which new interviews did not provide new evidence (saturation point) was reached after a smaller number of interviews in the other case companies. For example, in Supplier B only two interviews were made because the company is involved in only one relationship, it is only in the role of a supplier and the saturation was noticed to occur after two conducted interviews. In fact, the saturation point was used in deciding the sufficiency of interviews. The interviewees reviewed the case reports, which Yin (2003) claims increases the validity of the study and, according to Hirschman (1986), can be used to determine its credibility.

3.5. Data analysis

According to Yin (2003), the reliability of the study can be increased by using a case study protocol, developing a database and by ensuring the chain of evidence and this advice was followed. As away of organising the qualitative data a case study database was created and a chain of evidence was maintained. The data was colour-coded based on the 11 interview themes, and subjected to classification and qualitative content analysis. All this was done manually by one of the researchers. This process also represented a method of data reduction and provided an initial level of analysis (see Miles and Huberman, 1994). As Miles and Huberman (1994) suggest, data reduction, data display, and conclusion drawing and verification were used as techniques of data analysis. Summaries, mind maps and memos were written. Finally, the data was compared with the theoretical insights and interfaces were sought. Tables and summaries were used in comparing the empirical data with the theoretical framework.

4. Empirical findings

As mentioned above, the Retailer of this case study is one of the few retail specialists dominating the Finnish food market. Its power therefore stems to a great extent from its market power. Its volume of purchases from the Manufacturer and Supplier A are significant from the supplier's perspective but minor from the Retailer's perspective. In fact, its purchases from the Manufacturer account for only a few per cent of its turnover, whereas the Manufacturer's sales to the Retailer represent a quarter of the Manufacturer's turnover. Correspondingly, its purchases from Supplier A represent less than one per cent of its turnover, whereas Supplier A's sales to the Retailer are a fifth of the Supplier's turnover. Consequently, as the Supplier A stated "*The Retailer's buying volume is so significant that we are strongly dependent on it*", it is evident that the Manufacturer and Supplier A are dependent on the Retailer and its buying volume. The size of the Retailer is also a significant factor because its turnover is ten times more than that of the Manufacturer, and a hundred times more than that of Supplier A.

The Retailer also has extensive knowledge about selection and customer preferences, and about purchase and market prices. One reason for this could be its position in the network: it is close to the end customers and hence is quite independent in its generation of market intelligence. Therefore, the Retailer has remarkable sources of power at the network level. It has knowledge about the distribution channel, and has control over it, and therefore the other actors are dependent on it. These resources and capabilities are clearly sources of structural power for the retailer. The other actors in this value net considered the power position of the Retailer predominant, as both the Manufacturer and Supplier A stated: "*We are forced to sell our products to the Retailer because of its market power and position in the network*".

Supplier A, whose main organisational level sources of power are its manufacturing resources and capabilities, and product development capabilities, stated that "*We aim at keeping the delivery times, costs and quality on a very high level in order to increase our significance in the eyes of buyers*". Supplier A is a much smaller company than the Retailer or the Manufacturer, and as the Retailer stated: "*We do not see Supplier A as a possible partner for strategic collaboration because the company is too small. Our partners should have turnover that is high enough, they should be market leaders in their business area, and have strategic capabilities and competences that create unique value*". Supplier A's well known brand gives the Retailer some incentive to have a business relationship with it, but there are alternative suppliers and, especially with some of its basic products (e.g., flour and pasta), the Retailer has a very strong power position. Supplier A does not have any network level sources of structural power towards the Retailer.

The Manufacturer also has power over Supplier A. The volume of sales and purchases is not critical in defining their power relation because the Supplier's sales to the Manufacturer only represent approximately one percent of its turnover. It has competitors selling substitutive products to the Manufacturer, but it also has other buyers for its raw materials and products. Because of the switching costs the Manufacturer has some barriers in terms of changing supplier. The Manufacturer's role and position in the whole network is nevertheless more significant than the Supplier's role. In other words, it has resources, capabilities and competences that are more important to the value net and therefore, on the network level, the Manufacturer has more critical power sources than Supplier A (see Table 3). Supplier A has stated that "*We are not dependent on the Manufacturer, but it certainly would hurt us if our relationship would end*".

According to the Manufacturer, its brand and reputation in the eyes of the end customers are significant factors in determining its power position, and as stated by the Manufacturer "*We have a long history and our brand is well-known and highly respected*". It has active product development and unique recipes that are highly valued. Because the Manufacturer has a strong and well-known brand and indispensable products the Retailer is, on some level, forced to purchase end products from it. The Retailer does not have substitutive suppliers for all of the Manufacturer's products, and as the Manufacturer has stated "*If the Retailer wants to offer our popular brand products to the end customers, it is forced to purchase those from us*". The

Manufacturer, on the other hand, is forced to sell its products to the Retailer because of the Retailer's dominant role and position in the Finnish food market. According to the Manufacturer, "*We are dependent of the Retailer because if they do not buy from us we are not able to replace their buying volume*". Because of its long history and traditions the Manufacturer has indispensable knowledge about fresh ready-prepared food, and remarkable marketing and manufacturing capabilities and resources. These resources and capabilities are significant sources of structural power, and through them its power position in the value net is strengthened. Even if it is dependent on the Retailer, these sources of power are very relevant in relation to its suppliers (see Table 3).

Supplier B, with its extensive knowledge about packaging and packaging materials and its innovative product development, is not dependent on the Manufacturer. Its packaging solutions are important to the Manufacturer but not irreplaceable. The Manufacturer's purchases from Supplier B account for less than one per cent of its turnover. Nevertheless, the Manufacturer relies on Supplier B in that it purchases much more from it than from its competitors. The power relation between Supplier B and the Manufacturer is in balance because neither party has a highly dominant power source over the other. They have a collaborative relationship and according to Supplier B, "*We have a collaborative partnership relationship with the Manufacturer*", and as the Manufacturer put it, "*We have joint projects with Supplier B, in product development for example, because it's important to us that the Supplier's products are suitable for our needs*". Neither the Manufacturer nor the Supplier B has network level sources which would be critical in determining their power relation.

INSERT TABLE 3

Table 3 shows the power relations and sources of structural power in the case relationships. Supplier A and the Manufacturer are both dependent on the Retailer because of the Retailer's significant power sources at all the levels of analysis (network, relationship, organisation). The Manufacturer, on the other hand, has power over Supplier A mainly because of its role and position in the network and its network level sources determine their relationship. The relationship between the Manufacturer and Supplier B, on the other hand, is characterised by power balance and intensive collaboration.

5. Discussion

As a result of a theoretical study, a framework of structural power sources was presented in order to create a basis for the case study analysis. Most of the factors mentioned in the theoretical study were also evident in the case study. On the organisational level they included resources, capabilities and competences and their uniqueness and importance, the size of the firm, its economic base and expertise, and the technology owned. On the relationship level power was related to market power and buyer–supplier concentration, control of information, relationships with others and their significance, dependencies, types of products, brands, control of important technology, switching costs, investments and lock-ins, alternatives, sales and purchase volumes, as well as delivery times, costs and quality. Finally, on the network level the roles and positions of the actors were seen as important sources of structural power. In Table 4 the sources of power noticed from the theoretical and from the empirical case study are compared. Table shows how the sources described in previous studies were found in the case companies.

INSERT TABLE 4

It is worth noting that there were also some factors, such as negotiation skills and trust, which featured in the theoretical study but not in the case study. Moreover, it was found in the case study that having a well-known brand was a significant source of power, especially in the food industry. A firm’s brand was not similarly highlighted in the studies referred to in the theoretical framework. Only those conducted by Ramsay (1995), Ford et al. (1998), Cox et al. (2001a) and Cox (2001b) emphasised the meaning of the brand and the ability to build brands. In addition to the level of analysis, one partial reason for these differences between the theoretical and empirical findings could be the variety of industries and case companies used in the different studies. In this research the context of the empirical study was the food industry, and in particular the Finnish food industry, whereas the studies used in forming the theoretical framework covered a variety of industries that differed from each other and from the food industry.

For example, Doz and Hamel (1998) took several case companies from various industries, and Cox et al. (2001a) discussed the aerospace industry and analysed power relations mainly in terms of resources. Cendon and Jarvenpaa (2001) studied medical libraries and analysed sources of structural power in terms of resources, relationships, roles and positions. Furthermore, van Weele and Rozemeijer (1999) discussed types of products as a source of power, and their empirical study covered the manufacturing and supplier industries in the Netherlands. Caniëls and Gelderman (2005, 2007) identified types of products, expertise and resources as sources of power. Bates and Slack (1998) analysed power in several case companies from various industries (e.g., paper coating, menswear) in terms of company size, volume of purchases, switching costs, technology and expertise. In sum, none of the studies used in building the theoretical framework discussed sources of power in the context of the food industry.

However, the industry as a research context does not profoundly explain the differences between the studies. The main difference is the level of analysis which in this study was the network level. The network context turned out to be significant in that the sources of structural power that emanate from network effects and are related to other network participants beyond the dyadic relationship may crucially determine the power relation between two actors. This was evident in several relationships in the case study but the most significant role the network level sources had in the relationship between the Manufacturer and Supplier A where they crucially determined the power for the benefit of the Manufacturer. The findings support the insights of Stannack (1996), Cendon and Jarvenpaa (2001) and Zolkiewski (2001) who demanded for the research of power in networks. The organisational and relationship level sources constitute the building blocks of the sources on the network level, which were found to be the most crucial in defining the power relation. Moreover, those stemming from different levels influence each other and the organisational and relationship level sources reinforce those on the network level and thereby have a supportive function. Based on this it can be stated that the network context is important in the analysis of sources of structural power.

There are only a few studies in which the power relations and sources of power between a buyer and a supplier are discussed in the network context, and moreover in the food industry. This study therefore contributes to the research made in the field of supply management but it also contributes to research on value nets and the business of the food industries. This study has raised the question of the significance of the network context and the importance of network effects, and thus it is argued that more research in this field is still needed.

6. Conclusions

The purpose of this study was to determine the sources of structural power for the buyer and the supplier in value nets. The study adopted a structural perspective on power, the implication being that power stems from organisational structures and could thereby be called structural power due to its sources. Even if the sources of power in buyer–supplier relationships are discussed in earlier research in the field of purchasing and supply management, the perspective should be broadened from dyads to networks, and this was another main objective of the study.

The outcome of this study was the creation of a theoretical framework for the analysis of sources of structural power on the network, the relationship, and the organisational level. Whereas most previous studies on the phenomenon of power have concentrated on the analysis of dyadic relationships, this study has raised the question of network effects as also Stannack (1996), Cendon and Jarvenpaa (2001) and Zolkiewski (2001) demanded. The network context was found to be relevant in determining the sources of structural power for buyers and suppliers. Focusing purely on the relationship ignores the network effects, which may be the most crucial power determinants. Thus, this study contributes by extending the discussion on networks and value nets.

The empirical case study investigated a certain value net in the Finnish food industry. The findings indicate that buyers and suppliers have several sources of structural power in their value nets. The actors' power stems from their market power, their size, the volume of purchases and sales, the resources and capabilities owned, the types of products, and the number of alternative sources available, for example. The case Retailer had the most dominant power position due to its significant power sources, stemming from its market power, its size, the volume of its purchases, and its resources. It can be argued that its size, market power and role affected its volume of purchases. Because it is a large company which is in the role a retailer specialist, its volume of purchases is high and significant to its suppliers. Because of its role it also has the control of the distribution channel, which only strengthens its power position. The study showed that the Retailer has more significant power sources at all the levels of analysis (network, relationship, organisation) than the other case companies.

The Manufacturer also has some network-related advantages because its role and position in the value net determines its power relation compared to Supplier A, for example. It could therefore be argued that network level sources of power have key roles in value nets. Furthermore, the case study indicated that a well-known brand was found to be a significant source of power for the suppliers in this value net. For example, the Manufacturer and Supplier A utilised their well-known brands as power sources towards their buyers. The case study therefore indicates that a firm's brand and its significance as a source of power are outstanding, especially in this kind of industry, i.e. the food industry.

The study showed that the resources, competences and capabilities the actors own are paramount in determining their power positions, power relations and collaborative relationships: they are therefore significant sources of power. Moreover, they have critical roles in the value net because value is created from their unique combination. Hence, they are the key issue in value creation as well. It could therefore be argued that there is a link between value nets and power, and further research on this issue is needed.

7. Managerial implications

The results of this study have implications also for managers and practitioners, as it provides deeper understanding concerning the factors from which organisations' power stems from. In order to be able to analyse and manage buyer–supplier relationships and moreover, power relations, the background behind these relations needs to be understood. Thus, managers need to be aware of their power sources, their power relations and the strengths and weaknesses related to power. The sources from which power stems are concealed behind the power positions and relations, but are the most critical factors to be taken into account in attempts to develop relations or enhance the power position of the company. Attempts to change power relations should actually be attempts to change power sources because the sources define power relations and power positions. Analysis of the power sources is a prerequisite for the analysis of power positions and power relations.

From the perspective of supply managers, this is an issue worth studying given the need to understand the role of power as an influencing factor in the formation, development and maintenance of collaborative relationships between buyers and suppliers. Moreover, by enhancing the managers' knowledge about sources of power, this study helps companies in their supply strategy development. Different types of supplier relationships require different strategies. If managers are able to acknowledge the power sources behind the relations, they are able categorise their relationships and develop strategies on how to handle and manage different types of relations. Furthermore, in relationship development, managers can be aware of the factors which should be highlighted and which are the most crucial ones if their own power position requires development. Thus, the results of this study indicate the factors through which power relations can be changed and power position shifted. This also increases the ability to predict the future of the relationship because the balance between power sources may reveal to which direction to relationship is developing.

The results of the study are also applicable in the process of supplier selection. If the supply managers are aware of the sources of power in each relationship, they can use this knowledge when selecting supplier and deciding which from many alternatives is the most suitable one. If the sources of power are known, the most efficient option from the buyer's perspective can be chosen.

This study highlighted the meaning of the network perspective because the network effects may crucially determine the power relations and therefore, it is obvious that the managers should be able to view their relationships in the wider context. This enhances the managers' ability to determine their positions in relation to other companies and to develop their relationships in the networks. If the focus is only on the dyadic relationships, many of the power sources and moreover, the most crucial ones, i.e. those that are related to the network level, may not be identified and realised.

8. Limitations and suggestions for further research

In terms of generalisation, a couple of points are worth making. First, the single-case study does not aim at statistical generalisation. Instead, as confirmed by Stake (1995), for instance, the objective is to create a detailed view of the studied phenomenon, and the term particularisation should be used instead of generalisation. Secondly, Yin (2003) speaks about "analytic generalization," meaning that the developed theory is the level on which the generalisation of the case findings will occur. Single-case research such as this does not purport to produce findings that can be generalised in a statistical sense, but as Yin (2003) suggests, they will be valuable in an analytical sense if they clarify or extend understanding of the existing theory.

Further research should be directed especially towards power relations, sources of power and their influence on company performance: it would be interesting to conduct an extensive survey on the influence of sources of power in this respect. The relation between value net collaboration and the actors' power positions could also be studied more closely, specifically the influence of power on companies' willingness to form collaborative relationships should be studied. It would be interesting to find out whether power relations affect the willingness to collaborate, and if so, what kind of influence they have. It would also be interesting to investigate the value creation enabled by collaboration among the actors in the value net, and the role of capabilities in this. Finally, would be worth studying the role of collaboration and capabilities in value creation given the facilitating effect of collaboration and the combining of complementary capabilities.

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Figures:

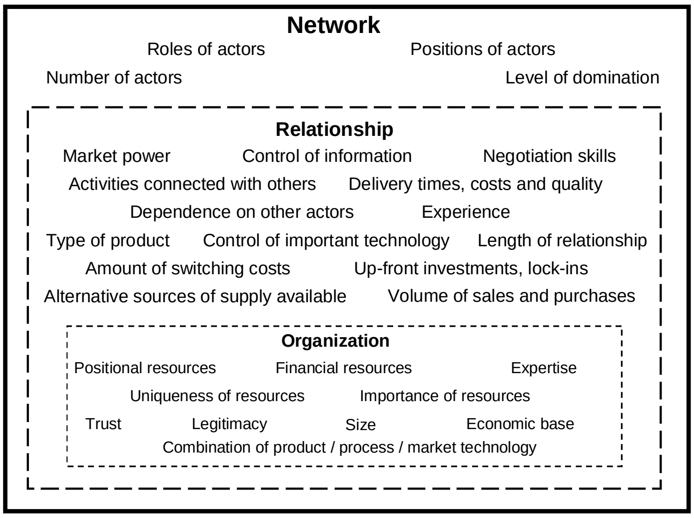

Figure 1. Sources of structural power on different levels of analysis

Tables:

Table 1. A review of the literature on sources of power

Author	Sources of power	Author	Sources of power
Bates and Slack (1998)	Size, Volume of sales and purchases, Key technologies Up-front investments, lock-ins	Johanson and Mattsson (1992)	Relationships, Network role, Resources
Caniëls and Gelderman (2005, 2007)	Type of product (item) Dependence between the actors	McDonald (1999)	Control of information and technology, Market power, Size, Volume of purchases and sales
Cendon and Jarvenpaa (2001)	Resources, Interconnections Organisational positions	Medcof (2001)	Resource importance, Alternatives, Discretion, Dependencies
Cox (1999)	Position, Resources	Mohr and Nevin (1990)	Control of information
Cox (2001a)	Share of the market, Number of alternatives, Dependencies, Lock-ins	Pfeffer (1981)	Dependence, Importance of resources, Alternatives, Skills Control of information, Position in network
Cox (2001b)	Economies of scale, Information, Brands, Switching costs, Network effects, Share of the market / revenue, Number of alternatives	Pfeffer and Salancik (1978)	Resource importance, Discretion over the resources, Control over the resources, Alternatives
Cox, Sanderson and Watson (2001a)	Resource dependency, utility Resource scarcity, i.e. Economies of scale, Information, Branding, Switching costs, Network effects	Porter (1985)	Buyer / Supplier concentration Switching costs, Substitute products, Type of product, Technology
Cox, Sanderson and Watson (2001b)	Number of alternatives	Ramsay (1995)	Interdependence, Resources, Capabilities, Volume of purchases and sales, Type of product, Brand, Market power
Doran, Thomas and Caldwell (2005)	Number of alternatives, Type of product, Importance of relationship	Ramsay (1996)	Resources, Switching costs, Alternatives, Type of product, Specific investments, Volume of sales and purchases
Doz and Hamel (1998)	Unique resources, competences Negotiation skills	Sanderson (2004)	Resource utility and scarcity, Volume of purchases and sales, Number of alternatives, Market power
Ford et al. (1998)	Financial and positional resources, Relationships, Technologies, Unique products, Brands, Market share	Stannack (1996)	Attribution = Size of the company (number of employees, turnover) Delivery times, costs, quality
Gadde et al. (2003)	Relationship	Svahn and Westerlund (2007)	Resources
Gelderman and van Weele (2004)	Importance of resources Substitutability of source, i.e. Alternative sources, Switching costs	Thorelli (1986)	Economic base, Technology, Expertise, Trust, Legitimacy, Market share, Size, Share of purchases, Importance of the product, Alternatives, Switching costs, Capabilities
Håkansson (1986)	Control of resources and activities	van Weele and Rozemeijer (1999)	Number of alternatives, Type of product

Table 2. Interviews conducted in the case companies

Case company	Number of interviews	Number of interviewees	Number of relationships	Company's role in the value net
Manufacturer	16	7	3	Buyer, Supplier
Retailer	6	4	2	Buyer
Supplier A	5	1	2	Supplier
Supplier B	2	1	1	Supplier
Total	*29*	*13*		

Table 3. Sources of power in the case power relationships

Relationship	Power situation	Buyer power sources	Supplier power sources
Manufacturer > Supplier A	Buyer dominance	Network position, network role Brand Control of information Resources, capabilities, competences Number of alternatives	Innovativeness, product development Delivery times, costs and quality Resources, capabilities, competences Number of alternatives
Retailer > Supplier A	Buyer dominance	Market power, size Control of the distribution channel Amount of purchases Knowledge about selection and customer preferences Network position, network role Resources, capabilities, competences Number of alternatives	Brand Innovativeness, product development Resources, capabilities, competences
Retailer > Manufacturer	Buyer dominance	Market power, size Control of the distribution channel Amount of purchases Knowledge about selection and customer preferences Network position, network role Resources, capabilities, competences	Resources, capabilities, competences Brand Knowledge about ready-prepared food Market and customer knowledge Product development Expertise
Manufacturer = Supplier B	Balanced power	Network position, network role Resources, capabilities, competences Activities connected with others Number of alternatives	Knowledge about packaging and packaging materials Product development, innovativeness High quality Resources, capabilities, competences Number of alternatives

Table 4. A comparison of sources of power between the theoretical and case studies

Source of power	Retailer	Manufacturer	Supplier A	Supplier B
Network level				
Positions	x	x		
Network role	x	x		
Other network effects	x	x		
Relationship level				
Volume of sales and purchases	x			
Market power	x			
Type of product		x	x	x
Delivery times, costs, quality			x	
Importance of relationship	x	x		x
Dependencies	x	x		
Information	x	x		
Investments, Lock-ins		x		
Relationships		x		
Alternatives and substitutes	x	x	x	x
Switching costs			x	x
Buyer /supplier concentration	x			
Organisation level				
Expertise, Special knowledge	x	x	x	x
Resources, capabilities, competences	x	x	x	x
Size	x			
Technology		x	x	x
Economic base	x			
Brands		x	x	

PUBLICATION 3

Ahtonen Anni-Kaisa (2008)

THE INFLUENCE OF POWER ON THE DEPTH OF COLLABORATION

Proceedings of the 24th IMP (Industrial Marketing and Purchasing) Conference,
4 – 6 September 2008, Uppsala, Sweden

A revised and further submitted version.

The influence of power on the depth of collaboration

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Abstract

The study analyzes the influence of power on the depth of collaboration by discussing the power relations and collaborative relationships between buyers and suppliers. Because companies develop new business models in which networking and value creation are in key roles, the issues of power and collaboration are combined with the value net approach in this research. The aim is to shed light on how power influences the depth of collaboration in this context. The results of a case study from the Finnish food industry indicate that the actors' power positions affect the forms of the relationships in the value net. It seems that power influences the depth of collaboration, which is minimal if the actors do not have balanced power positions. The findings also suggest that the role and position in the network may crucially determine the character of power relations if the actors are otherwise in balanced positions.

Keywords: power, collaboration, value net, food industry

Introduction

Companies are forced to find and develop new sources of competitive advantage because constant changes in technology and consumption, the increasing complexity of the business environment, globalization and increasing competition are redefining the characteristics of business relationships, concepts and strategic approaches (Möller, Rajala & Svahn, 2005; Parolini, 1999). The strategic approach is shifting from an enterprise-focused perspective to one that is extended to include value-creating systems and networks (Parolini, 1999). According to Achrol (1997), one of the fundamental shifts in the 21st century is from the dyadic perspective of inter-organizational exchange relationships towards a network perspective on value creation involving different types of network organizations. A critical issue for all types of networks is the capability to create value and the underlying system through which such value is produced (Möller & Rajala, 2007; Möller & Svahn, 2003). Each product or service requires a set of value-creating activities performed by a number of actors forming a value-creating system (Möller & Rajala, 2007). Möller and Rajala (2007) emphasized that through their buying and consuming activities customers define the value of the offer produced by the net. Furthermore, the ultimate test of value is how the end-customers perceive and evaluate the offerings that competing networks provide (Möller & Svahn, 2003).

The value net model was developed to facilitate the analysis, description and study of value-creating systems. According to Parolini (1999), the model takes activities rather than companies as the key elements of strategic analysis. Companies are thus regarded as complex nodes in complex interdependent value networks, and success comes through collaboration, cooperation, and creating a business environment in which each actor can be successful

(Allee, 2003). The actors in the net are connected to each other through different relationships. Some of these are intensive and trust-based, and information is shared openly. However, others are based more or less on the traditional arm's length relationship and therefore, cannot be called collaborative. There are various reasons why collaboration does not occur, but power imbalance may be one influencing factor. For example, Cox (2007) has stated that power is one of the major factors that determines outcomes in many business transactions and McDonald (1999) suggests that power within relationships can provide a serious obstacle to effective partnerships. The aim of this study is to analyze the influence of power on the character of buyer-supplier relationships. It therefore addresses the following research question: *How does power influence the depth of collaboration between a buyer and a supplier in the network context?* This is an issue worth studying given the need to understand the role of power as an influencing factor in the formation, development and maintenance of collaborative relationships between buyers and suppliers. Moreover, power exercised in a highly dominating manner may create an impossible environment for collaboration. This study also aims at emphasizing the importance of network context in studies concerning power and collaboration.

Power is socially embedded, and the transactions and relationships that are embedded in networks should therefore also be considered. According to Stannack (1996), the perspective adopted in studies in which power is analyzed in the context of interaction relationships between buyer and supplier is too limited in that it fails to explain multiple interactions. Zolkiewski (2001) also highlighted the importance of the network context, suggesting that power is the central force in network and thereby affects the struggle for control over resources, the dynamics of the net, and the tension between collaboration and competition. According to Cendon and Jarvenpaa (2001), the role of power in a network is evident in terms of its impact on the strategic choices, governance structures, relative dependence, resources, and activities performed. Thus, the issue of power is highly relevant to the discussion on networks. In order to analyze power relations in a sufficiently extensive context the network approach is adopted in this study, and buyers and suppliers are seen as network actors. In line with several other studies (Möller & Rajala, 2007; Möller et al., 2005; Svahn & Westerlund, 2007), it also adopts the industrial network (e.g. Håkansson, 1986; Håkansson & Johanson, 1992) and the strategic value net (e.g. Jarillo, 1998; Parolini, 1999) approaches by way of theoretical background. While the industrial network approach offers tools for the study of network structures by analyzing actors, resources and activities, the strategic value net approach focuses on the study of value-creating systems and value nets. The analysis of this study concentrates on power relations and collaboration from the value net perspective, and combines this approach with studies conducted in the field of supply management.

There is a tendency in many industries to move from fostering dyadic relationships towards forming networks in which the roles of customers and value creation are more significant. One example is the food industry, in which the traditional adversarial trading relationships are slowly being replaced by co-operation and co-ordination (Duffy & Fearne, 2004). The increasing demands have forced companies to develop their relationships further (Hingley, 2001; Olsen, Harmsen & Friis, 2008; van der Walk & Wynstra, 2005; Wilson, 1996), and it is clear that competition is increasingly taking place between networks rather than individual companies (Mikkola, 2008). Companies have been developing new business models in which customers and value creation are in key roles, and thus the traditional supply networks have begun to resemble value creating networks. So far the studies on value nets have mostly concentrated on the ICT (Information and Communication Technology) sector (Fjeldstad & Ketels, 2006), and there is a limited amount of research on the food industry, which is one of the biggest industries in the EU. In Finland, for example, the food sector has changed from a traditional agricultural industry with basic production procedures to a modern high-tech industry with fast-developing technology and business in general (Brännback & Wiklund, 2001). Given the increasing significance of technology and the use in food industry companies of these new and more competitive business models, there is a need to study value nets in this context as well.

The previous research related to this issue is discussed and the theoretical framework for the analysis of the case study is developed in the next section. A description of the research setting follows, and the method, data collection and analysis are explained. The results of the study are then presented, and illustrative examples given. The findings are discussed and conclusions drawn in the final section, and a summary of the managerial implications and suggestions for future research conclude the paper.

The influence of power on the depth of collaboration in value nets

A value net is a dynamic, flexible network in which the actors create value through collaboration (e.g. Allee, 2003; Bovet & Martha, 2000; Jarillo, 1998; Möller et al., 2005; Parolini, 1999). According to Ehret (2004), in a growing segment of the economy dynamic value networks constitute the context for the creation of value and the management of relationships more than traditional value chains. The reason for this is to do with the nature of the current business environment, which requires companies to form flexible networks in which competences and capabilities are combined through collaboration, and end customers play a central role. The traditional chain perspective, on the other hand, has been criticized (see e.g. Hines & Rich, 1997; Kothandaraman & Wilson, 2001; Parolini, 1999) for not considering the consumer's satisfaction the primary objective. Companies cannot concentrate exclusively on individual actors, however, and the focus should be on the value-creating system as a whole (e.g. Kothandaraman & Wilson, 2001). Therefore, according to the value net model, which has been extended from Porter's (1985) value chain model, economic activity is perceived not as a set of economic players who internally perform a set of activities, but rather as a set of activities that create value for final customers (Parolini, 1999). Unlike value chains and supply chains, value nets are future-oriented networks in which intangible assets play a crucial role (Allee, 2003). Of these, knowledge and innovation are important, but the issue of power is very significant as well because it may affect the nature of the relationship. According to Allee (2003), understanding the role of intangible assets is one of the most crucial business and economic questions. Moreover, intangible assets are dynamic rather than static, like physical assets. Given the focus in this study on the analysis of power, which is, moreover, a dynamic and intangible asset, the dynamic value net approach is more applicable than the traditional value chain perspective.

Lakemond, van Raaij and van Weele (2004) discuss the role of collaboration in value creation, and based their research on the assumption that value is created in a network and not just in one single company. Furthermore, they suggest that core competences are the key to delivering superior value. These assumptions are shared in this study. According to Möller et al. (2005), the existence of value nets rests partly on the idea that individual companies cannot internally master all relevant value activities, and it is not economically rational for them to do so. Furthermore, as Batt and Purchase (2004) state, firms do not operate in isolation and must seek to collaborate with other network actors in order to achieve their goals. Collaboration is the basis of networking, and by combining their resources, competences and capabilities the actors are able to create new competitive advantages and, moreover, unique value. However, a collaborative climate is not an obvious outcome of a value net relationship. The character of the relationship and the depth of the collaboration vary due to the different influencing factors. One major factor is power and, moreover, the actors' power positions in the network (see Cox, 2007; Cox et al., 2003; McDonald, 1999; van Weele & Rozemeijer, 1999)

The concept of power

Power is an essential characteristic of a social organization, and an inevitable instrument for inter-organizational coordination (Achrol, 1997). Power can be defined as *the ability to control* (El-Ansary & Stern, 1972), *the ability to evoke* (Gaski, 1984), *the ability of a firm to affect decision-making and/or behaviour* (Wilkinson, 1996), *the ability to manage the perceptions of the other party* (French & Raven, 1959), *the ability to impose one's will on others* (Blau, 1964), and *the ability to control one's own or another entity's range of intended or actual actions* (Stannack, 1996). It is defined in this study as *the ability to influence the decision-making and actions of the other party*. This definition is used because it fits in with the structural perspective of power, which is the research approach of this study.

The many facets of power make the concept very broad, and hard to capture and concretize. Various distinctions have been made, such as between structural and behavioral power, power sources and uses, and the macro and micro perspectives. The behavioral (i.e. micro) perspective focuses on individual actions and the exercise of power, whereas the structural (i.e. macro) perspective focuses on its sources, which are the factors that enable one party to acquire power and possess it (Cendon & Jarvenpaa, 2001). According to Cendon and Jarvenpaa (2001), from the structural perspective power is derived not from the actions of people but from organizational structures, which include resources, interconnections among actors and organizational positions. Even though power in this study refers to the ability to influence the actions of another party, the actions of people or organizations are not considered its sources. Power is rather analyzed in terms of network structures and network positions, and hence, the research approach is the *structural perspective*. Resource-dependency theory (Medcof, 2001; Pfeffer & Salancik, 1978) and the resource-based view (Barney, 1991; Penrose, 1959; Peteraf, 1993; Teece et al., 1997; Wernerfelt, 1984) therefore form the theoretical background.

Resource-dependency theory (RDT) is useful in terms of understanding organizational power in the management of internationally dispersed technological units (Medcof, 2001). According to Medcof (2001), the power of an organization depends upon the resource-dependency relationships it has with other organizations. This network-related analysis of power is also supported in the resource-based view (RBV) of the firm, which is a theoretical perspective focused on describing, explaining and predicting how firms can achieve sustainable competitive advantage through the acquisition of and control over resources (Rungtusanatham et al., 2003). The basic premise is that competitive advantage comes from having resources that create value and are unique (Medcof, 2001). In this study, the resources are viewed from the RBV perspective (see Amit & Zott, 2001; Medcof, 2001) and resources are considered crucial in value creation. As mentioned above, Lakemond et al. (2004) assume that value is created in a network and not by one single company, and core competences are the key in value creation. These assumptions are shared in this study, as is the notion that value is created through the combining of the unique resources of network actors.

Power positions and relationships in value nets

Various authors have studied sources of power in buyer-supplier relationships and networks (e.g. Bates & Slack, 1998; Cox, Sanderson & Watson, 2001; Doz & Hamel, 1998; Porter, 1985; Ramsay, 1996; Stannack, 1996; Thorelli, 1986). Among the various sources the resources, competences and capabilities of the actors are considered essential in several studies (e.g. Cendon & Jarvenpaa, 2001; Cox, 1999; Cox et al., 2001; Doz & Hamel, 1998; Medcof, 2001; Ramsay, 1996). Furthermore, according to Möller and Svahn (2003), an actor that commands resources through which it can carry out activities that are valuable, rare, inimitable and non-substitutable holds a very strong power position in a net. Hence, it could be argued that the resources, competences and capabilities define the roles of the actors in the value net, and have an influence on their power positions.

According to Wilkinson and Young (2002), a firm's network position refers to its role and how it is linked directly and indirectly to the other firms in the network. Gadde, Huemer and Håkansson (2003) further suggest that the potential to influence others is a function of the company's network position, and is defined in terms of the characteristics of its relationships. In the view of Johanson and Mattsson (1992), the relationships between them define the positions of the actors in the network, and the firm's position depends on the nature of its direct and indirect relationships with the other actors: thus the concept of network position facilitates understanding of how an individual actor is related to, or rather embedded in the environment. Håkansson (1986), in turn, posits that the role of the actors depends on the activities they perform or control, the resources they manage, and the knowledge they have about the activities, resources and other actors in the network, all of which define their network positions. The power position in a network is defined in this study, in accordance with the above, as *a combination of the role the actor has in a network and the relationships it has with the other network actors*. This definition supports the assumptions behind the structural perspective of power as well as the resource-dependency and the resource-based view. Given its capacity to define the positions of all the actors, the concept can be used to characterize the network structure and the distance between them (Johanson & Mattsson, 1992).

The power positions of network actors change all the time, not only because new relationships are developed, old ones interrupted and others change in character, but also because the other actors' positions change (Johanson & Mattsson, 1992). Firms are the product of their relationships as much as of their network positions, as these are the results of their own strategic actions and intentions (Håkansson & Ford, 2002). They do not survive and prosper solely on the basis of their own individual efforts, as each one's performance depends on the activities and performance of others and hence on the nature and quality of the relations it develops with these counterparts (Wilkinson & Young, 2002). As the network is a set of connected relationships between firms (Håkansson & Johanson, 1992), its effects will flow through the various relations the focal firm has established with other connected actors (Batt & Purchase, 2004). Collaboration within one relationship will affect relationships with other closely connected actors, making the whole process and its outcomes contingent upon the goals of the network rather than the dyad (Batt & Purchase, 2004). Relationships between network actors represent valuable bridges in that they give one actor access to the resources of another (Harland, 1996). Given that networks potentially provide the firm with access to information, resources, markets and technologies, relationship building may be not only the firm's most important resource, but also its source of sustainable competitive advantage (Batt & Purchase, 2004).

Reciprocity and reliance on other actors make it essential for collaborating firms both to give resources to the network and to take resources from it (Batt & Purchase, 2004). According to Gadde et al. (2003), a significant part of a company's total resource base is located beyond its ownership boundary and is controlled bilaterally with other firms. Therefore, its resources are tied to the resources of other firms. Companies involved in close relationships try to combine their resources systematically: any resource can be used and combined with others in many different ways because it has multiple features. According to Gadde et al. (2003), there are good reasons for a company to be deeply involved with its counterparts. In order to maximize its utilisation of the resources of another firm it needs to develop a relationship that is extensive in terms of breadth and depth.

The influence of actors' power on collaboration

Several authors (e.g. Caniëls & Gelderman, 2005 and 2007; Dubois & Pedersen, 2002; Gelderman & van Weele, 2002; Olsen & Ellram, 1997; van Weele & Rozemeijer, 1999) have studied collaborative relationships and/or power relations in the context of the purchasing portfolio (e.g. Kraljic's purchasing portfolio) in which relationship and strategy are analyzed by using profit impact and supply risk as an indicators. Dubois and Pedersen (2002) and Gelderman and van Weele (2005), however, have criticized such models, and according to the former there is a difference between the network and the portfolio approach in terms of understanding and modelling buyer-supplier relationships: from the network perspective relationships are not isolated dyads and thus their impact is always related to other relationships. Given its value net approach this criticism applies in this study, and portfolio models cannot be utilized as such.

As Batt and Purchase (2004) state, the network structure and position affect how collaboration will occur and which actors will be involved. According to van Weele and Rozemeijer (1999), partnerships can only grow when there is a certain balance of power between the parties. Furthermore, value net actors form collaborative relationships with actors who have complementary capabilities and resources through which the use of their own capabilities can be improved (e.g. Ford et al., 1998; Gadde et al., 2003; Håkansson & Johanson, 1992). As Figure 1 shows, these capabilities define the actor's role in the value net (e.g. Håkansson, 1986; Lilliecreutz, 1998). Moreover, capabilities and resources determine the power positions (e.g. Möller & Svahn, 2003; Svahn & Westerlund, 2007) in that they are considered essential sources of power (e.g. Cendon & Jarvenpaa, 2001; Cox, 1999; Cox et al., 2001; Doz & Hamel, 1998; Medcof, 2001; Ramsay, 1996). The relationships between the actors also have an influence on the power positions in the network (e.g. Ford et al., 1998; Gadde et al., 2003; Johnson & Mattson, 1992; Lilliecreutz, 1998; Wilkinson & Young, 2002), which in turn determine the character and especially the depth of the relationships (e.g. Batt & Purchase, 2004; van Weele & Rozemeijer, 1999). The theoretical framework (see Figure 1) used in this study is based on the above statements and previous research.

INSERT FIGURE 1

According to van Weele and Rozemeijer (1999), attempts to forge partnership relationships often fail due to a lack of understanding of the power positions of the parties involved. If the actors are unequal in power they may not have the incentive to commit to collaboration, and the one who has the dominant power position may not be willing to form an intensive collaborative relationship with another party (e.g. Batt & Purchase, 2004; van Weele & Rozemeijer, 1999). Rather than sharing information openly, for example, such actors might keep it to themselves because of the fear of losing power (e.g. Croom, Romano & Giannakis, 2000). Therefore, it could be argued that the power positions of the actors strongly affect the character and depth of the relationship (see Figure 1). Relationships are the building blocks of networks, and the value creation ability of the value net depends on their character. According to Anderson and Narus (1999), cooperative buyer-seller relationships can be a source of value creation. If the relationships are collaborative the value net is more likely to create value for its actors and the end customers.

Research setting and methodology

The case study concerns the power relations and collaborative relationships between buyers and suppliers in a certain value net in the Finnish food industry. The net comprises several actors, and the four main ones were selected as the case companies: a manufacturer, two supplier companies and a retailer. The case value net ranges from raw materials and packaging all the way to end customers through grocery stores. These four companies were selected because they represent different nodes of a certain value net, they are all significant actors in the Finnish food industry, and analyzing them will produce a complete picture of the net in question. Furthermore, they have different roles, power positions and relationships in this net, which is relevant to the research aim of the study.

Research method and data collection

The case method was used to study the phenomenon of buyer-supplier relationship in the value net context. The study is thus an embedded single-case study with multiple units of analysis. According to Dubois and Araujo (2007), it could be argued that a single-case design with multiple embedded units of analysis strengthens the study. The main argument in favour of the method (Yin, 2003) here is that the research problem is complex in nature because it includes many variables and concepts that are not easily grasped in a quantitative study. Furthermore, because the empirical research context is a contemporary event there are multiple sources of evidence, including interviews, introductory and informative sessions in the case companies, and company-specific documentation. According to Miles and Huberman (1994), flexibility, richness, holism, causality assessment, the possibility of locating meanings and the natural setting are some of the advantages of qualitative research. The case study method was chosen in order to exploit these advantages, and because of the nature of the research topic and context. Given the purpose of the study to achieve a deeper understanding of the nature of collaboration and power positions, it was considered the most appropriate option. Single-case research such as this does not purport to produce findings that can be generalized in a statistical sense, but as Yin (2003) suggests, the findings will be valuable in an analytical sense if they clarify or extend understanding of the existing theory.

Yin (2003) suggests that multiple sources of evidence should be used to establish construct validity and reliability, and according to Dubois and Araujo (2007), the use of multiple respondents makes it possible to capture a variety of perceptions and meanings, which is vital to the understanding of complex business relationships. Furthermore, having numerous and highly knowledgeable informants who view the focal phenomena from diverse perspectives should limit interview bias (Eisenhardt & Graebner, 2007). Therefore, several research informants and data from different sources (data triangulation), as well as investigator triangulation were used. The study comprises 29 individual semi-structured interviews conducted with the case companies' personnel (see Table 1). Data on sales and purchases was used in combination with the interview data. The research informants were selected and interviewed on the basis of their active involvement in buyer-supplier relationships, supply management, marketing and selling. The interviewees from the buyer companies mostly represented the purchasing and supply management side (e.g. purchasing directors, supply managers, buyers), whereas those in marketing and selling (e.g. marketing director, customer director, sales manager) represented companies in the supplier role. In order to obtain additional information and complementary perspectives interviews were conducted with informants from other company levels and in other positions (e.g. CEOs, commercial directors, quality manager). The interview information is presented in Table 1.

INSERT TABLE 1

The number of interviews in the manufacturer company was higher than in the other case companies because the manufacturer is the focal company of this value net, it is both in the buyer and supplier role, and is involved in several relationships. Hence, the point at which new interviews did not provide new evidence (i.e. saturation point) was reached with a smaller number of interviews in the other case companies. In fact, the saturation point was used in deciding the sufficiency of interviews. The interviewees reviewed the case reports, which Yin (2003) claims increases the validity of the study and, according to Hirschman (1986), can be used to determine its credibility.

Given the approach of this study, the structural perspective on power was also adopted in the interviews, and hence the interview questions concerned issues on the organizational (i.e. how the organization works) rather than the individual (i.e. individual behaviour) level (see Yin, 2003). The questions covered the roles and capabilities of the firms, their power positions and sources of power, relationships, information sharing, and the characteristics of the Finnish food industry. Notes were taken and the interviews were audio-recorded. The recordings were transcribed literally, producing 375 pages of data. The resulting qualitative data was coded based on 11 interview themes, and subjected to classification and qualitative content analysis. The themes were taken as the basis of the colour coding and classification because it was a logical, systematic and reliable way of doing it and the chain of evidence was ensured. The researcher did the coding and analysis manually. According to Yin (2003), the reliability of the study can be increased by using a case study protocol and by developing a database, and this advice was followed. Finally, the data was compared with the theoretical study and interfaces were sought.

The case companies

The manufacturer company is one of Finland's leading food manufacturers and a market leader in many of its operational areas. Its product categories include many kinds of ready-prepared foods and different meat products. Its main market area is Finland and a considerable proportion of its raw materials come from Finnish suppliers. Supplier A supplies both the manufacturer and the retailer. The manufacturer purchases both basic and customized raw materials, and the retailer purchases end products from it. Supplier A, which is the market leader in pasta products in Finland, also sells and manufactures flour, flakes and deep-frozen pastry, for example. Supplier B, on the other hand, has indispensable know-how in food packaging, and supplies packaging materials to the manufacturer. It offers and manufactures different kinds of packaging solutions for its customers. The retailer, which is in the role of a customer company in this value net, is the biggest case company in terms of turnover and the number of employees. There are only four main retail specialists in Finland, and the case retailer is one of them. In practice it has only one major domestic competitor because the other two specialists are much smaller. Its stores form the most comprehensive store network in Finland.

Suppliers A and B are always in the role of supplier in the case value net. The retailer, on the other hand, is always in the role of buyer: it only has a supplier role when it sells end products to its end customers. The manufacturer, however, has the roles of both buyer and supplier. It is a buyer when it purchases raw materials and packaging materials from suppliers A and B, and a supplier when it sells its end products to the retailer. These roles are defined on the basis of their exchange relationships to each other (see Figure 2). It should be noted, however, that suppliers A and B do not currently have an exchange relationship and they are not competitors. Furthermore, Supplier B does not have an exchange relationship with the retailer because it does not supply it with anything directly; it only supplies to the manufacturer, which supplies to the retailer.

INSERT FIGURE 2

As illustrated in Figure 2, the case companies have different competences and capabilities, which are complementary. They offer the core competences and capabilities that are relevant to this value net, and utilize the capabilities of the other actors. Unique value is created through these complementary competences, resources and capabilities when they are combined to create the output of the network.

The research context

The Finnish food industry has been subject to massive transformation driven by changes in the business environment as well as by technological advancement. From having been fairly protected and isolated it is currently facing the challenges of globalization and increased competition (Brännback & Wiklund, 2001). The Finnish food culture is unique, and Finns prefer domestic rather than foreign products and raw materials: 85 per cent of the raw material is domestic, and the market share of Finnish food products in Finland is 81 per cent (Finnish Food and Drink Industries' Federation, 2008). This in itself is challenging for the companies concerned. The Finnish grocery retail market is centralized and there are only a few retail specialists, which are noticeably dominant with their significant buying volumes. The combined market share of the three biggest grocery retail firms in Finland in 2008 was approximately 87 per cent (ACNielsen, 2009). This same phenomenon has been noted in many studies, as has the high level of retailer concentration and the dominance of the food industry in several countries (Collins & Burt, 1999; Hingley, 2001 and 2005; Kottila & Rönni, 2008; Kumar, 2005; Ogbonna & Wilkinson, 1996; Robson and Rawnsley, 2001).

In addition to facing common challenges such as corporate mergers and demands for increased efficiency (e.g. Olsen et al., 2008), the food industry also has several specific features that impose special demands on the business. Product development and innovativeness are required because customer preferences are constantly changing and customers are becoming more demanding. The importance of the customer perspective as well as comprehensive flexibility and the ability to adjust to rapid changes are prerequisites for success in the industry. Few food companies are able to meet these increased demands by themselves, and external resources are therefore necessary (van der Valk & Wynstra, 2005).

These companies are therefore forming collaborative relationships and, moreover, flexible networks that are able to satisfy the increasing demands. Given the demands and characteristics, these networks are developing into value nets. The value net model places more emphasis on the role of customers than the value chain model, which makes it more applicable to the food industry. The case network in this study is characterized by several issues that are typical of a value net. The network is agile and end customers are in the central role and thus it is capable of reacting rapidly to changes. Furthermore, the actors are constantly developing their processes, activities and relationships. The role of intangible assets such as knowledge and innovations is significant because the actors are creating new value activities. Therefore, this value net in the Finnish food industry offers an interesting research context.

Results from the Finnish food industry

The power position of the retailer is very significant in this value net. Its power mainly stems from its market power but it is also much bigger than the other case companies and it has remarkable buying volumes. Its turnover is ten times higher than that of the manufacturer, and a hundred times higher than that of Supplier A. The amount of the retailer's purchases from the manufacturer and Supplier A are significant from the supplier's perspective, but minor from the retailer's viewpoint. The retailer's purchases from the manufacturer are only a few per cent of the retailer's turnover, whereas the manufacturer's sales to the retailer represent one quarter of the manufacturer's turnover. Furthermore, the retailer's purchases from Supplier A represent less than one per cent of the retailer's turnover, whereas Supplier A's sales to the retailer represent one fifth of its turnover. Table 2 shows the retailer's power relations with the manufacturer and Supplier A: the retailer is in the buyer role in these relationships. It also shows the retailer's as well as the supplier's sources of power.

INSERT TABLE 2

The relationship between the retailer and the manufacturer has a long history and they both see each other as important partners. In fact, both of them have categorized their relationship as a strategic partnership. The retailer has stated that "*We have a relationship with a long history and a high level of commitment with the Manufacturer, and we have had this collaborative relationship for years.*" However, trust-based collaboration, open information sharing and joint development are still quite shallow in nature, mainly because of the power imbalance. According to the manufacturer, "*The retailer is reluctant to share its market knowledge*", and hence it uses its information to increase its power. The retailer does not have a substitutive supplier for all of the manufacturer's indispensable products. The manufacturer, on the other hand, is forced to sell its products to the retailer because of the retailer's network role and position, which are significant sources of power. As the manufacturer admitted, "*We are dependent on the retailer*". The manufacturer is more willing to develop the relationship, but the retailer is quite satisfied with the current situation. The retailer wants to keep its dominant power position, and therefore the power imbalance between these actors prevents deeper collaboration. However, they are collaborating at some level because the retailer as a dominant actor is willing to do so.

Collaboration is also lacking in the relationship between the retailer and Supplier A (see Table 2), which largely represents a pure arm's length relationship based on a competitive strategy. According to Supplier A, "*The retailer uses its power in the negotiations, and the information* *exchanged mostly concerns only price issues"*. The only significant source of power that supplier A has over the retailer is its well-known brand. However, the retailer has some alternative suppliers and, especially with some of the basic products, it has superior power over Supplier A. The retailer wants to maintain its predominant power position: *"We do not see supplier A as a possible partner for strategic collaboration because the company is too small. Our partners should have turnover that is high enough, they should be market leaders in their business area, and have strategic capabilities and competences that create unique value"*. Because of the retailer's dominant power position there is no collaboration between them.

The power relations between the manufacturer and its supplier cannot be defined so distinctly. The manufacturer is the gatekeeper of the information flow between the suppliers and the retailer. The retailer distributes some information to the manufacturer, concerning consumers' buying behaviour for example, but the manufacturer does not share it any further: it merely increases its market knowledge by keeping the information to itself, and admits that "*Knowledge is power*". Thus, Supplier A in particular is somewhat dependent on the manufacturer's consumer knowledge (see Table 3).

INSERT TABLE 3

The relationship between the manufacturer and Supplier A has some collaborative characteristics, and the manufacturer is not in such a predominant power position as the retailer. The amounts of purchases and sales between them are not quantitatively significant in terms of their turnover, and therefore, Supplier A is not highly dependent on the manufacturer's purchases. However, the manufacturer has some level of power over the supplier in that there are not so many manufacturers of ready-made meals but several suppliers of the necessary raw materials (see Table 3). According to Supplier A, "*The manufacturer is not very willing to allow us to be part of its product development. It limits the information it shares, and is reluctant to share any other information than is necessary for transactions*". Supplier A continued, "*We would like to have more intensive collaboration*". The manufacturer, on the other hand, acknowledged that, "*Supplier A thinks that we are not committed to the relationship*". The fear was that the supplier would reveal the information obtained to its other buyers, which could be competitors of the manufacturer. This is why the manufacturer limits the information sharing, and obviously uses its knowledge as a source of power thereby preventing deeper collaboration. However, on some level the manufacturer is willing to collaborate with the supplier because its ingredients are significant to its products and it could achieve benefits through collaboration. According to the manufacturer, "*The relationship with Supplier A could be developed further because there are good basis for collaboration. Both companies have flexible structures and the relationship has a long history*". Furthermore, the manufacturer does not have superior power over the supplier, which increases its willingness to collaborate. The only strategically important difference between their power sources is the manufacturer's role and position in the case value net, which gives it a slightly better power position.

INSERT TABLE 4

As Table 4 shows, the manufacturer and Supplier B are in balanced power positions. The manufacturer's purchases from this supplier represent less than one per cent of its turnover, nevertheless it considers the supplier important because it purchases considerably more from it than from its competitors. The manufacturer has alternative suppliers and Supplier B has alternative buyers, thus the actors are not dependent on each other. The relationship is nevertheless significant for both of them. According to Supplier B, "*We have a collaborative partnership relationship with the manufacturer and we have joint projects in product development*", and as the manufacturer put it, "*We have joint projects with supplier B, in product development for example, because it is important to us that the supplier's products are suitable for our needs*". Therefore, as the manufacturer stated, "*Price is not a primary issue when making contracts with suppliers offering the materials in question*". Because they do not have network-related power advantages and their power positions are in balance, they do not have the opportunity to dominate and hence they have a good basis for collaboration. Moreover, they are willing to collaborate because the relationship is significant for both of them. This relationship could thus be described as true collaboration.

Figure 3 summarizes the case situation. The actors who are in the buyer roles are in dominating power positions in the value net. The only relationship in which the buyer and the supplier are in balanced power positions (=) is that between Supplier B (S^B) and the manufacturer (M). As mentioned earlier, the manufacturer has some level of power over Supplier A (S^A), and this relationship is characterized by buyer dominance (>). Buyer dominance is also evident in the relationships between the retailer (R) and the manufacturer, and the retailer and Supplier A. It seems that power increases as the distance from the end-markets decreases, and the closer the firm is to the consumers, the more power it has. It could be concluded that the buyers in the case value net had power over their suppliers, and more or less dominated them.

INSERT FIGURE 3

The findings show that when the actors are not equal there are implications with regard to the collaboration. The actors in the case value net were willing to form collaborative relationships when they were in the supplier role, but far less willing when they were in the role of the buyer. This is clearly evident in the case of the manufacturer, whose willingness to collaborate is dependent on its role and power position.

Discussion

This study concerned power relations and collaboration in the value net context, the purpose being to analyze how power influences the depth of collaboration between a buyer and a supplier. The theoretical basis was built on the industrial network approach, the strategic value net approach, the resource-dependency theory and the resource-based view resulting in a framework that incorporates the relations between some of the value net components (e.g. the actors' roles, capabilities, power positions and collaboration). The purpose of the theoretical framework was to create a basis for the case analysis of power relations and collaboration in the Finnish food industry value net.

As well as in several other studies from several case countries, also this case study indicated that the retailer is a dominant actor in the Finnish food industry. The effects of this dominance on collaboration were evident because the retailer of the case study was very critical and deliberate when selecting possible partners for a collaborative relationship. According to Duffy and Fearne (2004), collaboration between retailers and their suppliers will not occur if the powerful retailers do not share information on matters such as consumer demand. However, companies should aim at intensive collaboration as stated also by Whipple, Lynch and Nyaga (2009) who found that collaborative relationships offer significantly higher level of performance than transactional relationships. Bloom and Perry (2001) found similar results when studying the supplier's financial performance in the context where the relationship with a powerful retailer was collaborative rather than transactional. Hence, it is obvious that also in the food industry the actors should aim at collaboration in order to obtain benefits for themselves and for the whole network.

When the findings from the empirical study were analyzed and compared to the results of the theoretical study, similarities were found. The findings from the literature were echoed in the empirical study. For example, it has been reported that the resources, competences and capabilities that firms own are essential sources of power for them (see e.g. Cendon & Jarvenpaa, 2001; Cox, 1999; Cox et al., 2001; Doz & Hamel, 1998; Medcof, 2001; Ramsay, 1996). Similarly, according to the case study analysis these very same assets are essential sources of power for the actors involved who, furthermore, have different power positions based on the different sources.

There is also evidence in the literature that firms need to develop relationships in terms of breadth and depth in order to make the best use of the resources of another firm (e.g. Gadde et al., 2003). It could thus be concluded that actors form collaborative relationships with other actors who have complementary capabilities and resources through which they can optimize the efficiency and utilization of their own capabilities. These capabilities define the actor's role in the value net (e.g. Håkansson, 1986; Lilliecreutz, 1998), whereas the capabilities and roles determine the background of the relationships (e.g. Ford et al., 1998; Gadde et al., 2003; Håkansson & Johanson, 1992). The exchange relationships between the actors have an influence on the actors' power positions in the network (e.g. Ford et al., 1998; Gadde et al., 2003; Johnson & Mattson, 1992; Lilliecreutz, 1998; Wilkinson & Young, 2002). Thus the study took part to the discussion on firm resources, competences and capabilities, and in line with previous research (e.g. Amit & Zott, 2001; Barney, 1991; Lakemond et al., 2004; Medcof, 2001) showed the multidimensional meaning of those.

However, previous studies have shown that collaborative relationships can only grow when there is a certain balance of power between the actors of the relationship (van Weele & Rozemeijer, 1999). In this study it was found that the depth of collaboration is affected by the actors' power positions. The findings support the notions of McDonald (1999), van Weele and Rozemeijer (1999), Cox (2007) and Cox et al. (2003) who argue that power has an effect on the nature of relationships.

Conclusions and implications

In terms of this research, the main focus was on the interrelationship between the actors' power positions or power relations and the depth of collaboration between them, especially in the network context. The aim was to find an answer to the research question: *How does power influence the depth of collaboration between a buyer and a supplier in the network context?*. It can be concluded from the theoretical and empirical research that the depth of collaboration is highly affected by the actors' power positions in the network. Power imbalance may prevent intensive collaboration, and the actor in a dominant power position may not be willing to form collaborative relationships with other actors. On the contrary, powerful actors may be eager to sustain their power positions and therefore avoid intensive collaboration. This phenomenon was evident in the case study in the relationships between the retailer and the manufacturer, and between the retailer and Supplier A. The power situation had some impact on the depth of collaboration between the manufacturer and Supplier A, and in this case a slight imbalance to the benefit of the manufacturer decreased its willingness to collaborate. In situations in which the power is balanced, however, the actors have the incentive to collaborate and are willing to form collaborative relationships. Because they cannot dominate the other actor, power is not a key issue, and the existing power balance rather facilitates and increases collaboration. The relationship between the manufacturer and Supplier B supported this. These implications can be justified on the basis of the theoretical research and the evidence of the empirical study.

The results of the case study also indicate that the actors' roles in the network may crucially affect their power relations. The critical factor in the relationship between the manufacturer and Supplier A was the manufacturer's network role and position, which were based on the fact that Supplier A was just a raw-material supplier whereas the manufacturer had the resources and capabilities for manufacturing the end products. This was also a crucial factor for the retailer, whose superior power was based mainly on its network role and position. The closeness of the end customers was evident here: it thus seems that power increases as the distance from the end markets decreases, and the closer the firm is to the consumers the more power it has. This could also be demonstrated through the actors' roles in that buyers who are closer to end customers are less willing to form collaborative relationships with suppliers, but when they are in the role of a supplier their willingness to commit to collaboration increases.

Hence, it could be argued that actor's role and position in the network may crucially determine the character of the power relation if the positions would otherwise be balanced. Moreover, this emphasizes the importance of network perspective by explaining why power and collaboration should be analyzed in the network context rather than in the context of dyadic relationships between buyer and supplier. Pure relationship perspective ignores the network effects which may however, even be the most crucial power determinant.

It should be pointed out that power is only one factor that influences the depth of buyer-supplier collaboration, and there may be other influencing factors as well. However, the aim of this study was to analyze how power influences the depth of collaboration in networks, and the focus was therefore on its impact on buyer-supplier relationships in value nets. To the author's knowledge there are no existing studies in which power relations and collaboration are combined and discussed from the value net perspective. Whereas most previous studies on the phenomenon of power have concentrated on the analysis of dyadic relationships, this study has raised the question of network context as also Stannack (1996), Cendon and Jarvenpaa (2001) and Zolkiewski (2001) demanded. Hence, this study aimed at emphasizing the importance of network approach in the studies concerning power. Furthermore, these issues are rarely examined in the context of the food industry. This study therefore contributes to research conducted in the field of supply management, to the literature on value nets, and to the research concerning power relations and the business of the food industry. Moreover, the study contributes to research concerning buyer-supplier relationships by discussing and showing evidence of the importance of network context for the analysis of power and collaboration.

The results of this study have implications also for managers and practitioners, as it provides deeper understanding of how power influences collaboration and moreover, how the wider network perspective may crucially determine the power relations. It is argued that companies' roles and position in the network or value net are critical especially if the actors' power positions are otherwise in balance. Therefore, it is obvious that the managers should be able to view their relationships in the wider context. It is important for managers to be aware of their power sources and strengths and weaknesses. Managers should also acknowledge the effects of power on the nature of their relationships and, moreover, on the depth of collaboration. This enhances their ability to determine their positions in relation to other companies and to develop relationships offering opportunities for deeper collaboration. If collaboration is lacking, it may be due to power imbalance between the organizations, and it is important to acknowledge this. Collaboration requires certain conditions, and power imbalance partially prevents collaboration.

Limitations and suggestions for further research

In terms of generalization, a couple of issues should be mentioned. Like most qualitative studies, this one is an in-depth analysis of a single phenomenon in a specific situational context, and the findings cannot be generalized as such. As Stake (1995), for instance, states, the objective of the case study is to create a detailed view of the studied phenomenon. Single-case research such as this does not purport to produce findings that can be generalized in a statistical sense, but as Yin (2003) suggests, they will be valuable in an analytical sense if they clarify or extend understanding of the existing theory.

Because power relations and collaboration in the context of networks and value creating nets are rarely examined from the perspective of strategic supply management, there are still many research gaps in this area. Firstly, further research should be directed especially towards value creation and collaboration in value nets. It would be interesting to study the value creation emanating from collaboration between buyers and suppliers, and the role of resources and capabilities in value creation. The role of collaboration and capabilities should also be studied, because efficient value creation is facilitated through collaboration and by combining the actors' complementary capabilities. Secondly, there is a need for comparable studies of power relations and value nets in other fields: it would be useful to find out whether power relations have the same dynamics in other industries. One approach would be to use quantitative research methods, and it would therefore be interesting to conduct an extensive survey on power and collaboration in the network context.

Finally, even if the changing and expanding role of purchasing and supply management is widely recognized by many academic researchers, the role of strategic supply management has not been widely discussed in the context of value creation. It has been noted that strategically managed purchasing can become a value-added resource for the firm (see e.g. Ellram & Carr, 1994), and that value is an increasingly relevant concept from the perspective of supply management (see Lindgreen & Wynstra, 2005). Therefore, value creation in networks should be examined more closely, especially from the perspective of strategic supply management. Moreover, value creation should be connected in further academic research to studies on supply strategy and to questions of how (i) value creation enabled by collaboration and (ii) the roles of capabilities and power should be taken into account in the firms' strategic supply management.

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Figures:

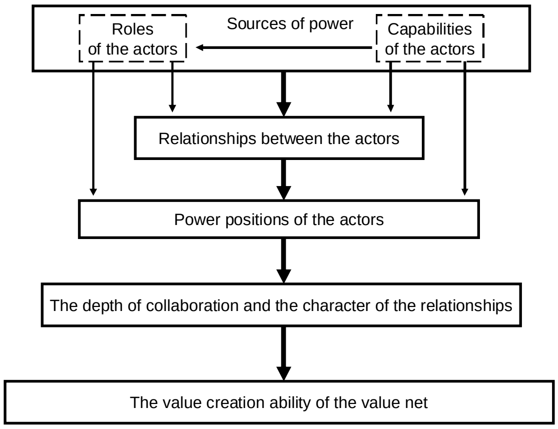

Figure 1. Power as a determinant of value net collaboration.

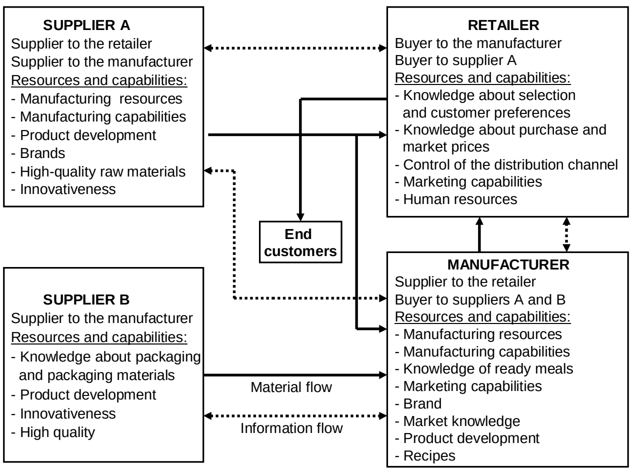

Figure 2. The actors, their resources, capabilities and relationships.

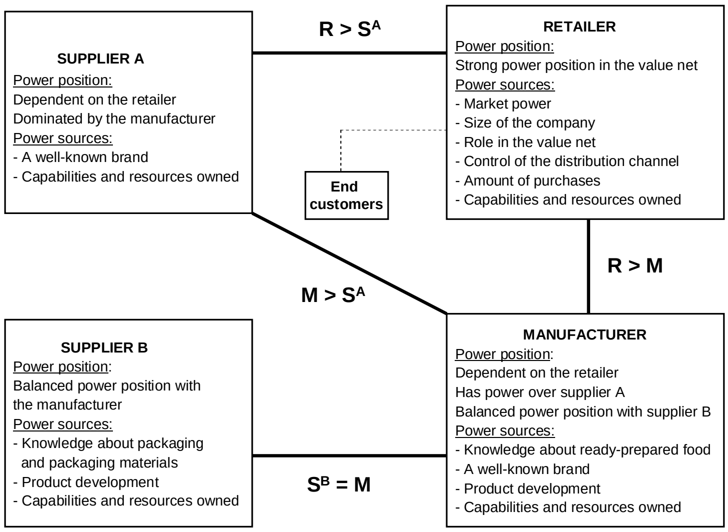

Figure 3. Power relations in the value net of the Finnish food industry.

Tables:

Table 1. Interviews conducted in the case companies

Case company	Number of interviews	Number of interviewees	Number of relationships	Company's role in the value net
Manufacturer	16	7	3	Buyer, Supplier
Retailer	6	4	2	Buyer
Supplier A	5	1	2	Supplier
Supplier B	2	1	1	Supplier
Total	*29*	*13*		

Table 2. The retailer's power vis-à-vis its suppliers

Relationship	Power situation	Buyer power sources	Supplier power sources
Retailer > Manufacturer	Buyer dominance	Market power, size Control of the distribution channel Amount of purchases Knowledge about selection and customer preferences Network position, network role Resources, capabilities, competences	Resources, capabilities, competences Brand Knowledge about ready-prepared food Market and customer knowledge Product development Expertise
Retailer > Supplier A	Buyer dominance	Market power, size Control of the distribution channel Amount of purchases Knowledge about selection and customer preferences Network position, network role Resources, capabilities, competences Number of alternatives	Brand Innovativeness Resources, capabilities, competences

Table 3. Power relations between the manufacturer and Supplier A

Relationship	Power situation	Sources of buyer power	Sources of supplier power
Manufacturer > Supplier A	Buyer dominance	Network position, network role Control of information Brand Resources, capabilities, competences Number of alternatives	Innovativeness, product development Delivery times, level of costs and quality Resources, capabilities, competences Number of alternatives

Table 4. Power relations between the manufacturer and Supplier B

Relationship	Power situation	The buyer's power sources	The supplier's power sources
Manufacturer = Supplier B	Balanced power	Network role Activities connected with others Resources, capabilities, competences Number of alternatives	Knowledge about packaging and packaging materials Product development, innovativeness High quality Resources, capabilities, competences Number of alternatives

PUBLICATION 4

Kähkönen Anni-Kaisa and Tenkanen Mari (forthcoming)

THE IMPACT OF POWER ON INFORMATION SHARING IN THE FINNISH FOOD INDUSTRY

To be published in the British Food Journal

The impact of power on information sharing in the Finnish food industry

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Abstract

Purpose – The study analyzes power balance and collaboration in the value net context, and discusses the role of information as a source of power. The purpose of this paper is to find out how power affects information sharing and collaboration between buyers and suppliers. Both demand and supply perspectives are utilized, and the value net approach is combined with research on supply management and market orientation.

Design/methodology/approach – The case study method is used in order to analyze relationships and information sharing in the Finnish food industry. Twenty-nine semi-structured interviews were conducted in four case companies.

Findings – The results indicate that value net actors in the supplier role are willing to form collaborative relationships, but when they are in the role of the buyer the willingness to collaborate weakens. The implication is that power increases as the distance from the end-markets decreases, and that power relations affect collaboration and restrict information sharing between the actors in the value net.

Research limitations/implications – Single-case study such as this does not purport to produce findings that can be generalized in a statistical sense, but the findings will be valuable in an analytical sense because they extend understanding of the existing theory. Further research should be directed towards comparative studies of value nets, power relations and information sharing in other countries and in other industries.

Practical implications – The study sheds light on the critical factors that influence value net collaboration, making it possible for managers to focus on relevant issues when developing business relationships and the value net as a whole.

Originality/value – There is a limited amount of research on value nets in the food industry, and because of the changing business environment there is an urgent need for studies focusing on the food business in the context of networks and value nets. In combining the value net approach with purchasing and supply management and market orientation perspectives the study extends the discussion on information sharing with its emphasis on network relations and the complicated nature of collaboration.

Keywords Collaboration, Power, Information sharing, Value net, Food industry

Paper type Case study

Introduction

Changes in the business environment are redefining the characteristics of business relationships, concepts, and strategic approaches. On account of this dynamism companies can no longer concentrate exclusively on dyadic relationships between buyers and suppliers, and are being forced to form networks with several collaborating actors. This has extended the strategic approach from the enterprise-focused perspective to one that includes value-creating systems and networks (Parolini, 1999). Nowadays many networks are customer-oriented, and a critical factor in all types of networks is the capacity to create value (Möller and Svahn, 2003). It is for this reason that networking and value creation have attracted considerable attention in current business studies.

The value net approach (Allee, 2003; Bovet and Martha, 2000; Jarillo, 1998; Möller *et al*., 2005; Parolini, 1999) combines the network and value creation perspectives. Buyers and suppliers have different roles and capabilities in the value net, and the relationships and power positions vary. Information sharing is a joint feature of the roles, the power positions and the collaboration, and the network will influence the information sharing and market orientation of the firm (Blesa and Bigné, 2005; Siguaw *et al*., 1998). Moreover, relational characteristics such as trust, power and conflicts may affect the amount of information exchange and the depth of the cooperation. Active information sharing has a positive effect on the relationships between the actors in the value net (e.g. Siguaw *et al*., 1998). However, power imbalance may affect the information sharing, and may influence the adoption of new collaborative business models. Furthermore, an actor will be less satisfied with the relationship with a partner that uses its power in a coercive way (e.g. Geyskens *et al*., 1999), and according to van Weele and Rozemeijer (1999), collaborative partnerships can only grow when there is a certain balance of power between the parties. It is important to understand the interrelationship between information sharing and power because both communication and governance mechanisms are elements that can be used to manage interfirm exchanges (Mohr *et al*., 1996). Therefore, power relations and information sharing seem to be significant factors in collaboration, requiring further investigation in the value net context.

This study concerns buyer-supplier relationships in the value net context, and analyses collaboration and the role of information as a source of power. Both the demand and the supply side are covered, the aim being to analyze how power affects the information sharing and collaboration between a buyer and a supplier. The value net approach is combined with the supply management and market orientation perspectives. Information sharing has been the focus of much research in the areas of relationship marketing and business-to-business marketing, for example, but the perspective should be broadened from dyads to networks. This study extends this discussion by emphasizing wider network relations and the complicated nature of collaboration.

The research context

We are confronted with the constant reshaping of the world of business, and the food industry is no exception. Companies in this sector are facing common challenges such as corporate mergers, changes in consumer preferences, and demands for increased efficiency, all of which create pressure (e.g. Olsen *et al*., 2008). The food industry in Finland has been subjected to massive transformation driven by changes in the business environment as well as by technological advancement. It was fairly protected and isolated at one time, but it is currently facing the challenges of globalization and increased competition (Brännback and Wiklund, 2001). Furthermore, the Finnish food culture is unique, and Finns prefer domestic rather than foreign products and raw materials: 85 per cent of the raw material is domestic, and the market share of Finnish food products in Finland is 81 per cent (Finnish Food and Drink Industries’ Federation, 2008). This in itself is challenging for the companies concerned.

The small number of large players and the numerous small and medium-sized companies characterize the Finnish food sector. The grocery retail market, on the other hand, is centralized, and there are only a few retail specialists that are noticeably dominant with their significant buying volumes. The combined market share of the three biggest grocery retail firms in Finland in 2008 was approximately 87 per cent (ACNielsen, 2009). This same phenomenon has been noted in many studies, as has the high level of retailer concentration and the dominance of the food industry in several countries (e.g. Collins and Burt, 1999; Hingley, 2001; Hingley and Hollingsworth, 2003; Kumar, 1996 and 2005; Ogbonna and Wilkinson, 1996; Robson and Rawnsley, 2001). Aalto-Setälä (2002) reported significantly increased concentration in grocery retailing over the last few decades in both the US and Western Europe.

Even if the food industry represents one of the biggest industries in the EU, there is a limited amount of research on value nets in this field. So far the studies have concentrated mostly on the ICT (Information and Communication Technology) sector and therefore the food sector offers a new empirical context in which to conduct value net research. The sector has changed from a traditional agricultural industry with basic production procedures into a modern high-tech business with fast-developing technology and processes. Furthermore, changes in the business environment are forcing food industry companies to collaborate (e.g. Hingley, 2001; Wilson, 1996). Dyadic relationships are moving towards networks in which the roles of customers and value creation are even more significant. Therefore, food industry companies seek to create unique value through the formation of value-creating networks. Moreover, end customers (i.e. consumers) and their changing and demanding preferences increase the significance of information sharing, and companies are being forced to develop business models in which it is in a key role. The value net model places more emphasis on the role of customers than the value chain model which makes it more applicable to the food industry. Furthermore, given the increasing significance of technology and the use in food industry companies of these new and more competitive business models, there is a need to study value nets, collaboration and information sharing in this context as well.

The influence of power on information sharing and collaboration in value nets

Traditionally exchange relationships between companies have been studied in the context of dyadic relationships, and rather on the supply chain than on the network level. The principles of the chain perspective have also been widely utilized in studies on value creation. Since 1985, when Porter developed the value chain model, value creation has been studied from this perspective. However, many authors (e.g. Hines and Rich, 1997; Parolini, 1999; Kothandaraman and Wilson, 2001) have criticized the inadequacy of the model, mainly due to its activity structure and customer perspective. Porter (1985) separated value chain activities into primary and support activities, thereby highlighting the significance of individual companies. Kothandaraman and Wilson (2001) criticized Porter's model on the grounds that the value-adding activities are examined without exploring the links between the firms in the chain. However, collaborative relationships between actors are paramount in value creation and therefore the perspective of the individual company is too narrow. Companies cannot strategically concentrate exclusively on individual actors and should focus on the value-creating system as a whole. Instead of conceiving economic activity in terms of a set of economic players who internally perform a set of activities, value net approach considers it in terms of the set of activities that create value for final customers (Parolini, 1999).

One of the main differences between the traditional value chain model and the dynamic value net model concerns the role of end customers. The former has been criticized for not considering the consumer's satisfaction its primary object, whereas the latter begins with the customer and focuses on satisfying actual demand. The value net forms itself around its customers, captures their real choices in real time, and transmits them to other net participants (Bovet and Martha, 2000). Because the net is activated by real customer demand it is capable of responding reliably and rapidly to customer preferences. This makes the final product or service more valuable to the end customer than it would otherwise have been (Hines and Rich, 1997).

Because the value chain as a value-creation model is too rigid and sequential, and cannot respond to changes, a more flexible and agile model has been created. The value net model was developed to facilitate the analysis, description and study of value-creating systems. It takes activities rather than companies as the key elements of strategic analysis (Parolini, 1999). Companies are regarded as complex nodes in complex interdependent value networks, where success comes through collaboration and creating a business environment in which each actor can be successful (Allee, 2003). The value net is a dynamic network of relationships and information flows in which the actors create value through collaboration. The firms concerned do not operate in isolation, but must seek to collaborate with other network actors in order to achieve their goals (Batt and Purchase, 2004). The existence of value nets is based partly on the idea that individual companies cannot internally master all the relevant value activities of the value chain, and that it is not economically rational for them to try to do so (Möller *et al*., 2005). The network structure and position determine how the collaboration will take place and between which actors (Batt and Purchase, 2004).

Information dissemination and relational characteristics in a value net

Relational characteristics such as trust, power and conflicts may affect the depth of collaboration and the amount of information exchange in the network. According to Mohr *et al*. (1996), it is important to understand the interrelationship of information sharing and power because both communication and governance mechanisms are elements that can be used to manage interfirm exchanges. Information sharing is required of all value net members (Grunert *et al*., 2005). Information exchange gives firms new perspectives on and more comprehensive intelligence about customers, products and environmental changes, and also produces cost savings and other synergic benefits. Firms' ability to communicate and to coordinate activities is critical for the successful development of the network (Frazier, 1999). Responsiveness and proactivity in the whole value net are possible only if the information gained is disseminated effectively to the other parties. Moreover, the net of which the firm is a part will influence its market orientation and information dissemination (Blesa and Bigné, 2005; Siguaw *et al*., 1998).

Earlier research has shown that business-to-business firms are less likely to adopt a market orientation than business-to-consumer firms, although the relationship between such an orientation and performance has been found to be stronger among industrial companies than among those directly communicating with consumers (e.g. Weerawardena and O'Cass, 2004). One reason for this might be the actors' dependence on each other in terms of information access, as well as the problems involved in reciprocal relationships. Trust and conflict play an important part in inter-firm collaboration. When the parties trust each other they are less hesitant in sharing information and more willing to invest in joint activities (Elg, 2003), whereas conflicts diminish trust between partners. Providing there is no holding back or protecting vital information, collaboration will achieve a level of production and innovation that neither party could manage individually (Miles *et al*., 1998). Furthermore, conflicts may be a result of power asymmetry: when the parties are unequal, frequent communication may only create tension and make the less powerful actor perceive the more powerful one as overbearing (Mohr and Nevin, 1990). Power plays an essential role in communication and collaboration.

Power relations and network positions as key factors in information sharing

Actors in the value net have different power positions and sources of power. The concept of power can be defined as *the ability to control* (El-Ansary and Stern, 1972), *the ability to influence* (Mohr *et al*., 1996), *the ability of a firm to affect decision-making and/or behaviour* (Wilkinson, 1996), or *the ability of an actor to impose its will on others* (Blau, 1964). It can also be described as the ability to cause someone to do something he/she would not have done otherwise (Gaski, 1984). Power is defined in this study as *the ability to influence the decision-making and the actions of another party*. Network position, on the other hand, refers to the role a firm plays in the network and how it is linked directly and indirectly to the other firms involved (Wilkinson and Young, 2002). According to Håkansson (1986), the character and role of the actors depend on the activities they perform or control, the resources they manage and the knowledge they have about the activities, resources and other actors in the network, all of which define their network position. In this study the power position in a network refers to *a combination of the actor's role and the relationships it has with other network actors*. Furthermore, the power positions of the actors are determined by their sources of power.

Several studies connect power sources to buyer-supplier relationships and networks (e.g. Cox *et al*., 2001; Doz and Hamel, 1998; Stannack, 1996; Thorelli, 1986). Moreover, many (e.g. Cox, 1999; Cox *et al*., 2001; Doz and Hamel, 1998; Ramsay, 1996) consider the actor's resources, competences and capabilities essential sources of power. A firm's resources provide a basis of power in terms of the extent to which they are needed by others and how their alternative sources are controlled (Hallén *et al*., 1991). Mohr and Nevin (1990) found that when the actors were unequal in power the less powerful might actively withhold information as a way of gaining countervailing power. It can therefore be argued that information is an essential source of power, and has the potential to determine possible commercial advantage (Forker and Stannack, 2000) or the relative bargaining power of the players (Evans and Wurster, 1997). Strong knowledge of customer preferences or material applications, for example, gives the firm an advantage in relation not only to its competitors but also to its value net partners, and a collaboration partner with special intelligence is a desired asset. Imbalance in intelligence may have an influence on cooperation among value net firms: they may be reluctant to share information because they fear losing their power, or they may try to prevent the other party from gaining competitive advantage in the markets. Furthermore, as Croom *et al*. (2000) state, not all firms are open to sharing information because they perceive disclosure as a loss of power. This type of behaviour often results in the distortion of information flow through the supply chain or network.

However, power asymmetry does not necessarily have a negative influence on collaboration. According to the study carried out by Hernández-Espallardo and Arcas-Lario (2003), in the particular context of asymmetrical channel partnerships firms with too limited resources and knowledge to be adequately oriented to the market can benefit from the management activities implemented by the leader. A powerful firm can thus persuade other firms to collaborate and to develop the network as a whole. It is important to find out the network elements that affect the adoption of a market orientation and thereby prevent strategic collaboration. This issue is discussed in the next section in the context of the Finnish food industry.

Power and information exchange in the Finnish food industry

This case study concerns buyer-supplier relationships in a value net in the Finnish food industry, and analyses the role of power in information sharing. The value net comprises several actors, and the four main ones were selected as the case companies: a manufacturer, two supplier companies, and a retailer in the role of a customer company. The case value net ranges from raw materials and packaging all the way to end customers through grocery stores.

These four companies were selected because they represent different nodes of a certain value net, they are all significant actors in the Finnish food industry, and analysing them will produce a complete picture of the net in question. Furthermore, they have different roles and power positions in this certain value net, which was relevant to the research aim of the study.

Data collection

The case study method was used to study the buyer-supplier relationships in the value net. The phenomenon in question is a buyer-supplier relationship and the research context is the value net, and more precisely a food industry value net. Hence, this study is an embedded single-case study with multiple units of analysis. According to Dubois and Araujo (2007), in case research the different aspects of the case are analyzed in relation to one another in a coherent whole or configuration, rather than as modular assemblages of variables. The main argument in favour of the method (see Yin, 2003) here is that the research problem is complex in nature because it includes many variables and concepts that are not easily grasped in a quantitative study. Furthermore, because the empirical research context is a contemporary event there are multiple sources of evidence, including interviews, introductory and informative sessions in the case companies, and company-specific documentation. According to Miles and Huberman (1994), flexibility, richness, holism, causality assessment, the possibility of locating meanings and the natural setting are the advantages of qualitative research. The case study method was chosen in order to exploit these advantages and because of the nature of the research topic and context. Given the purpose of the study to achieve a deeper understanding of the nature of information sharing and power positions, it was considered the most appropriate method. Single-case research such as this does not purport to produce findings that can be generalized in a statistical sense, but as Yin (2003) suggests, the findings will be valuable in an analytical sense if they clarify or extend understanding of the existing theory.

Yin (2003) also suggested that multiple sources of evidence should be used to establish the construct validity and reliability of the study. Therefore, several research informants and data from different sources (data triangulation), as well as investigator triangulation were used in this study. The study comprises 29 individual semi-structured interviews conducted with the case companies' personnel in 2006 and 2007. Data on sales and purchases was used to validate the interview data. The research informants were selected and interviewed on the basis of their active involvement in buyer-supplier relationships, supply management and marketing, and included supply managers, marketing managers, CEOs and buyers. The questions concerned the roles and capabilities of the firms, their power positions and sources of power, relationships, information sharing, and the nature of the Finnish food industry. Notes were taken and the interviews were audio-recorded. The recordings were transcribed literally, producing 375 pages of data. The resulting qualitative data was coded based on the interview themes, and subjected to content analysis and classification. Coding and the analysis were done manually by the researchers. The data was then compared with the theoretical study and interfaces were sought.

The description of the case companies

There are only four main retail specialists in Finland, one of which is the retailer chosen for this study. In practice this retailer has only one major domestic competitor because the other two specialists are much smaller. It possesses various resources and capabilities that are significant to the case value net and increase its power. It holds extensive knowledge about product selection and customer preferences, and about purchase and market prices. Its most important resource, however, is its knowledge about the distribution channel and the control it has over it. The other value net actors are therefore dependent on it and consider its power position predominant.

The manufacturing company is one of Finland's leading food manufacturers and a market leader in many of its operational areas. Its product categories include many kinds of ready-prepared foods and different meat products. Its main market area is Finland and a considerable proportion of its raw materials come from Finnish suppliers. Because of its long history and traditions it possesses indispensable knowledge about fresh ready-prepared food. It also has marketing and manufacturing capabilities and active product development. Furthermore, it has a very strong and well-known brand, which gives it remarkable power in the case value net.

Supplier Company A supplies both the manufacturer and the retailer. The manufacturer purchases both basic and customized raw materials and the retailer purchases end products from it. Supplier A, which is a market leader in pasta products in Finland, also sells and manufactures flour, flakes and grits, as well as deep-frozen dough and pastry, for example. The most significant capabilities and resources it possesses concern its manufacturing and product development activities. It also has a well-known brand. Supplier Company B, on the other hand, has indispensable know-how in food packaging, and supplies packaging materials to the manufacturer. It offers and manufactures different kinds of packaging solutions for its customers. It has knowledge about packaging and packaging materials, which is one of its main capabilities in this value net. The company is very innovative in product development and offers high-quality products.

Power positions in the value net and their influence on information sharing

The retailer is in a dominant power position in this particular Finnish food industry value net. Its power stems from various sources, namely its market power, its size, its resources and capabilities, and the volume of purchases. Its purchases from the manufacturer account for only a few per cent of its turnover, but represent one quarter of the manufacturer's turnover. Correspondingly, its purchases from supplier A represent less than one per cent of its turnover, and one fifth of the supplier's turnover. Even though the retailer's position is significant, the strong net of suppliers and their specific core capabilities and well-known brands decrease its power.

The actors in the supplier role (the manufacturer and suppliers A and B) utilize their resources and capabilities as sources of power. They are all smaller than the retailer and do not have volume benefits. Their most significant power sources are their brands. The manufacturer and supplier A, for example, use their well-known brands in order to increase their power positions with regard to the retailer. Because the manufacturer has a well-known brand and indispensable products, the retailer is, on some level, forced to purchase end products from it. The retailer does not have substitutive suppliers for all of the manufacturer's products, and therefore if it wants to offer these brand products to its end customers it is forced to purchase them from the manufacturer. This same phenomenon works to the benefit of supplier A. The retailer dominates these relationships, however, because the other actors are dependent on its purchase volumes.

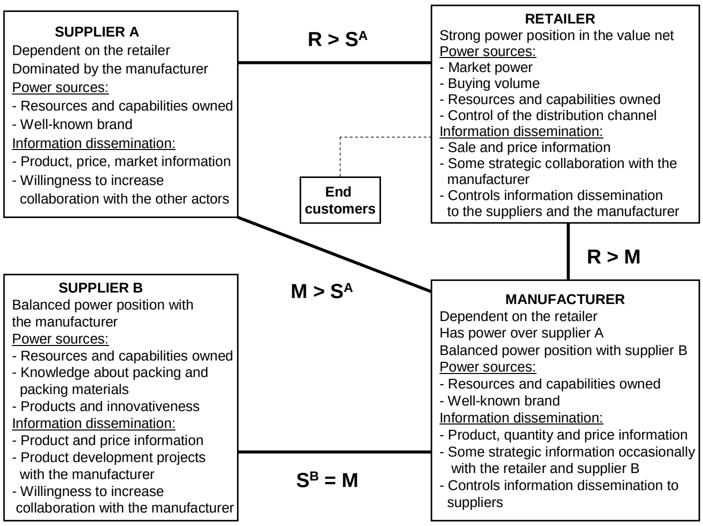

Figure 1. Power relations and information dissemination in the case value net.

The power relations and sources of power in the case value net are summarized in Figure 1, which shows how the actors that are in the buyer role are in dominant power positions. The relationship between the manufacturer (M) and supplier A (S^A) is characterized by buyer dominance (>), which is also evident in the relationships between the retailer (R) and the manufacturer, and between the retailer and supplier A. The only relationship in which the buyer and the supplier are in balanced power positions (=) is that between supplier B (S^B) and the manufacturer (M). It can be argued that the buyers in the case value net have power over the suppliers and are more or less dominant depending on the sources they have. This power imbalance is also reflected in the information sharing.

Power asymmetries are significant in this value net and the power imbalance is visible in the collaboration, especially in the information dissemination between the firms. The case companies acquire information about markets very independently, trusting their own inner capabilities to get enough information about end customers and markets. The manufacturer, for example, is very independent in market intelligence generation and product development. The firms have trust concerns with each other due to the power imbalance, which has implications in terms of information sharing. If the retailer disseminates some information to the manufacturer, the manufacturer has trust-related reservations, and concerns about the bias or partiality of the information it has received. It therefore needs to acquire the same information from other sources as well. Fear of information leaks limits communication between the firms. The benefits of information exchange are often perceived as smaller than the risks of sharing market information. Therefore, the information shared between the case companies is mainly related transactions and prices. The contact persons only discuss prices and product ranges, and the information dissemination is very often one-sided. The firms do not exchange more extensive information on consumer preferences and buying behaviour or market trends for example, or on anticipated future changes in the markets even if they realize that this is highly significant in the food industry. According to the manufacturer and the suppliers, the retailer does not share much, if any, information even though they share some of their market knowledge. The retailer has also noticed the problem they have in sharing information with the distributors and suppliers, especially before peak seasons. Even though the relationship between the retailer and the manufacturer has a long history and they both consider each other as important partners, information sharing is still quite shallow. Therefore, more intensive collaboration is limited and rare.

The manufacturer is, to some extent, obliged to disseminate information to the retailer if it wants to have shelf space for its products. The retailer uses the information obtained to increase its power. The acquisition of knowledge from several sources makes the retailer more powerful in the negotiations. It could use the knowledge obtained from the manufacturers to develop its own private label production and range if it wanted to. This opportunistic behaviour and the competitive features of the relationships intensify trust concerns and limit communication and the manufacturer's willingness to develop the collaboration further. The value net parties occasionally have joint product-launching or development activities, but there are barriers to regular and versatile collaboration. Even the firms themselves have noticed that there are problems, first of all in joint product development and marketing communication, but also in effective logistics and production due to a lack of knowledge about the partners' performance and plans. Apart from the lack of coordination and joint forums, power asymmetries constitute a further barrier.

One major obstacle to developing more intensive collaboration between the value net actors is the power issue. The manufacturer, for example, is reluctant to share any information other than what is necessary for its transactions, although the suppliers would like to engage in more intensive cooperation. Suppliers A and B are eager to develop the collaboration further, but the manufacturer is reluctant to share more information because of trust issues. Although there have not been conflicts in these particular relationships, the manufacturer is very wary of possible information leaks. It is also a gatekeeper of the information flow between the suppliers and the retailer. The retailer distributes some information to the manufacturer concerning consumers' buying behaviour, for example, but the manufacturer does not distribute this information further, thereby increasing its market knowledge by keeping the information to itself. Thus the suppliers are dependent to some extent on the manufacturer's consumer knowledge. If any market information is disseminated the information flow is one-way – from the supplier to the manufacturer. The suppliers do not even know in which products their ingredients are used because the manufacturer does not share this information. This could affect, the development of more suitable ingredients, for example. The manufacturer has expressed a need for more information from the suppliers about the products and the production, but is not willing to share its knowledge with them. This one-way information flow is facilitated by the power imbalance to the benefit of the manufacturer. The fact that the case companies do not share information efficiently has negative effects on their collaboration. Consequently, the possibility to create value and to achieve competitive advantage through collaboration is not exploited enough.

Discussion and conclusions

This was a study on power relations and collaboration in the value net context, the aim being to analyze how power relations affect information sharing and collaboration between buyer and supplier. It thereby deepens understanding of information sharing and collaboration in this context. It was found in the theoretical part that the resources, competences and capabilities the firms owned were essential sources of power. Furthermore, information was regarded as one of the main resources a firm owns. As Evans and Wurster (1997) noted, for example, it can determine the power of an actor. It can therefore be argued that it is a remarkable source of power. The case study analysis produced similar findings: resources, competences and capabilities were considered essential sources of power for the buyers and suppliers, and the actors had different power positions based on their power sources.

The results of the study also suggest that the power positions and relations of value net actors have an influence on their information exchange. This is visible particularly in the quality and quantity of the information disseminated, but also in the direction of the flow. It was found that the power increased as the distance from the end-markets decreased: the closer the firm was to the end customers, the more power it had and the more independent it was in market intelligence generation. Firms that communicate little with their end customers have to rely on the information they get from their partners. Powerful actors such as the case retailer and manufacturer use information as a source of power and are not willing to share it openly. The retailer thus has control over its suppliers, and the manufacturer also controls some of its suppliers. The results of the study also indicate that when an actor is in the role of a supplier and has a less powerful position than its buyers, it is willing to share information and to obtain it from the buyer, but the willingness to share decreases when it assumes the buyer role. Such a situation was evident in the case study in the manufacturer's behaviour. It stated that it needed more information from the suppliers about their products and production, but it was not willing to share its knowledge with them. Moreover, the suppliers had knowledge about the end customers on account of their interactive ways of communicating, and this information would also be valuable to the manufacturer. Nevertheless, the manufacturer was reluctant to share any other information than was necessary for its transactions. This one-way information flow was facilitated by the power imbalance to the benefit of the manufacturer, which in turn was linked to the lack of trust and commitment. Experiences of one-sided commitment and opportunistic behaviour decrease the willingness to increase information dissemination in the value net. Its development requires the willingness of all of the actors involved to invest in collaboration.

The results of this study indicate that the role and power position of actors in a network determine their willingness to share information. Because power increases as the distance from the end-markets decreases, the network position is significant. The actors in the case value net that were in the buyer role dominated those in the supplier role. Powerful buyers are able to decide what kind of information to give suppliers, thus preventing them from gaining bargaining power. Power asymmetry prevents long-term collaboration and, in particular, supplier innovativeness. Further, the actors in the supplier role were willing to form collaborative relationships, but when they were buyers their willingness to commit themselves to collaboration decreased. They were anxious to sustain their power positions and therefore did not share information, which had negative effects on collaboration. For this reason the possibility to create value and to achieve competitive advantage through collaboration was not utilized efficiently. In the long run this will reduce the competitiveness and effectiveness of the value net because it is the end customers that, through their buying and consuming activities, define the value of what it offers. The end customers and their changing and demanding preferences highlight the significance of information sharing. Information exchange enables firms to obtain more comprehensive intelligence about customers, products, and environmental changes, and hence to satisfy the needs of their end customers better.

Retailers in the food sector have gained power over manufacturers and suppliers in many countries (see e.g. Collins and Burt, 1999; Dunne, 2008; Hingley, 2001; Hingley and Hollingsworth, 2003; Kottila and Rönni, 2008; Kumar, 1996 and 2005; Ogbonna and Wilkinson, 1996; Robson and Rawnsley, 2001). They are close to the end customers, and the end products of the industry are delivered through them. Competition among suppliers and manufacturers is intense, and it is important for them to ensure that the retailer promotes their products. One way of keeping the retailer satisfied is to provide it with information (see also Blesa and Bigné, 2005). The barrier to changing supplier is high if the quality of the information received is high. However, suppliers are rarely in direct interaction with end customers, and have to rely to some extent on their partners in the value net. Wathne and

Heide (2000) suggest that this may cause asymmetry of information that could be opportunistically used by retailers. This same phenomenon was apparent in our case study.

A single-case study does not purport to produce findings that are generalizable in a statistical sense, but the results may be valuable in an analytical sense if they clarify or extend understanding of existing theory (Yin, 2003). This study enhances understanding of the dynamics of the value net in relation to power relations and information sharing. It also has practical implications in terms of revealing the critical factors influencing value net collaboration, making it possible for managers to focus on relevant factors in developing business relationships and the value net as a whole. To the authors' knowledge there are no existing studies in which power relations, collaboration and information sharing are combined and discussed from the value net perspective. Furthermore, these issues are rarely examined in the context of the food industry. The study therefore contributes to the research conducted in the fields of supply management and value nets, and to knowledge about power relations and the food business.

Further research could be directed towards comparable studies of value nets in other fields: it would be important to find out whether power relations have the same dynamics in other industries as well. Furthermore, enhancing understanding about the influence of power on other elements of collaboration in a value net will be of particular interest in the future. Further research could also be conducted on value creation and collaboration in value nets, namely the value creation facilitated by collaboration between the actors and the role of capabilities. The role of information sharing in the development of value nets, and of collaboration and capabilities in value creation are also worth further study because efficient value creation is enabled through collaboration and the combining of complementary capabilities.

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PUBLICATION 5

Kähkönen Anni-Kaisa (forthcoming)

POWER RELATIONS IN SUPPLY STRATEGIES – A NETWORK APPROACH

To be published in the International Journal of Procurement Management

Power relations in supply strategies – a network approach

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Abstract

The aim of this study is to discuss the role of power relations in supply strategies and in the strategic supply management of a firm. Power relations between buyers and suppliers are examined in the context of value nets, because the network as a level of analysis in power research has been argued to be significant. The study presents a framework for measuring sources of structural power and uses it in the evaluation of power relations. A case study from the Finnish food industry shows that the nature of the relationship significantly determines the actions and decisions of supply management and, moreover, defines the strategy used.

Keywords: power relation, supply strategy, strategic supply management, source of power, network

1 Introduction

In supply management one of the fundamental questions is related to the supplier relationships and their nature. According to Harland et al. (2004), managing the implementation of strategies for capturing value from the networks of suppliers is a key task for those responsible for supply relationships in a firm. Traditionally buyer–supplier relationships have been studied in the context of a dyadic relationship. According to Anderson et al. (1994), in order to understand buyer–supplier relationships, greater attention must be directed to the embedded context within which dyadic relationships take place. The conditions for efficiency and effectiveness in a single supply or value chain are determined by the way activities and resources are related to those in other chains, and this calls for a network perspective (Gadde and Håkansson, 2001). Veludo et al. (2006) stated that the relationships in networks are being influenced by the network effects that flow through the network. Dubois and Fredriksson (2008) have argued that it is important to understand how one dyad in a triad or, moreover, in a network affects the other dyads, and the same rationale can be utilized with networks where one dyad can affect the other dyads.

Because several authors (Andersen and Christensen, 2005; Anderson et al., 1994; Batt and Purchase, 2004; Choi and Wu, 2009; Dubois and Fredriksson, 2008; Gadde and Håkansson, 2001; Merminod et al., 2007; Veludo et al., 2006) have found that it is important to study buyer–supplier relationships in the context of networks and that dyadic relationships are embedded in networks so that the importance to analyze power in this same context can also be argued to be significant. Stannack (1996) has stated that studies analyzing power in the context of interaction relationships between the buyer and supplier are too limited in perspective, because they fail to explain multiple interactions. Zolkiewski (2001) has highlighted the importance of the analysis of power in the network context. This study shares the assumptions made by earlier research and argues that when analyzing power in buyer–supplier relationships, the wider context in which the relationships are embedded in is highly critical in order to obtain an extensive analysis. Therefore, this study extends the analysis of power to the context of networks.

Previous research has shown that the power relation between a buyer and supplier affects the nature of the relationship between them and, moreover, determines the depth of collaboration (see e.g., Ahtonen, 2008; Ahtonen et al., 2008; Batt and Purchase, 2004; van Weele and Rozemeijer, 1999). For example, van Weele and Rozemeijer (1999) argue that partnerships, i.e. collaboration, can only grow when there is a certain balance of power between the parties. Cox (2007) has stated that power is one of the major factors that determines outcomes in many, although not in all, business transactions. The aim of this study is, thus, to examine the role and influence of power relations on the strategic supply management of a firm; therefore, the following research question is addressed: *What is the role of power relations in the supply strategy of a firm?*.

This is an issue worth studying given the need to understand the role of power as an influencing factor in the formation, development and maintenance of collaborative relationships between buyers and suppliers. Moreover, power exercised in a highly dominating manner may create an impossible environment for collaboration. Therefore, as the significance of collaborative relationships in strategic supply management is acknowledged, the significance of power relations also needs to be taken into account. The empirical part of this study discusses the issue in the context of the Finnish food industry in which a case study with 29 semi-structured interviews is conducted.

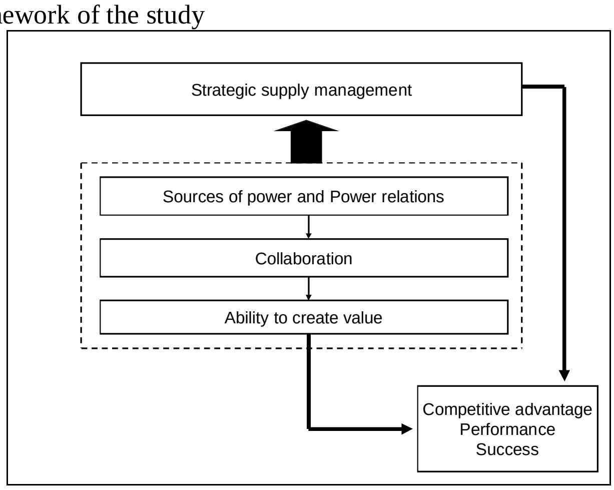
2 Strategic supply management in firm performance and value creation

In previous studies (see e.g., Carter and Narasimhan, 1996; Ellram and Pearson, 1993; Ferguson et al., 1996; Yeung, 2008; Zsidisin et al., 2003) it has been found that there is an evident link between strategic supply management and firm performance. In many firms the importance of supply management for performance and success has significantly increased along with the recognition of the strategic nature of the function. According to Cox and Lamming (1997, p. 62), supply management is “the strategic management of external and internal resources and relational competencies in the fulfilment of commitments to customers." In this study, strategic supply management is defined to be the process of planning, evaluating and controlling strategies and operating purchasing decisions for directing all the activities of the purchasing function toward opportunities consistent with the firm's capabilities to achieve its long-term goals. This definition is applied from the definition of Carr and Smeltzer (1997). Cousins and Spekman (2003) have stated that supply management is concerned with the flow of goods and services through the organization with the aim of making the firm more competitive. Thus, competitiveness and the ability to achieve competitive advantage can be connected to strategic supply management.

Barney (1991) has defined the concept of competitive advantage as a result from a situation when the firm is implementing a value-creating strategy not simultaneously being implemented by any current or potential competitors. Competitive advantage is in several studies connected to the resources, capabilities and competences of the firm (e.g., Eisenhardt and Martin, 2000; Grant, 1991; Medcof, 2001). Medcof (2001) argued that competitive advantage comes from having resources that create value and are unique, and Amit and Zott (2001) determined that value can be created by uniquely combining a set of complementary and specialized resources and capabilities. Thereby, as Amit and Zott (2001) as well as several other studies (e.g., Bovet and Martha, 2000; Harrison and Håkansson, 2006; Lakemond et al., 2004) have found, value can be created by uniquely combining the resources, competences and capabilities of companies.

According to Lamming (1993), by collaborating within a high dependency structure, high degrees of value can be achieved. Arnold (1998) has stated that the contribution of suppliers to the value creation of a firm has increased significantly. In this study, it is assumed that one of the main goals of buyer–supplier collaboration is the maximizing of value creation and that this value can be created by combining resources, competences and capabilities. When a firm is able to create unique value, it is also able to achieve competitive advantage and to gain high levels of performance and success. Stalk, Evans and Shulman (1992) have argued that competitive success depends on transforming a company's key processes into strategic capabilities that consistently provide superior value. Because previous discussion shows the focal role of value creation, it is considered significant in the aims of this study. When combining it with the discussion of collaboration and networks, the most suitable research context is the model of value-creating networks. Thus, value nets are used as a research context in this study.

Figure 1 The framework of the study

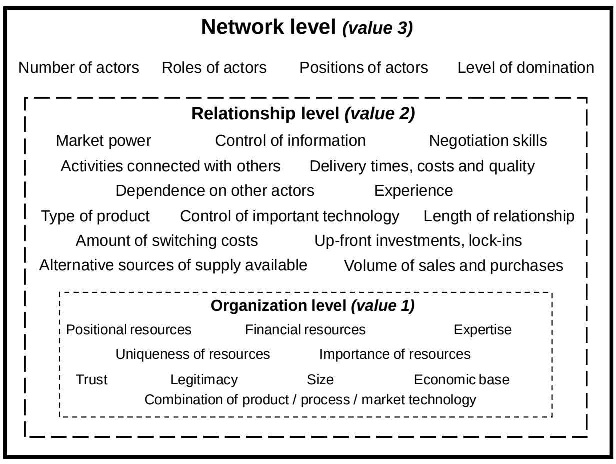


However, the viewpoint and assumptions would be too perfect if the factors that may have a negative effect would not be considered. In previous research (e.g., Batt and Purchase, 2004; van Weele and Rozemeijer, 1999) it has been found that power between firms has an influence on the nature of relationships. Because power imbalance between firms may decrease or even prevent collaboration, it has to be highlighted as one of the factors that has influence on the value creation ability. Thereby, the role of power relations in the strategic supply management and in supply strategies is also a very interesting topic. The above discussion is presented as a research framework in Figure 1.

3 Sources of power and power relations

Because firms have different kinds of power relations between them, it is evident that they also have different kinds of sources from which their power stems from. In order to be able to analyze and determine power relations between different firms, sources of power need to be considered. In this study, the sources of power as well as the concept of power is viewed from the structural perspective of power because, from the structural perspective, power is seen to derive not from the actions of people but from organizational structures, which include resources, interconnections among actors and organizational positions (Cendon and Jarvenpaa, 2001). Power is analyzed in this study in terms of network structures and positions and, hence, the structural perspective of power is applied. Power is viewed to stem from organizational structures and can thereby be called *structural power* due to its sources. Figure 2 presents the sources of structural power based on previous research (e.g., Bates and Slack, 1998; Caniëls and Gelderman, 2005 and 2007; Cendon and Jarvenpaa, 2001; Cox, 2001; Doz and Hamel, 1998; Johanson and Mattsson, 1992; McDonald, 1999; Medcof, 2001; Pfeffer, 1981; Ramsay, 1995 and 1996; Stannack, 1996; Thorelli, 1986).

Figure 2 Three levels of sources of structural power



This study uses the above-presented framework for measuring the sources of structural power for buyers and suppliers in the context of a value net. In this three-level framework, the sources of structural power are divided into the levels of network, relationship and organization. On the organizational level sources of structural power are seen as internal to a single organization. The second level includes the dyadic relationship of an organization with another organization. Hence, on the relationship level the power sources of the parties of the relationship are compared. The network level incorporates all three levels, thereby including sources of structural power from the organizational, dyadic relationship and network perspectives. Based on previous discussion about the importance of the network context, it is argued that the network level sources are the most significant ones whereas the organization level sources are not so remarkable. Hence, the three point scale for the measurement of power between buyers and suppliers in networks is developed. In this framework the organizational level sources of power are assigned value 1, the relationship level sources are assigned value 2, and the network level sources are assigned value 3. By doing this, an evaluation criterion for the power positions and relations in the networks is created.

The sources of power presented in Figure 2 define the actors' positions in value nets. Whilst power position refers to *a combination of the role the actor has in a network and the relationships it has with the other network actors* (e.g., Gadde et al., 2003; Johanson and Mattsson, 1992; Wilkinson and Young, 2002), power relation is viewed as a relation between the power positions of two value net actors. Power relation is *the result of power difference between the power positions of a buyer and supplier*. The power of an actor is analyzed in relation to the other party's power, and it is viewed that the sum of supplier and buyer power is always set. Only the power balance between them shifts.

Based on previous discussion and the assumptions in Figure 1 the most interesting issue seems to be the role and influence of these power relations in supply strategies used. It can be argued that the role of power relation is twofold. On one hand, it affects the nature of relationship and the depth of collaboration and, thus, determines the ability to create value which, moreover, affects the ability to achieve competitive advantage. On the other hand, power relations affect strategic supply management by influencing the strategies used and decisions made.

In several studies (e.g., Caniëls and Gelderman, 2005 and 2007; Gelderman and van Weele, 2002; Olsen and Ellram, 1997) it has been found that the type of purchased item defines the nature of the supplier relationship. Lamming and Harrison (2001) have stated that the categorization of purchased items using, for example, Kraljic's purchasing portfolio remains the foundation for the supply strategy for many organizations (see also Ahtonen and Virolainen, 2009). Kraljic's portfolio suggests that with leverage items the buyer should exploit the purchasing power (for more, see Kraljic, 1983). Here the role of power relation is evident and it determines the supply strategy used. Also, when there are several alternative suppliers, the buyer has power over the supplier and is not dependent on them (e.g., Cox, 2001; Thorelli, 1986; van Weele and Rozemeijer, 1999). This determines the strategy used and is a reflection of the power relation between them. On the other hand, when there are a lot of switching costs involved the buyer's strategy is tied to the power relation to the benefit of the supplier (e.g., Cox, 2001; Ramsay, 1996; Thorelli, 1986). All these situations are characterized by the dominance of one actor, and the influence of power relation on the strategic choices and decisions is evident. Therefore, it can be argued that the power relation between the buyer and supplier affects the decisions and strategies of the buyer, and the role of power relations in supply management is significant. Given the differences in relationship type and power relations there also has to be divergent strategies and actions when handling these relationships (see e.g., Svahn and Westerlund, 2009).

Next, in the case study from the Finnish food industry the role of power relations in strategic supply management is discussed. As one result of the case study, the sources of structural power for the case companies are measured by utilizing the framework of three-level analysis, which creates a basis for the power relations between the case companies. After that it is possible to analyze their influence on the companies' supply strategies.

4 Research setting and methodology

The food industry offers an interesting research context for this study because there are many imbalanced power relationships in the food industry worldwide (e.g., Collins and Burt, 1999; Hingley, 2001; Hingley and Hollingsworth, 2003; Ogbonna and Wilkinson, 1996; Robson and Rawnsley, 2001). The case value net comprises several actors, and the four main ones were selected as the case companies. They were selected because they represent different nodes of the network, they are significant actors in the Finnish food industry, and analyzing them will produce a complete picture of the network in question. Furthermore, it is relevant to the aim of the study that they have different roles, power positions and relationships.

The case companies are the Retailer, the Manufacturer and Suppliers A and B. In Finland there are only three main retail specialists, one of which is the Retailer of this study. The Manufacturer is one of Finland's leading food manufacturers and a market leader in many of its operational areas. The Manufacturer is the supplier of end products to the Retailer and it purchases both basic and customized raw materials from Supplier A. The Retailer purchases end products from Supplier A which is a market leader in pasta products in Finland. Supplier B, on the other hand, has indispensable know-how in food packaging, and it supplies packaging materials and solutions to the Manufacturer.

4.1 Research method and data collection

According to Eisenhardt (1989), a case study is a research strategy which focuses on understanding the dynamics present within single settings. According to Halinen and Törnroos (2005) and Järvensivu and Törnroos (2010), a case strategy is the most suitable for studying business networks. It allows investigation of a contemporary phenomenon that is difficult to separate from its context, and necessary to study within it in order to understand the dynamics in the setting (Halinen and Törnroos, 2005). In this study, the studied phenomenon is a buyer–supplier power relation which is studied in the network context. The relationship is embedded in the network and is affected by network effects; hence, the boundaries between the context and phenomenon cannot be clearly defined. The case study method was chosen because of the nature of the research topic and context. Given the purpose of the study to achieve a deeper understanding on the role of power relations in strategic supply management, it was considered the most appropriate option. As Seuring (2008) notes, even if the case study is often criticized for its lack of rigor, case study research will continue to allow in-depth analysis of contemporary phenomena if the research process is carried out in a structured way and is well documented. Fernandez and Kekäle (2007) have suggested that in case research no strong theoretical hypotheses should exist in advance, and this advice was followed.

Dubois and Araujo (2007) suggest that multiple respondents should be used because it makes it possible to capture a variety of perceptions and meanings, which is vital to the understanding of complex relationships. Having numerous and highly knowledgeable informants who view the phenomena from diverse perspectives limits the interview bias (Eisenhardt and Graebner, 2007). Based on these suggestions, several informants, data from different sources and investigator triangulation were used in this study. A total of 29 semi-structured interviews were done of which 16 interviews were conducted in the Manufacturer company, 6 with the Retailer, 5 with Supplier A and 2 with Supplier B. The number of interviews with the Manufacturer was higher than in the other case companies because the Manufacturer is both in the buyer and supplier role, and is involved in three relationships. The Retailer and Supplier A are both involved in two relationships, and Supplier B only in one relationship. Hence, the point at which new interviews did not provide new evidence was reached with a smaller number of interviews in the other case companies. Data on the sales and purchases was used in combination with the interview data.

The research informants were selected based on their active involvement in buyer–supplier relationships, supply management and marketing. The interviewees from the companies in the role of a buyer mostly represented the supply management side (purchasing directors, supply managers, buyers), whereas those in marketing and selling (marketing director, customer director, sales manager) represented companies in the supplier role. In order to obtain additional information and complementary perspectives, interviews were conducted with informants from other company levels and in other positions (CEOs, commercial directors, quality manager). The interview questions covered the roles, positions and relationships of the firms, their resources and capabilities, supply strategies and strategic supply management, information sharing, and the characteristics of the Finnish food industry. The interviews were audio-recorded and the recordings were transcribed and produced 375 pages of data.

4.2 Data analysis

The resulting qualitative data was read several times, notes were taken and pre-coding was done. After perusing the data carefully, the data was color-coded based on the interview themes. The interview themes were selected to be the basis of the coding because it was a logical, systematic and reliable choice and the chain of evidence was ensured. Coding was done manually by the author. The coded and categorized data was subjected to qualitative content analysis. Data reduction, data display, and conclusion drawing and verification were used as techniques of data analysis. According to Yin (2003), the reliability of the study can be increased by using a case study protocol, developing a database and by ensuring the chain of evidence, and this advice was followed (see also Beverland and Lindgreen, 2010). Finally, the data was compared with the theoretical insights and interfaces were sought. This was done by utilizing the literature review made and by collecting complementary literature in order to either find support to the empirical results or explain them. Tables and summaries were used in comparing the empirical data with the theoretical framework.

5 Findings from the Finnish food industry

The value net from the Finnish food industry contains four relationships which have been selected to be the units of analysis of this study. In Relationship 1, the Retailer is in the role of a buyer and the Manufacturer is in a supplier role. In Relationship 2, the Retailer represents the buyer and Supplier A the supplier role. In Relationship 3, the Manufacturer is in the buyer role whereas Supplier A is in the role of a supplier. Finally, in Relationship 4, the Manufacturer is in the buyer role and Supplier B is in the role of a supplier. These relationships and, moreover, the power relations between the parties are discussed next.

5.1 Sources of power and power relations in the case value net

The sources of structural power for the case companies are analyzed by using the framework presented in Figure 2. The sources at the network level are assigned value 3 which means that the company gets 3 points for each network level power source. The value 2 is given to the sources at the relationship level and one point to the sources of power at the organization level. The sources of structural power in the case value net and the measurement of those (see also Figure 2) is presented in Table 1, which shows the evaluation of the power sources in each relationship separately. This is done because even if the level of analysis is the network level, the sources have to be evaluated by separating the relationships because it was noticed that the sources are highly dependent on the other party of the relationship. For example, the Manufacturer has different power sources in relation to Supplier A than in relation to the Retailer. Thereby, the sources of power are evaluated in each relationship differently, but the analysis is still done at the network level because the relationships are embedded in the network and the network-related sources of power are considered. Moreover, the sources of power at the relationship level are closely connected to the sources of the network level and, thereby, the importance of the analysis at the level of network is critical.

Table 1 Sources of structural power in the case value net

	Relationship 1		Relationship 2		Relationship 3		Relationship 4	
Source of power	**R**	**M**	**R**	**S A**	**M**	**S A**	**M**	**S B**
Positions	3		3		3		3	
Network role	3		3		3		3	
Network effects	3		3		3			
Volume of sales and purchases	2		2					
Market power	2		2					
Type of product		2				2		2
Delivery times, costs, quality				2		2		
Importance of relationship	2	2	2		2		2	2
Dependencies	2		2		2			
Information	2		2		2		2	
Investments, Lock-ins		2						2
Relationships		2			2			
Alternatives and substitutes	2		2		2	2	2	2
Switching costs						2		2
Buyer /supplier concentration	2		2					
Expertise, Special knowledge	1	1	1	1	1	1		1
Resources,capabilities,competences	1	1	1	1	1	1	1	1
Size	1		1					
Economic base	1		1					
Technology		1		1		1		1
Brands		1		1				
Total	27 >	12	27 >	6	21 >	11	13 =	13

Table 1 shows that in Relationship 1 the Retailer, in the role of a buyer, has several power sources over the Manufacturer and the power relation between them is characterized by buyer dominance. The table clearly reveals that the power sources related to the network, i.e. network position, network role and network effects, are remarkable power determinants in this relationship. Relationship 2 is also characterized by buyer dominance because the Retailer is clearly dominating Supplier A. It has many more sources of power than Supplier A and its power sources are representing all three levels whereas the supplier's sources mostly represent the organization level sources. Relationship 3 is also characterized by buyer dominance because the Manufacturer, who is in the buyer role, has more power sources and more significant ones than Supplier A. Table 1 reveals that the Manufacturer's sources which are related to its position and role in this value net are in a critical role when defining the nature of this relationship. From Table 1 it can be seen that in addition to the network level sources, the Manufacturer's relationships, their importance as well as dependencies are the sources which make the difference in the amount of power between these actors. The organizational level sources between them are quite even but the significant difference comes from the above-mentioned sources. Relationship 4 is an interesting one because even if the Manufacturer has sources of power that are related to its role and position in the value net, it is not dominating Supplier B. The reason for this is that Supplier B has several relationship level power sources which mainly stem from its special technology and expertise. The relationship between them is characterized by power balance.

5.2 Power relations in supply strategies and strategic supply management

As presented in Table 1, the power relations between the case companies vary due to their different sources of structural power. The importance of power and its role in the relationships has also been recognized by the value net actors, which can be illustrated by a comment from the Retailer's representative: "*Power between the value net actors is very significant when determining the relationships between us.*" The Retailer is quite advanced in strategic supply management as one of its representatives described: "*Strategic supply management determines the background for the supply activities. The goals are set in it and then it is turned into the operative action.*" It has also recognized the value creation role of resources and capabilities and highlighted the importance of supply management by stating that "*we aim at creating value through our strategic supply management.*" Moreover, a Retailer representative had internalized the significance of collaborative relationships: "*In our relationships we aim at achieving competitive advantage which is in fact the main goal of our collaborative relationships.*"

The sources of power between the Retailer and the Manufacturer make the Retailer more powerful than the Manufacturer. The Retailer, in the role of a buyer, stated that "*we have a relationship with a long history and a high level of commitment with the Manufacturer, and we have had this collaborative relationship for years.*" According to the Retailer, "*the turnover of the Manufacturer is high enough and it has power in the category of ready-made meals.*" The Retailer continues: "*We have a collaborative partnership relationship with the Manufacturer.*" This reveals that the Retailer sees the Manufacturer as an important supplier and is willing to have a collaborative relationship with them. What makes this interesting, is the power relation between them and the fact that the Retailer has more power in this relationship. Even if the Retailer is in the dominant role, it is willing to collaborate with the Manufacturer and is, thus, executing a strategy of collaboration.

The Retailer's supply strategy in its relationship with Supplier A significantly differs from the strategy used with the Manufacturer. In its relationship with Supplier A, the Retailer has power benefit as Table 1 shows. Even if the Retailer representative recognized the longevity of the relationship by stating that "*our relationship with Supplier A is over 20 years old and it is our second biggest supplier of flour products,*" it is not willing to execute a supply strategy based on collaboration because, according to the Retailer, "*we do not see Supplier A as a possible partner for strategic collaboration because the company is too small. Our partners should have a turnover that is high enough, they should be market leaders in their business area, and have strategic capabilities and competences that create unique value.*" It can be argued, that Supplier A is not as attractive partner for collaborative relationship as the Manufacturer. The Retailer has stated that "*Supplier A has the expertise in its products, but it does not have anything special from our viewpoint.*" Moreover, the Retailer has more power over Supplier A than over the Manufacturer. The sources of power for the actors are strengths for them and based on the Retailer's opinion, it can be argued that the weaknesses of Supplier A are mainly its size and its value creation ability in the eyes of the Retailer. Therefore, the supply strategy that the Retailer uses is based on competitive strategy.

Supplier A is also in the role of a supplier in its relationship with the Manufacturer. As Table 1 shows, the Manufacturer is the dominant one in this relationship. However, Supplier A has some power sources, like the type of product, technology and special knowledge, towards the Manufacturer. These are mostly related to its products and expertise. Its delivery times, costs and quality are determined to be its power sources as well and according to the Manufacturer "*it is important that our suppliers are able to supply the quality we need with impeccable delivery times.*" The Manufacturer sees potential in this relationship and according to the Manufacturer "*the relationship with Supplier A could be developed further because there is a good basis for collaboration and the relationship has a long history.*" The Manufacturer is interested in executing a supply strategy based on collaboration in its relation to Supplier A, but it still has some doubts mainly because of its willingness to utilize its power position. According to the representative of the Manufacturer, they have determined that "*a collaborative strategy should be utilized when the supplier has suitable raw material with optimal quality and price.*" This shows that the Manufacturer sees that the price is quite an important issue and because of its focus on price-related factors, its willingness to utilize a collaborative strategy suffers from these negative effects. Therefore, it can be determined that in its relation with Supplier A the Manufacturer utilizes a supply strategy that can be located somewhere between collaboration and an arm's length relationship.

In the relationship with Supplier B, the Manufacturer does not have power over the supplier and, as Table 1 shows, the power relation between them is in balance. Supplier B is an important supplier to the Manufacturer because the representative of the Manufacturer has stated that "*we have joint projects with Supplier B because it is important to us that their products are suitable for our needs.*" Moreover, the Manufacturer representative has acknowledged that "*price is not a primary issue when making contracts with suppliers offering the materials in question.*" Unlike in the Manufacturer's relationship with Supplier A, the price is not a primary issue in its relationship with Supplier B. The reason for this is that the items they purchase from Supplier B are technical items with which their functionality is highly critical. Therefore, the Manufacturer sees that the strategy based on collaboration is the only possible option. Also, Supplier B sees their relationship as collaborative by nature and has confirmed that "*we have a collaborative partnership relationship with the Manufacturer.*"

The case study reveals that the case companies are very aware of the importance of collaborative relationships and most of them have determined very distinctly when collaboration will be utilized and with whom it can be utilized. Thus, they have clear strategies regarding collaboration. However, the issue of power as a whole and everything related to it, like the sources of power, power positions and power relations, are quite neglected issues. Only the Retailer has determined how they should act with the suppliers which they are dependent on. As stated by the Retailer representative, "*a relationship that is* *based on collaboration is the right type with the supplier which we are dependent on. With this kind of suppliers we aim at forming long-term, open relationships in which the goal is a win-win situation.*" The Retailer's supply strategies towards Supplier A and the Manufacturer differ, and one reason is the difference in power relations. This same phenomenon can be found in the Manufacturer's relationships towards its suppliers. The results of the case study show that power relations, power positions or sources of power are not seen as important issues in the supply strategy of a firm as, for example, collaboration. All the case companies highlighted the meaning of collaboration and collaborative relationships, but the element of power was left in the background.

6 Conclusions

The study showed that the competitiveness of the firm and the ability to achieve competitive advantage can be connected to strategic supply management. Moreover, when the firm is able to create unique value, it is also able to achieve competitive advantage and to obtain high levels of performance and success. Therefore, the issues of value creation, competitive advantage and firm performance can be connected to the discussion of strategic supply management. However, in buyer–supplier relationships, which are in a significant role both in strategic supply management and value creation, one factor that affects the nature of relationship and, thereby, the value creation ability, competitive advantage and performance as well, is the issue of power.

Thus, the study aimed at analyzing the role of power relations in the supply strategy of a firm. The results of the study indicate that power relations have an influence on the nature of relationships. The study shows that if the relationship is in power imbalance, collaboration may not occur. When one party has power over another, it does not have incentives for collaboration and it may be eager to sustain its power position. This kind of situation was evident in the case study especially in the relationship between the Retailer and Supplier A. In balanced power positions or when the power positions are close to each other, companies have a good basis for collaboration. This was also found from the case study which showed that the Manufacturer and Supplier B, whose power relation was in balance, had a collaborative relationship. The case study revealed that the actors' willingness to collaborate plays a key role when determining the nature of the relationship. This was evident in the relationship between the Retailer and the Manufacturer where the Retailer's willingness to collaborate enabled intensive collaboration even if the power relation was not in balance.

The results of the study revealed that the issue of power and power relations between buyers and suppliers are not so evidently highlighted in the supply strategies and strategic supply management than, for example, collaborative relationships. Somehow it seemed that the interface between power relation and supply management was harder to find than the same interface between collaborative relationship and supply management. Thus, it seemed that power relations are not highlighted as much as collaboration and it were found to be a hiding element in the supply management. This means that when firms are utilizing competitive strategies or other relationships in which collaboration is at a very low level, power may be one of the most crucial factors behind these strategic decisions. This was also found from the case study in which the behavior of the Retailer and the Manufacturer were affected by their power relation. The findings show that the nature of the relationship significantly determines the actions and decisions of supply management. Moreover, the nature of the relationship determines the strategy used. Firms use different kinds of strategies depending on the nature of the relationship, i.e. the strategies and actions are different in collaborative situations and in imbalanced power situations.

Some propositions for future research emerged during this research. Future studies should be directed towards power relations, sources of power and their influence on company performance. One approach would be to use quantitative research methods, and it would therefore be interesting to conduct an extensive survey on the influence of power and sources of power in this respect. Further research should also be directed towards the significance and role of strategic supply management in the value creation of a firm. Even if the changing and expanding role of purchasing and supply management is widely recognized by many academic researchers, the role of strategic supply management has not been widely discussed in the context of value creation. Therefore, value creation from the perspective of strategic supply management and value creation in supply networks should be studied more closely.

Acknowledgements

Author appreciates the feedback of anonymous reviewer(s), whose suggestions have improved the paper.

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APPENDICES

Appendix 1. Interview information

Company	Interviewee's position	Date	Researcher
Manufacturer	Other	15.5.2006	Kähkönen
Manufacturer	Supply management	15.5.2006	Kähkönen
Manufacturer	Other	16.5.2006	Kähkönen
Manufacturer	Supply management	14.5.2006	Kähkönen
Manufacturer	Other	14.6.2006	Kähkönen
Manufacturer	Supply management	16.1.2007	Kähkönen
Manufacturer	Supply management	16.1.2007	Huuhtanen
Manufacturer	Supply management	11.10.2007	Kähkönen
Manufacturer	Other	15.5.2006	Tenkanen
Manufacturer	Supply management	15.5.2006	Tenkanen
Manufacturer	Other	16.5.2006	Tenkanen
Manufacturer	Supply management	14.6.2006	Tenkanen
Manufacturer	Other	14.6.2006	Tenkanen
Manufacturer	Supply management	30.1.2007	Paavola Tenkanen
Manufacturer	Supply management	21.2.2007	Ainasoja
Manufacturer	Marketing and sales	28.2.2007	Ainasoja
Retailer	Supply management	24.11.2006	Paavola Bergius
Retailer	Supply management	30.1.2007	Kähkönen
Retailer	Supply management	19.2.2007	Tenkanen
Retailer	Supply management	19.2.2007	Ainasoja
Retailer	Other	26.2.2007	Kähkönen
Retailer	Supply management	12.7.2007	Kähkönen
Supplier A	Other	12.10.2006	Paavola
Supplier A	Other	3.11.2006	Paavola Bergius
Supplier A	Other	3.11.2006	Huuhtanen
Supplier A	Other	14.5.2007	Kähkönen
Supplier A	Other	14.5.2007	Huuhtanen
Supplier B	Marketing and sales	10.1.2007	Paavola Tenkanen
Supplier B	Marketing and sales	10.1.2007	Huuhtanen

Other: CEOs, Quality manager, Director of commercial operations
Marketing and sales: Customer directors, Sales managers
Supply management: Purchasing directors, Supply managers

Appendix 2. List of interview questions

Interviews were tailored and all the following questions were not necessarily used in all interviews.

Purchasing organization
What kind of purchasing organization does your company have?
How are the responsibilities defined?
How are the purchasing decisions made and by whom?
Does your company utilize centralized purchasing?
What kind of decisions concerning centralization and decentralization have been made?
Does your company utilize purchasing consortiums?
What kind of decisions concerning purchasing consortiums have been made?
What kind of purchasing tools does your company use?

Supply strategy
Does your company have a supply strategy? Is it in the written form?
What kind of elements are included in the supply strategy?
What kind of elements should be included in the supply strategy?
What kind of goals and objectives are determined in the supply strategy?
Is the supply strategy included in the firm's business strategy?

Outsourcing
How is the core competency or capability of your company determined?
How are the outsourcing decisions made? And on what basis?
What kind of goals and objectives does your company try to achieve through outsourcing?
What kind of problems and risks are related to outsourcing?
What is the role of core competencies and capabilities in outsourcing decisions?
What is the role of costs in outsourcing decisions?
How could the competitive advantage of your company be determined?

Supplier relationships
How many suppliers does your company have?
Should the number of suppliers be reduced or increased? Why?
What kinds of decisions concerning supplier relations have been made?
Has your company categorized the purchased items? How and based on what kind of classification? Why?
What kind of decisions does your company have concerning collaboration and partnerships?
What kind of partner selection criteria and decisions does your company have?
When are collaborative relationships utilized? Why?

Value nets and relationships
What kinds of actors are included in this certain value net?
What kind of roles these actors have? How are these roles determined?
What kind of competencies, capabilities and resources do these actors have?
What is the role of your company in this value net?

What are the most significant competencies, capabilities and resources of your company in this value net?
What issues have an influence on the role of your company in this value net? What about the roles of other actors?
Does some actor have the most significant role in this value net? Why?
What kind of power position does your company have in this value net?
What kind of power positions do the other actors have?
What determines these positions?
What kind of sources of power do the other actors have?
What kind of sources of power does your company have?
What kind of relationships there are between the value net actors?
How intensive is collaboration in this value net? How is the character of collaboration or relationship determined?
What kind of dependencies there are between the actors? Are there any?
What causes these dependencies?
What is the role of the actor that the others are dependent on?
How do the dependencies influence relationships, collaboration and power?
What kind of relationship should be formed with the actor which your company is dependent on?
Are the other value net actors dependent on your company? Why?
Is your company dependent on any other actor? Why? What causes this?
Does your company try to exploit these dependencies? How? Why or why not?

Information sharing
Where does your company obtain information concerning end customers? How is the information gathered?
Who is responsible for the analysis of market information?
How is the information analyzed? What kinds of problems occur in analyzing?
How does your company react to the information gathered?
Is the market information utilized in the supply activities of your company? How?
What kind of information is shared openly between the value net partners?
What kind of information is not shared at all? Why?
What kind of information is shared only with the collaborative partners of your company?
What kind of information do the collaborative partners share with your company?
What kind of information is not shared with the partners? Why?
What kind of information would your company like to get from the partners?
Is the information gathered together with the value net partners? How / Why not?
Is the information analyzed together with the value net partners? How / Why not?
What kind of information do your suppliers share with your company?
How is the information shared with the other value net actors? How regular is information sharing?
What are the biggest problems in information sharing between the value net actors?
What kind of benefits can be gained from information sharing?
What is the biggest problem when gathering information about end customers?
How are end customers taken into account?
How is the market knowledge transferred in your organization?
How does your company react to the market conditions?

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