

# The Balancing Act- Cooperating with Competitors

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*Till Isak*



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# **Abstract**

Coopetition, the strategy by which companies cooperate and compete simultaneously in their business relationships, has received increasing attention from scholars and practitioners the last decade. Prior studies show that more than 50 percent of all strategic alliances are between competitors. Despite the recognized importance for firms to develop strategies to manage competitive relationships, the ways in which firms cope with strategic dilemmas in coopetition has not been sufficiently researched.

Firms engaging in coopetition may encounter contradictions, paradoxes and tensions that need to be managed in order for the business relationships to be beneficial. This doctoral thesis consists of five individual but related studies with the overarching aim to advance the understanding of firms' capabilities to balance strategic dilemmas in coopetition. The thesis addresses three research questions. How do firms balance interaction, roles and expectation in coopetition? How do firms balance power and dependency through portfolios of relationship in coopetition? How do firms balance temporalities in coopetition?

The thesis is divided into two parts. Part I introduces the research questions, theoretical framework, method, gives an overview of the research papers, and a concluding discussion of the contribution of each paper in relation to the research questions and the aim of the thesis as a whole. Part II consists of the five research papers all using qualitative methods to examine specific research questions and providing important insights into views of firms' capabilities to balance strategic dilemmas in coopetition. All five research papers explore different aspects of the ways in which companies balance contradicting logics of interactions in coopetition, and how firms manage tensions in the interactions, which is critical for the competitive relationships to evolve and be beneficial. Three of the papers examine firms' capability to adhere to and balance different roles and expectations in coopetition. Firms need to be flexible in their role-playing behavior to act as customers, partners, supplier and competitors in a relationship. These roles may come with conflicting role expectations. Firms' role-playing capability is related to the mindset that is needed in their role performance.

Moreover, the thesis investigates how Small and Medium-sized Enterprises (SMEs) balance power and dependency through portfolios of relationships. These findings are reported in three of the research papers and cover both how SMEs balance asymmetric buyer-supplier relationships by building competitive relationships with SME competitors and how small firms build

and reconfigure portfolios of relationships to balance their relationship with large competitors. The thesis uncovers how SME are able to sustain independence in and to balance asymmetric cooperative relationships if they develop alliance portfolio managing capabilities; build legitimacy, enhance agility and create role flexibility. These capabilities are found to be critical for small firms in balancing and navigating among different cooperative relationships, thereby creating and sustaining business opportunities.

Finally, the thesis explores how companies balance temporalities in competition. Two of the research papers uncover firms' capabilities to balance this dilemma. The studies uncover how firms encounter dilemmas to interact on a temporary basis while sustaining important long-term relations in competition and how increased temporary relationships combined with long-term relationships can create both dynamics and tensions, furthermore how these tensions need to be managed in order to be beneficial.

To conclude, this thesis has comprehensively explored firms' capabilities to balance strategic dilemmas in competition through five studies with different theoretical approaches and multiple cases of large and small firms in different industry settings, covering both more stable industries and dynamic and rapidly changing industries.



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## Appended Papers in Part II

### **Paper 1:**

Johansson M. (2009) Dynamics of Supply Chains, a Study of SMEs in Overlapping Networks, *Licentiate thesis*, Umeå University.

### **Paper 2:**

Bengtsson M. and Johansson M. (2011) Clashes between condensing market regimes: a challenge for firms in converging industries. *European Business Review*, 23(5): 454-476.

### **Paper 3:**

Johansson M., Bengtsson M., Eriksson J. and Wincent J. (2012) A Study on Balancing Cooperation and Competition in a Coopetitive Relationship through Bridging and Bonding.

### **Paper 4:**

Johansson M. (2012) Interaction in dynamic networks: Role playing and its implications for innovation. *IMP Journal*, 6(1): 17-37.

### **Paper 5:**

Bengtsson M. and Johansson M. (2012) Managing Coopetition to Create Opportunities for Small Firms. *International Small Business Journal*, in press.



# Introduction

## ***Setting the Scene***

In today's business landscape the well cited quote "no business is an island" (Håkansson and Snehota, 1989) is more valid than ever. Firms are embedded in many different network formations and interfirm partnerships in order to co-create and appropriate value. To be a member of networks is vital and matters for both large and small firms' strategies and performance (Fjeldstad and Sasson, 2010). Giant firms such as Apple, Microsoft and Google enter and create new markets through alliances. These firms are fierce competitors who collaborate to leverage resources and market positions (Yoffie and Slind, 2006). New and small firms maneuver within these networks to achieve favourable positions and create market niches for their products and services (Santos and Eisenhardt, 2009). These firms act to sustain their independence and avoid being locked into the supply chains of powerful, large companies.

Firms have traditionally adhered to clear and well-defined roles acting as suppliers, customers, partners or competitors in their business relationships. However, as a result of a dynamic and complex business landscape the roles that firms play changes; a supplier in one project can act as a customer or a competitor in another. Mirroring this development, coopetition research has emerged within the strategy literature recognizing that firms compete and cooperate simultaneously (Brandenburger and Nalebuff, 1996; Lado, Boyd and Hanlon, 1997; Bengtsson and Kock, 2000). The rationale for coopetition is that cooperation and competition can co-exist in business relationships and that coopetition can lead to beneficial outcomes (Bengtsson and Kock, 2000). Recent empirical research witnesses how firms engaging in collaboration with their competitors can enhance their time to market, increase their technological diversity (Lou, 2007; Faems, Janssens and van Looy, 2010) or release a new product innovation (Belderbos et al., 2004; Quintana-García and Benavides-Velasco, 2004; Ritala, 2012). However, to collaborate with competitors are challenging and these challenges need to be managed for the relationship to be beneficial. This thesis focuses on how firms manage coopetition and its implications.

## **Industry Dynamics and Networks Change Shapes Coopetition among Firms**

Industries exhibit more or less dynamics in their settings. Economic and strategic factors within firms' industry and network settings give rise to competition among firms in both moderate and dynamic settings. Moderately

dynamic industries go through continuous changes but follow a predictable and linear path (Eisenhardt and Martin, 2000). Competitors often occupy well-established and well-known positions. Furthermore, norms of mutual forbearance often develop among competitors to regulate their competitive behaviour (Chen, 1996; Gimeno, 1999). Therefore, these industries often have stable structures where firms' roles are clearly defined (Eisenhardt and Martin, 2000; Santamaria, Nieto and Barge-Gil, 2009). Companies can to a further extent rely on existing knowledge and develop their resources and capabilities gradually to meet new demands (Greener, 2002). A review of prior research has shown that cooptation is evident and matters for firms in moderately changing industries (Nieto and Santamaria, 2007; Santamaria, Nieto and Barge-Gil, 2009) such as manufacturing (Arranz and Arroyabe, 2008) and forestry (Rusko, 2011). However, engaging in cooptation is probably more difficult in dynamic industries where relationships are rapidly changing.

Many industries are becoming increasingly dynamic (D'Aveni, 1994; Thomas and D'Aveni, 2009). Dynamic industries are characterized by fast-paced change, and an intense rivalry among the firms (Eisenhardt, 1989; Das, 2006; Chen et al., 2010). Chen et al. (2010:1529) use the slogan *you snooze you lose* to capture the competitive situation for firms, particularly in high-tech industries and nascent markets. Researchers have noted that firms' strategies include frequent collaboration with competitors in order to secure temporary advantages (Tuschman and Anderson, 1986; Thomas and D'Aveni, 2009; Chen et al., 2010). The complexity increases as competitors' alliance portfolios often are inter-linked (Dittrich and Duyesters, 2007). According to prior research, cooptation is important for firms' ability to take advantage of temporary opportunities and compete successfully in more dynamic and complex industries.

Both stable and dynamic industries are continuously altered by discontinuities such as deregulations and disruptive innovations crossing boundaries leading to convergence. These discontinuities change the competitive landscapes and blur the roles that companies play (Pralahad and Ramaswamy, 2000). Convergence is a special form of technology and industry change where previously separated knowledge bases meet, causing firms to adopt new technologies, knowledge fields and customer needs (Pennings and Puranam, 2001; Bröring, 2010). Convergence creates both opportunities and challenges. It creates new opportunities in form of new markets, new technical solutions and new customers. It also forces firms to update their knowledge, capabilities and value proposition to meet new customer needs and new competition (Choi and Valikangas, 2001). Industry convergence can be technologically- and market- driven.

Technologically driven convergence is brought by new technologies, such as semiconductors, or nanotechnology, and their rapid diffusion across industry boundaries (Pennings and Puranam, 2001; Malhotra and Gupta, 2001; Bröring, 2010). Prior research has noted that technological convergence drives firms to cooperate with their competitors to accommodate the increasing cost of R&D, upstream product complexity, and shorter product life cycles (Duysters and Hagedoorn, 1995; Gnyawali and Park, 2009; Baumard, 2009). Competitors need to share technological and commercial risks related to technological and market uncertainty (Gnyawali and Park, 2011) with cross licencing agreements (Chen and Chen, 2011) and to reach advantages of scale in standardization alliances (Fjeldstad et al., 2004; Mione, 2009; Guegen and Ischkia, 2011). Market driven convergence includes socio-economic development and deregulation. Deregulation and diffusion of, for example, transportation and telecommunications, foreign investment and international trade have contributed to an integration of demand structures. The effects include greater similarity in customer needs and markets that become increasingly homogeneous over the world (Levitt, 1983). Deregulation allows a bundling of previously well separated and not competing products and services (Pennings and Puranam, 2001; Bröring, 2010). The implication is that firms from previously separated industries meet as competitors.

Another related driver of change from the demand side is that global customers in knowledge intensive industries such as IT and telecommunication, defence and aerospace are becoming more sophisticated than ever in their buyer behaviour (Pralahad and Ramaswamy, 2000; Fjelstad and Sasson, 2010). These global customers demand a customization and integration of pioneering technologies and services in their solutions to differentiate and to bring the most cutting-edge innovations to the market (Lou, 2007; Davies et al., 2007). Value co-creation becomes customer-centric (Davies et al., 2007; Cova and Salle, 2008). As a result, system suppliers are forced to open up their business models, to de-couple and modularize their technical systems (Jacobides, 2006; Chesbrough, 2006; 2011). This creates a higher level of specialization and opportunities for new and small firms to enter into the systems and markets (Wirtz, 2001; Jacobides, 2005).

One recent example is the convergence between the computing and telecommunication industries (Mulligan, 2011). As Hacklin et al. (2010) highlight; it was not so long ago that telephones and computers had little in common. The telephone had its technological base in analogue signal and transmission and the computer in the storage and processing of data. Each industry had its own investors, its own value chains with firms responsible

for R&D and technological development, its own technological standards, competitive dynamics and way of interacting, as well as its own market segments and customers. With the introduction of Internet, firms from both industries saw potential new applications and services, but the Internet also blurred industry boundaries and merged industries that had previously been separate. The result was that business models clashed and the firms fought over the same customers.

These industrial changes generate inter-industry segments, nascent markets, and bring an emergence of new alliances, networks and supply chains (Dong et al., 2004). However, researchers have observed how large, powerful competitors take control over emerging market and new technologies through mergers, acquisition and strategic alliances (Hacklin, 2010). They thereby sustain prevailing industry structures. The aim is often to complement their internal resources, keep and strengthen their dominant positions (Duyester and Hagedoorn, 1998; Gulati et al., 2000). These powerful firms follow a competitive logic either to incorporate or exclude others, to keep their control and protect their profit margin (Davies et al., 2007; Windahl and Lakemond, 2010). By these strategies the large firms are re-arranging the hierarchies and sustaining their power positions. So, contradicting effects on the network structures have been noted. On the one hand, convergence leads to specialization and growth of new market entrants (Brusoni and Pavitt, 2003; Li and Whalley, 2002) giving rise to loosely coupled networks (Sahaym et al., 2007). On the other hand, convergence leads to consolidation and new integrated value chains and alliances where leading firms act to sustain their dominant positions and control over asymmetric buyer-supplier relationships (Hacklin, 2010).

Taken together, contemporary industry settings have elements of both stability with mature and stable supply chains and power regimes where the relationships are long-term and the firms adhered to clear and institutionalized roles, and of an increased openness and emergence of loosely coupled and temporary networks of customers, suppliers, partners and competitors (Dhanaraj and Parkhe, 2006; Sahaym et al., 2007). However, to stay competitive in both stable and dynamic industries it is vital for firms to be part of different alliances to share and combine skills and resources, reduce costs and share risks (Gulati, 1998). Small firms in particular face considerable challenges because of their lack of resources and limited market presence (Baum et al., 2000; Storey, 1994). Small firms often need to build relationships with large, powerful firms to create legitimacy and access markets through their supply chains. In this context they do however need to sustain their independence and avoid being locked into large, powerful firms' supply chains. Although research have shown positive



effects of forming multiple ties (Baum et al., 2000; Ozcan and Eisenhardt, 2009), being part of several networks and playing different roles can be problematic. Firms encounter a number of strategic dilemmas when they attempt to cooperate and compete simultaneously, play different roles and build and reconfigure multiple relationships with sometimes conflicting expectations. Therefore, the ability to strategize and develop capabilities to deal with these dilemmas is essential. Despite this, research of firms' capabilities to manage dilemmas in coopetition is limited.

### **Strategic Dilemmas in Coopetition**

This thesis explores three strategic dilemmas that accompany coopetition. The first dilemma is to engage simultaneously in cooperative and competitive interactions in a relationship (Dagnino and Padula, 2007). These two forms of interactions rely on contradictory, often conflicting logics (Bengtsson and Kock, 2000). A cooperative logic relies on sharing of information, knowledge and resources which is facilitated by relational mechanisms of trust, commitment and reciprocity that are needed for learning and knowledge exchange in the relationship (Dyer and Singh, 1998; Håkansson and Snehota, 1995). A competitive logic, in contrast, relies on rivalry, hostility and sometimes conflicts that can compel firms to be innovative, alert and vigilant to new opportunities (Oakley, 1990; Ellig and Lin, 2001; Gomes-Casseres, 1994). A managerial dilemma is how to uphold cooperation and competition simultaneously without suppressing one of the two logics. More research is called for to examine the paradoxical nature of competition and how firms manage this complexity over time (Chen, 2008; Gnyawali and Park, 2009).

Moreover, to engage in coopetition actors adhere to different, sometime conflicting roles and expectations. To act as a competitor in one activity and as a partner in another can create a clash of expectations and demands (Leonard-Barton, 1992; Benner and Tushman, 2003) and an ambiguity of how to act in a relationship (Zeng and Chen, 2003; Wincent and Örtqvist, 2009). These contradictions and conflicts need to be managed for the cooperative relationship to be productive and have beneficial outcomes. There has been a dearth of research into firms' capabilities to be flexible and to perform different roles in coopetition; little is also known about the implications of firms' role-playing behaviour. Few studies have investigated how firms develop the capabilities to uphold and balance contradicting logics of interaction, roles and expectations in coopetition. These capabilities are needed if cooperative relationships are to evolve and generate beneficial outcomes. This leads to the first research question:

*- How do firms uphold and balance contradicting interactions, roles and expectations, simultaneously and over time?*

A second dilemma is the management of power and dependency asymmetries in cooperative relationships (Gulati and Stytch, 2007). Small firms are especially vulnerable to the dilemma of being in a dependency position in their relationships with large firms (Katila et al., 2008). These relationships are asymmetric, because of the power imbalance between the firms. Research on cooperation in a small business context has foremost focused on how SMEs collaborate with SMEs competitors to reach economies of scale, mitigate risks and complement each other's resources (e.g. Levy et al., 2003; Quintana-Garcia and Benavides-Velasco, 2004; Morris et al., 2007; Gnyawali and Park, 2009). Cooperation literature lacks insights of how SMEs balance such asymmetrical relationships with large competitors to create and sustain business opportunities. There is also very little research into how small firms caught in the overlap between different network structures can balance and take advantage of their position. The firms in today's business landscape join several alliances to strengthen their resources and enhance their performance (Gulati, 2007; Lavie, 2007; Ozcan and Eisenhardt, 2009). Research on cooperation has foremost focused on dyadic relationships, ignored how firms' portfolios of relationships affects the firm's ability to balance power and dependency asymmetries in cooperation. In this vein, dyadic cooperative relationships cannot be analyzed in isolation. Firms need to balance dependencies in portfolios of relationships and consider how their interaction with one partner can affect present and future relationships. These gaps in the literature lead to the third research question:

*- How do firms balance power and dependency through portfolios of relationships in cooperation?*

A third dilemma is that cooperative relationships are unstable (Park and Russo, 1996). The premise of instability is that a relationship becomes unstable if following an unexpected major change, disruption, or dissolution (Inkpen and Beamish, 1997; Das and Teng, 2000). In cooperation, a competitor can at any time disrupt its engagement, stop cooperating, change its strategic objective, make changes in its product portfolio, or develop the product by itself, hence ceasing to be a partner in cooperation and becoming a direct competitor (Yami et al., 2010). Despite these insights much remains to be known about the aspect of time in cooperation. Taking into account the increased pace of change in many industries, the temporary aspect of relationships must be accounted for in order to understand how to balance cooperation and its implications. There is a general lack of understanding of

how firms cope with divergent time-orientations in relationships, if they act with a long-term or a temporal intention (Andersson and Mattsson, 2010). An actor with a long-term intention has different expectations from an actor with a temporal one. Prior research into cooptation has neglected the dimension of time and how firms cope with and manage both temporary and long-term relationships. For this reason, research on cooptation calls for more studies of how firms manage time-related dilemmas in cooptation (c.f. Yami et al., 2010; Czakon, 2010). This leads to the third research question:

- *How do firms balance temporalities in cooptation?*

Although the literature on cooptation is growing, it is still a new perspective within strategic management and network literature, one that is still fragmented and underdeveloped (Chen, 2008). There is an ambiguity and a lack of knowledge of how firms balance these critical issues in cooptation which is vital for the relationships to evolve (Chen 2008; Gnyawali and Park 2011; Ritala, 2012). Researchers call for more longitudinal studies of firms' capabilities to balance cooptation, arguing that the knowledge of the manner in which firms manage cooptation over time is still a "black box phenomenon" (Bengtsson et al., 2010b:32).

Deriving from this background this thesis consists of five studies with the overarching aim to advance the understanding of firms' capabilities to balance strategic dilemmas in cooptation.

The five studies that comprise this thesis have different approaches. All of them represent departures from different theoretical frameworks with case studies of firms in both stable and dynamic industry settings.

The remainder of this introductory chapter is structured as follows. The theoretical framework summarises the literature that constitutes the conceptual basis of the thesis. The next section describes the methodological considerations, research design and strategies of the five studies. This is followed by an extended summary of each paper, presenting its core and contributions. Finally a concluding section recapitulates the findings of the research papers, presents the conclusions of the thesis, discusses the limitations of the thesis and offers suggestions for future research.

## **Theoretical Framework**

The thesis is positioned within the strategic management literature and network theory, addresses the management of coopetition. With its birth half a century ago (1960) strategic management falls under the economic paradigm and has an inherent competitive view. Strategic management scholars are concerned with the sources of firms' performance and how firms develop strategies to achieve, sustain and strengthen their competitive advantages (Herrmann, 2005). Over time, two divergent but widely accepted paradigms of firm strategy have been developed and dominated the literature: the competitive paradigm and cooperative paradigm. The competition literature acknowledges that firms simultaneously pursue collaborative and competitive strategies in relationships and both challenges and extends these pre-dominant perspectives (Padula and Dagnino, 2007). The competition paradigm is central to the resource-based theory including the knowledge-based view and dynamic capability view. The cooperation paradigm dominates the strategic alliance literature and network theory. An important note for this thesis is that coopetition literature is closely interrelated to the literature on horizontal strategic alliances, where coopetition offers a narrower analysis of firms' pursuit of simultaneous cooperation and competition in their relationships and analysis of its interdependences on multiple levels (Lou, 2005; Dagnino and Rocco, 2009). The theoretical streams -- the resource-based view, the relational based view, the strategic alliance literature, and network theory -- provide the conceptual basis for the understanding of how firms balance the dilemmas of coopetition.

### **A Resource-based View**

The resource-based view emerged as an extension to the industry structural view of firm's sustainable competitive advantages (Barney, 1991; Mahoney and Pandian, 1992; Peteraf and Barney, 2003). The competitive paradigm was mainly developed from the industrial organization (IO) view by Bain (1968) and the seminal work of Porter (1980) who takes the structural conditions within an industry as the main predictor of a firm's competitiveness (see also Caves and Porter 1977; Henderson and Cockburn 1994). From the IO view firms can use their position within an industry structure to develop their competitive advantages (Porter, 1979; 1980; 1998). Firms with favourable structural conditions in form of strong bargaining power and few rivals due to high barriers to entry can withhold its dominant position. Structural characteristics of an industry such as the degree of

vertical integration and entry barrier with the degree of diversification and differentiation can explain the competitive advantages of the firm (c.f. McKie, 1970; Schmalensee, 1988; Feurgeson and Feurgeson, 1994). Within this perspective the underlying structure of the industry ultimately sets conditions for firms to develop and sustain its competitive position.

The resource-based view complements the IO view, by analyzing how firms' resources and capabilities are organized internally to achieve and sustain competitive advantages (Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Teece et al., 1997). This view has traditionally had an inward focus of the firm and its theoretical core is that firms are conceptualized as a bundle of resources and capabilities in the form of physical, human and organizational assets (Eisenhardt and Martin, 2000; Lavie, 2006). To gain and sustain a competitive advantage, firms must acquire and control resources and capabilities that are valuable, rare and difficult to imitate or substitute for other firms; so called "VRIN attributes" (Barney, 1991; Nelson, 1991; Conner and Prahalad, 1996). By being in control of these resources, firms' competitive strategies can be differentiated and sustained (Mahoney and Pandian, 1992; Amit and Schoemaker, 1993; Wernerfelt, 1984). The resources and capabilities form companies' divergent value propositions and competitive strategies, which lead to competitive advantages (Prahalad and Hamel, 1990; Collis, 1994).

According to the resource-based view, firms' technological and market capabilities evolve over time and there is an industry-specific path-dependency in firms' knowledge and capabilities (Teece et al., 1997; Lei, 2000; Fai and von Thunzelmann, 2001). Firms' path dependency is shaped by technological trajectories, and constrained by complementary resources that firm develop over time, which build on and extend the existing, often industry-specific resources and capabilities (Dosi, 1982; Teece et al., 1997; Greener, 2002). To be able to internalize new technology and develop a broad set of resources required for complex technology and changing needs requires time and stability, both of which are rare commodities in fast moving industries and accelerating technological change (Tushman and Andersson, 1986). According to the traditional resource-based view, firms may be trapped by the past and there is an inherent tension in the contradiction of being consistent with the firm's path dependency and adapting to changes in dynamic markets (Teece et al., 1994). When a firm deviated from its path-dependence, for instance in an industry convergence, it will encounter knowledge, capability and resource gaps (Lei, 2000; Bröring, 2010). The resource-based view can contribute to explain causes of firms' difficulties in adjusting to changes in form of tension and rigidities, and in entering new industries and market segments. It is, however, not

sufficient in explaining how firms should cope with changes in their business environment (Kraaijenbrink, Spender and Groen, 2010).

The resource-based view has therefore developed in several directions and in different fields of strategic management literature. One of these fields emphasizes the importance of learning and knowledge accumulation, and the need for firms to develop their capabilities in order to manage knowledge and learning processes (Conner and Prahalad, 1996; Grant, 1996). This stream of literature which is part of the resource-based view includes the knowledge-based view of the firm (Kogut and Zander, 1992; Nonaka, 1994; Grant, 1996). Scholars who espouse a knowledge-based view, perceives that resources being valuable, rare and difficult to imitate for firms today mainly remains in the knowledge, capabilities and experience of individuals, and in routines and practices of learning within and between firms (Grant, 1996; Kogut and Zander, 1992).

Another stream of literature focuses on dynamics and firms development of dynamic capabilities (Teece et al., 1997; Eisenhardt and Martin, 2000; Zollo and Winter, 2002; Winter, 2003). These researchers argue that firms need to develop “the [...] ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments” (Teece et al., 1997:516). Dynamic capability is the capacity of a firm to create, extend, or modify its resources or skills (Helfat, 2007). Eisenhardt and Martin (2000) suggest that the forms of dynamic capabilities depend on industry dynamics, and that the traditional resource-based view is limited as a theoretical explanation in more dynamic and fast-paced industries. Both the knowledge-based view and the dynamic capability view contribute to an understanding that firms need to access external resources through relationships with other firms.

The resource-based view, comprising the knowledge-based and dynamic capability view, can offer with rationales of why firm engage in cooptation, and to some extent the dynamics of cooptation. Scholars from the resource-based view explain cooptation as the need for firms to mobilize resources and capabilities from their competitors (Hamel 1991; Lavie, 2006). The resource-based view can further contribute to the understanding of potential benefits and risks of engaging in cooptation (c.f. Gnyawali and Park, 2009; Ritala, 2012). This is elaborated upon in the section on the drivers and outcomes of cooptation. However, the resource-based view is insufficient to explain the process of cooptation, how cooptative relationships form and evolve their dynamics and how firms balance many cooptative relationships (Schiaivone and Simoni, 2011). Therefore a relational- based view of the firm and its strategic alliances with competitors is needed.

## **A Relation-based View**

The strategic management literature has acknowledged that firms are embedded in networks (Powell, Koput and Smith-Doerr, 1996) with many diverse partners (Baum, et al., 2000) all of whom can provide a diversity of resources, information and flexibilities (Ozcan and Eisenhardt, 2009). Because of the drivers and dynamics within industries, firms are being forced to open up their proprietary business models and value chains in order to succeed in their R&D activities and market performance (Chesbrough, 2006, 2011). Firms must co-create value in alliances (Lavie, 2006). The traditional resource-based view with an inward, proprietary assumption of firms' ownership and control of resources therefore has to be integrated and extended with a relational view of the firm and its strategy (Lavie, 2006).

The relational-based view of the firm has been developed within the strategic management literature (Dyer and Singh, 1998; Gulati, 1998; Gulati, Nohria and Zaheer, 2000). The relational-based view contributes knowledge about why firms form relational ties with customers, partners and competitors and how strategic alliances can add value to firms (Gulati, 1998). From the relational-based view, critical resources spans firm's boundaries and are embedded in inter-firm relationships and networks (Dyer and Singh, 1998). Strategic alliances and their structure, form and function, type of connections, contents and governance differ (Provan, Fish and Sydow, 2007). A strategic alliance can be an R&D alliance, a joint venture, a technological consortium or industry alliance, but all of these are voluntary arrangements between independent firms (Gulati, 1998). Firms' portfolios of alliances have further gained attention as an important part of firms' strategies (Baum et al., 2000; Lavie, 2006). Alliance portfolios are defined either as firms' egocentric alliance network and its set of direct ties (Baum, 2000; Jacobides, 2005; Ozcan and Eisenhardt, 2009) or as firms' total portfolio of strategic alliances (Bae and Gargiulo, 2004; Lavie, 2007; Wassmer, 2010).

In line with the relation-based view, critical resources are owned by customers, suppliers, partners and competitors and can be accessed through network ties (Lavie 2006; Fjelstad and Sasson, 2010). These network resources can open up new opportunities and enrich the firm with technological complementarities (Powell et al., 1996) and market capabilities (Henderson, 2006; Slater and Moore, 2006) to reduce market uncertainties (Lee, 2007). Following the literature within the knowledge- and capability - based view; network resources can be used to improve learning and innovation performance (Powell et al., 1996; Baum et al., 2000; Shan,

Walker and Kogut, 1994). Consequently, firms' learning and innovation performance can be enhanced by access to and transfer of codified and tacit knowledge (Ahuja, 2000; Doz and Hamel, 1997; Eisenhardt and Schoonhoven, 1996) and a spread of R&D costs among several partners (Hagedoorn, 2002). Forming ties with partners may hence lower the costs and reduce risks associated with R&D and innovation projects (Faems, van Loy and Debackere, 2005). Ultimately, firms can benefit from network resources to create and develop resources that otherwise would be difficult to mobilize (Das and Teng, 2000). From this perspective, collaboration is a deliberate and intentional strategic choice aimed at reaching beneficial outcomes.

However, firms differ in their abilities to access and leverage network resources (Lee, 2007). Research shows how alliances are difficult to manage, often fails or have a low success rate (Anand and Khanna, 2000; Kale and Singh, 2007). Firms therefore have to develop their capabilities to manage networks rising different relationships. The capabilities have been termed differently in the strategy literature, including network capabilities (Kogut and Zander, 1992; Anand and Khanna, 2000), relational capabilities (Lorenzoni and Lipperarini, 1999) and alliance management capabilities (Rothaermel and Deeds 2006; Kale and Singh, 2007).

Firms have to develop their network capabilities. If they are to act, interact and form alliances (Kogut and Zander, 1992). Network capabilities are used to utilize, combine and acquire the resources of other firm to enhance its performance and reach competitive advantages (Gulati, 1995; Dyer and Singh, 1998; Gulati, Nohria and Zaheer, 2000). Kale et al. (2000) adds relational skills and partner knowledge to these capabilities and describe relational capabilities as a balance between learning from partners and protecting firm-specific capabilities. These relational skills can create friendship, trust and respect between the firms. Rothaermel and Deeds (2006) define alliance management capability as a firm's ability to manage multiple alliances effectively. Kale and Singh (2007) note how firms' accumulated alliance experience, use of know-how and dynamic capabilities affect alliance success. Heimerics and Duyesters (2007) depict alliance portfolio capabilities as a learning capability that is needed to share knowledge in multiple alliances.

A relation-based view of firms' capabilities and strategy is useful to further explore firms' capabilities to manage cooperative relationships. However, forming and developing relationship with competitors requires additional capabilities, to balancing elements of both cooperation and of competition in dyadic relationships and in portfolios of alliances. These capabilities have



not been explored in the strategic alliance literature. Also, firms' network embeddedness and its influence of firms' strategies need to be considered to explore how firms manage strategic dilemmas in cooptation.

### **The Network Embeddedness of Firms' Cooperative and Competitive Strategies**

In a networking context firms need to maneuver and position themselves in networks to obtain information and resource advantages (Hagedoorn et al., 2006). In this vein, network theory has advanced the strategic alliance literature with studies of performance implications on strategic alliances (Gulati, Nohria and Zaheer, 2000) and how structural conditions such as network density, centrality and composition affect firms' competitive actions and innovative performance (Ahuja, 2000; Baum et al., 2000; Lavie, 2007). Cooptation researchers have also suggested that cooptation should be conceived as a network embeddedness phenomenon (Gnyawali and Madhavan, 2001; Gimeno, 2004). The focus of network theory is the quality of network ties and structural and relational aspects of embeddedness (Granovetter, 1985; Borgatti and Foster, 2003). The structural aspect concerns with the pattern of connection between actors, network positions, and the pattern of linkages and network ties (Burt, 1992; Granovetter, 1973). On a structural level, the composite of network ties and network centrality become the source of firms' competitive advantages (Freeman, 1979; Burt, 1992). The relational aspects focus on the substance of relationships and the encouragement of normative behaviour based on relational mechanisms such as trust and trustworthiness (Fukuyama, 1995; Uzzi, 1996), norms and sanctions (Coleman, 1990), obligations and expectations (Coleman, 1990; Granovetter, 1985). Relational aspects also include how firms' legitimacy, status and reputation can be strengthened by membership in networks (Coleman, 1990). These relational mechanisms are needed to share and exchange resources, capabilities and information (Ozcan and Eisenhardt 2009). Consequently, the structural aspects can be a source of value and the relational aspects concern the substance of value in networks (Portes, 1998; Adler and Kwon, 2002).

Firms' structural and relational embeddedness in networks is useful to understand competitive behaviour (Granovetter, 1985; Burt, 1992; Uzzi, 1996). Companies' collaborative and competitive strategies and actions are embedded in, influenced by and enabled by their networks (Gnyawali and Madhavan, 2001; Gimeno, 2004). A social embeddedness among firms has been shown to reduce the uncertainty of potential partners' quality and increase the likelihood of forming network ties with others that are already connected (Burt, 1992; Gulati and Gargiulo, 1999). However, researchers

have also noted the contradictory effects of how a firm's current network position and prior experiences on network formations determine how it develops its future ties (Larson, 1992; Ozcan and Eisenhardt, 2009). Firms tend to form ties with the same partners, or their partners with a known reputation in an extended network (Gulati, 2007). This behaviour shaped by initial resources and ties may create a stability, but also pose the risk of inertia (Mauer and Ebers, 2006; Kim, Oh and Swaminathan, 2006) and negative consequences of path-dependencies (Ozcan and Eisenhardt, 2009; Prashantham and Dhanaraj, 2010). Inertia and resource- and path-dependencies can destroy firms' competitive advantages and their ability to identify and act on novel opportunities.

A vital implication is that network position and centrality in itself does not translate to resources strength and power of a firm. What matters is the firm's strategic agency and actions to manage and utilize its network ties over time (Hoffmann, 2007; Ozcan and Eisenhardt 2009) to keep or strengthen its position (Prashantham and Dhanaraj 2010).

Taken together, firms need to develop their capabilities to manage multiple relationships of suppliers, customers, competitors and partners simultaneously, and to leverage their network resources (Dhanaraj and Parkhe, 2006; Lavie, 2007). Knowledge of firms' network embeddedness and strategic actions to cope with and leverage network relations and utilize network resources are vital in understanding how firms manage dilemmas of competition. Network theory is used in the thesis to understand of how firms' network embeddedness influences their cooperative and competitive strategies and actions (Gnyawali and Madhavan 2001, Ozcan and Eisenhardt 2009; Prashantham and Dhanaraj, 2010).

### **Coopetition – The Duality of Cooperation and Competition**

This section gives an overview of coopetition research and its conceptual development, followed by a review of drivers, dynamics and outcome of competition reported in prior research. The purpose is not to present a comprehensive literature review of coopetition but to discuss some representative research of rationales to coopetition, dynamics of cooperative relationships and its outcomes. This lays a foundation for the understanding of how the thesis relates to and contributes to the literature.

#### *Coopetition- conceptual development and definition for this thesis*

The term coopetition captures the duality of cooperation and competition. Brandenburger and Nalebuff (1996) coined the term. They regard

coopetition as comprising many relationships in a value network of customers, suppliers, substitutes and complementors. According to them, two firms can complement each other and compete with a third firm in the value net. Lado, Boyd and Hanlon (1997) contributed to the understanding of coopetition, proposing that we need to understand cooperation and competition as two independent dimensions, not as two extremes of one continuum. Although Lado et al. (1997) did not use the term *coopetition* they proposed that firms pursue both cooperative and competitive strategies simultaneously to gain economic rents and enhanced performance, differing from the conceptualization of Brandenburger and Nalebuff (1996). Lado et al. (1997) conceptualize cooperation and competition as four cell typology of 'rent-seeking behaviour' with high versus low cooperation and competition, thus initiating the discussion of dynamics between cooperation and competition. Rent-seeking behaviour refers to firms' search for resources and capabilities that enable value-creating strategies and economic returns. Bengtsson and Kock (1999) suggest that depending on their position in an industry structure and the need for external resources, firms can choose among four relational modes: competition, co-existence, cooperation and coopetition. Bengtsson and Kock (2000) provide narrower definition of coopetition, which they define as inherent in one and same relationship between two firms that cooperate in some activities but not in others. The focus on activities instead of actors enables researchers to capture the dynamics and tension that can explain why coopetitive relationships can be beneficial. The contributions of Nalebuff and Brandenburger (1996) Lado et al. (1997) and Bengtsson and Kock (1999, 2000) are hallmarks of coopetition theory, and are cited in the majority of research on the topic (Yami et al., 2010).

As the literature of coopetition has grown, so has the number of definitions (Padula and Dagnino 2007; Bengtsson et al., 2010). This thesis conceptualizes coopetition as processes of simultaneous and mutual cooperative and competitive interactions between two or more actors (Bengtsson et al., 2010a). The process view, emphasizing the interdependency and the simultaneous aspects of coopetition, acknowledges that two actors can have mutually competitive and as cooperative interactions, that affect each other and can vary in strength, simultaneously and over time (Bengtsson and Kock 2000; Padula and Dagnino 2007). Moreover, to conceptualize cooperation and competition processes to occur on two continua allows an understanding of the interplay between cooperation and competition, the ability to balance the contradicting interactions, and potential tensions appearing in different situations.

## **Coopetition - Drivers, Dynamics and Outcome**

Within recent research on coopetition there are three overall research streams; the drivers, dynamics and outcome of coopetition (cf. Padula and Dagnino, 2007; Gnyawali and Park, 2009, 2011; Peng et al., 2011).

Drivers of coopetition describes why firm collaborate with their competitors, these drivers can be decomposed into structural conditions, contextual drivers and firms' motives. Contextual drivers such as market and technology convergence and network dynamics push companies to engage in coopetition. Companies within many industries have to cope with upstream product complexity, high R&D costs, shorter product life cycles, demands for customization of their offerings, and shorter time-to-market (Baumard, 2009; Gnyawali and Park, 2011). These external factors drive firms to engage in coopetition to access and utilize their competitors' resources and capabilities (Hagedoorn, 1993).

Moreover, their own strategies, resources and capabilities are likely to motivate firms to collaborate with competitors. The reasons for engaging in coopetition are to mobilize and leverage resources, knowledge and capabilities from competitors needed in technological development and creation of new markets (Padula and Dagnino 2007; Ritala, 2012). High similarity of resources among competitors can facilitate the strategic alignment and stimulate cooperation (Dussauge et al., 2000; Das and Teng, 2000). Similarities of competitors' resources, knowledge base and capabilities can utilize cooperation on a strategic level, to share risks and reach advantages of scale (Emden, Calantone and Droge, 2006; Gnyawali and Park, 2009). Moreover, similarities of a partner's technological base and market understanding are vital in R&D and innovation activities in order to share and exchange codified knowledge (Gnyawali et al., 2006). In this vein, similarities of knowledge and capabilities are prerequisites for mutual learning, and the ability to use absorptive capacities to acquire and leverage knowledge into commercial ends (Cohen and Levintal, 1990). Accordingly, trust and commitment are needed to share knowledge and information in competitive relationships (Gulati 1995; Dyer and Singh 1998).

Further rationales to engage in coopetition are to access, integrate and bundle diverse and complementary resources from competitors (Bengtsson and Kock, 2000; Gnyawali and Park, 2009; Peng and Bourne, 2009). A diversity of resources, knowledge and capabilities is necessary for the creation of new innovations (Nelson and Winter, 1982; Nonaka, 1994). Empirical studies show that firm cooperate with competitor to enhance its resource diversity, integrate technologies to advance technological

innovations (Quintana-Garcia and Benavides-Valesco, 2004; Gnyawali and Park, 2011) and bring new innovation to a market (Ritala, 2012).

These drivers to engage in co-opetition can also create *dynamics* in co-opetition as the relationship evolves, which is the second stream of research in co-opetition. Following the process view where cooperation and competition can vary in strength simultaneously and over time; co-opetition is dynamic (Lou 2007; Padula and Dagnino 2007; Lou 2007; Bengtsson, Eriksson and Wincent 2010). The process of co-opetition entails interactions among competitors as the relationship forms and evolves (Gnyawali and Park, 2011). Drawing from the previous discussion; high similarities of resources together with high market commonality among competitors can give rise to intense competition and strong competitive tension in a relationship (Chen, 1996; Chen, Su and Tsai, 2007). Partners with similar resources are likely to have similar strategic capabilities as well as competitive actions and strategies, which together will strengthen the competition element (Dussage et al., 2000; Harrison et al., 2001; Galvagno and Garraffo, 2010). Strong competition is characterized by rivalry, hostility and frequent moves and countermoves of the partners to win on a market, or with a new innovation (Chen and MacMillan, 1992; Chen, 2008). Competitive tensions can stimulate firms to improve and develop (Oakley, 1990; Ellig and Lin, 2001). Therefore, strong competition and competitive tensions can give rise to a dynamic interplay but does require a capability to balance the competitive elements for the relationship to evolve. If competition prevails, the risk is that the relationship will cease to evolve, or will fail.

Diverse and complementary resources and capabilities among competitors give rise to other forms of dynamics in co-opetition, because of the likely increase in the cooperation element (Dussage et al., 2000). Resource complementarity may reduce competitive tensions and related risks of opportunism and increase the possibility of knowledge exchange and organizational learning (Sarkar et al., 2001; Das and Teng, 2000; Gnyawali and Park, 2009). Cooperation increases when firms commit themselves to share and combine complementary knowledge and resources in new and novel ways (Håkansson and Waluszewski, 2007). However the strength of cooperation does also need to be balanced so as not to create a risk of overembeddedness and inertia that can be harmful to firms' alertness to see and act on novel opportunities (Uzzi, 1996; Kim, Oh and Swaminathan, 2006). Overly strong cooperation together with low degree of competition in relationships risks collusive behaviour, such as cartels, or in passive behaviour if the firms do not see each other as competitors (Easton and Araujo, 1992; Bengtsson et al., 2010a).

Peng et al. (2011) examined cooptition dynamics within Taiwanese supermarket networks and proposed how cooperation among competitors increases the partners' market power, but also their market commonality thereby intensifying the competitive element as the relationship evolves. Their study reveals how competitive tension did foster cooperation among the firms. Other studies propose how firm market commonality drives competition and how resource asymmetry among firms can strengthen cooperation (Lou, 2007). Gnyawali and Park (2011) investigated the competitive relationship between Samsung Electronics and Sony Corporation and their joint development of LCD TV panels, thus adding to the knowledge of how firms need to possess a cooptitive capability. This capability is a mindset that makes it easier for firms to accept their involvement both cooperation and competition. To benefit from these relationships, they need to play by the "rules of the game" (Gnyawali and Park, 2011).

As cooperation and competition is rooted in the same relationship, the structural characteristics of a partner are critical for identifying opportunities but they can also cause tensions (Ingram and Yue, 2008). Research suggests that simultaneous cooperation and competition is facilitated by a similarity in the partners' status and size, but that their resource bases are complementary (Das and Teng, 2000). Dynamics of competition are thus shaped by partners' characteristics and firms' capabilities to manage tensions and to balance the relationship (Gnyawali and Park, 2011). It can therefore be concluded that engagement in competition requires balancing act; but ways in which firms learn to balance competition over time has not been explored in the literature.

The third area of research explores the *outcome of cooptition* in form of benefits and risks. Earlier studies have uncovered how cooptition can be beneficial. Cooperation with competitor can enhance firms' market performance (Lou, Rindfleisch and Tse, 2007), innovation output (Belderbos et al., 2004; Faems et al., 2010) and new market creation (Fjelstad, Becerra and Naryanan, 2004; Lou, 2007; Ritala, 2012). A cooptition strategy can be used to protect market shares, or to capture a larger share of an existing or an emerging market (Lavie, 2006; Santos and Eisenhardt, 2009). Ritala's (2012) empirical study proposed how cooptition can increase innovation and market performance for firms in markets conditioned by high market uncertainty and high potential of network externalities, evident in many high-tech industries, as competitors share risks and costs (see also Baughn et al., 1997; Teather, 2002). Gnyawali, He and Madhavan (2006) demonstrate how firms by engaging in cooptition are able to co-opt their main rivals,

protect their market positions and interests, and support new technical trajectories beneficial for their strategic competitive performance.

Nevertheless, cooptation can have negative consequences. Firms risk the loss of proprietary knowledge when collaborating with a competitor. Competitors with high absorptive capacity and which often possess similar resources can easily acquire and apply the knowledge which is made visible in the knowledge exchange (Dussauge et al., 2000; Zeng and Chen 2003; Lou et al., 2007). Critical knowledge can unintentionally be leaked, for instance in R&D projects (Heiman and Nickerson, 2004). Risk of loss of control is another drawback of cooptation, especially when a small firm is partnered with a larger, powerful firm (Rothaermel and Deeds, 2004). Intense interfirm rivalry and concerns about opportunism may impede value creation due to restrictions in information and knowledge sharing (Oxley and Sampson, 2004). Cooptation may also lead to detrimental races for knowledge within the relationship before it ends (Hamel, 1991). These races can generate innovation, but are shown harmful to alliance success (Kim and Parkhe, 2009). Consequently, firms' strategic actions to be first to market or with a new technology can damage the relationship which may fail, or at least cause mistrust and opportunistic behaviour (Dyer and Singh, 1998; Park and Russo, 1996; Kim and Parkhe, 2000; Gomes-Casseres, 1994).

Hence researchers have noted a contradiction in the resource and knowledge exchange in cooptation as the knowledge shared can be used by the partner with both cooperative and competitive intents (Baumard, 2009). Partners should not have blind trust in each other as it may lead to loss of propriety technology and market capabilities (Rindfleisch and Moorman, 2003; Lou et al., 2007). At the same time they should share a sufficient amount of information with the competitors for the relation to be productive. Scholars have indicated that achieving a balance in competition and cooperation might be important (Bengtsson et al. 2010; Gnyawali and Park, 2011), but few researchers have explored how to balancing different strategic dilemmas in cooptation. The studies in this thesis offer new insights of firms' capabilities to manage cooptation.

### **Exploring Capabilities and Acts of Balance in Cooptation – Relating the Research Papers to the Body of Literature**

Cooptation, its drivers, dynamics and outcome have received conceptual and empirical attention and have enriched the cooptation literature. Drawing from the prior body of research, abilities to manage these relationships depends on the scope, intensity and duration of cooperation and

competition, where structural conditions of the partner in form of status, size, market commonality and resource similarity matters.

Firms' capabilities to maintain a balance of strategic dilemmas in cooptition over time still merit further scrutiny. The studies address several of the gaps in relation to research on these three strategic dilemmas in cooptition, how they are managed and its implications. Table 1 shows how each paper enhances the understanding of each strategic dilemma.

<b>Strategic Dilemmas in Cooptition</b>	<b>Research Paper.</b>
<b>Balancing interactions, roles and expectations</b>	Papers 1, 2, 3, 4, 5
<b>Balancing power and dependency with portfolios of relationship</b>	Papers 1, 3, 5
<b>Balancing temporalities</b>	Papers 4, 5

**Table 1:** Relation between research questions and research papers

Firstly, in terms of interactions, roles and expectations this thesis argues that prior to researchers have failed to arrive at an in-depth understanding of how firms uphold and balance cooperation and competition interactions in relationships simultaneously and over time. Prior research has conceptualized cooptition as contradictory and challenging, but has limited considerations of how firms manage tensions and how firms adhere to and balance different roles and expectations. Nor have researchers explored how firms learn to be flexible in their role-behaviour and related mindset. Consequently, this thesis examines firms' ability to balance contradicting interactions, roles and expectations in cooptition and the implications for firms' strategies, innovation and creation of business opportunities.

Secondly, the thesis identifies gaps in research on the ways in which firms balance power and dependency asymmetries in cooptitive relationships. Small firms are especially vulnerable because of their dependence on large firms. These small firms need to build and reconfigure their portfolios of relationship to avoid being locked in, or outcompeted by powerful competitors. Prior research in cooptition has focused on dyadic relationships, to the exclusion of the ways in which firms' portfolios of cooptitive relationships affect each other and the firms' strategies. This is a shortcoming because the dilemma of managing portfolios of cooptitive relationships may be most pronounced in dynamic and complex environments, but is also evident in more stable industries. This thesis



explore how firms balance power and dependency asymmetries in competition by building and reconfiguring portfolios of relationships, and how these capabilities matter to firms' competitiveness and development of business opportunities.

Thirdly, researchers in strategic alliances and competition have concluded that cooperative relationships are unstable. Instability inherent in cooperation is that partners distance themselves, and easily can end one relationship and move on to another. However, little is known how firms cope with instabilities inherent in temporalities in cooperative relationships. Temporary relationships develop if the time horizon or the intended duration of the relationship is short (Das 2006). The aspect of time in the literature of competition needs more focus to further explore how firms uphold and balance cooperation and cope with tensions when firms have different time-orientations in their interactions.

The findings and contribution of each of the five papers and contributions of the thesis are presented in the concluding discussion in chapter 5. The next section describes the methodological considerations, research designs and research strategies of the appended studies.

# Methods

## Research Design and Settings

Given the limitations of the research on firms' capabilities to balance strategic dilemmas in cooptation, the studies conducted within this thesis have an exploratory case study design (Eisenhardt, 1989). Exploratory case studies are suitable to understand complex and context-dependent phenomena (Eisenhardt, 1989). According to literature, cooptation are dynamic, paradox and complex interactions between two or more actors (Chen 2008; Bengtsson et al., 2010a). To manage cooptation is also dependent upon and shaped by firms' relationships, networks and technological and market contexts (Czakon, 2010; Gnyawali and Park, 2011). Explorative and longitudinal case studies are therefore an appropriate research design when firms' cooperative and competitive interactions over time are important and not limited to structural conditions (Eisenhardt and Graebner, 2007).

The research strategy has aimed towards develop the theory of cooptation by exploring how firms balance and uphold contradicting logics of interaction, roles and expectations in cooptation, how firms balance power and dependency asymmetries through portfolios of relationships, and how firms balance temporalities in cooptation. In the case studies numerous interactions between competitors are explored over time and in different industry settings. Prior scholars have found that the pursuit of cooptation varies in industrial settings (Ritala, 2012). The majority of prior research, however, has been conducted in a particular industry, and therefore provided a rich but inconclusive understanding of how firms pursue cooptation in different industry settings. In order to take this research further the studies in the thesis explores firms' capabilities to manage cooptation in three different industry settings.

In order to answer the research-inquires the case studies have been used to develop conceptual models, illuminate relationships between categories, themes and concepts, and to develop propositions (Eisenhardt 1989; Eisenhardt and Graebner 2007). The case study approach is therefore focused on theory development rather than theory generation. The multiple cases have been purposefully selected. One important criterion has been that the cases could contribute to develop and extend theory (Burgess, 1984; Glaser and Strauss, 1967; Suddaby, 2006). The cases have been selected within different industry settings and conducted during different periods throughout a twelve year period between 2000 and 2012. The research

strategy of several case studies within different settings, over different time phases, can yield further accurate and robust theories compared to single case studies (Eisenhardt and Graebner, 2007).

The research settings were a moderately dynamic manufacturing industry with low or medium technology. Furthermore the fast-paced semiconductor industry and the converging IT, telecommunication and financial service sector. These latter two are characterized by turbulence, intense rivalry and relational complexity. The selection of these three settings is appropriate in order to examine the phenomena of coopetition, strategic dilemmas and capabilities to balance coopetition, and their implications. This argument builds on previous research, suggesting that coopetition is important, but not necessarily crucial for firms' strategies in stable industries with low- or medium technology firms (Santamaria Nieto and Barge-Gil, 2009). Whereas in more turbulent, high-tech industries characterized by intense rivalry where competitors' alliance portfolios often being inter-linked (Lavie 2006, 2007; Chen et al., 2010), coopetition is suggested to be a vital strategy that matters for firms' innovativeness and market performance (Ritala, 2012). Therefore the aim was to capture coopetition over time and place; within different settings; both stable low or medium technology industries and fast-paced, high-technology industries.

The setting for the first case study, conducted between 2001 and 2006 (2001-2003 was studied retrospectively) was the moderately dynamic manufacturing industry in a peripheral region in Sweden. The regional business landscape was comprised of a few large, powerful locomotive firms (Porter 1998) and a number of locally-based small and medium-sized suppliers that were traditionally dependent upon the large firms. The cooperative and competitive relationships among the suppliers in the region were locally based. The large buyer firms competed on the international arena but relied on regional suppliers for the manufacturing. The local suppliers primarily competed to sustain their position within the established supply chains. In this setting a small manufacturing firm, Sanco and a strategic and multilateral network, SSMG AB was studied. Sanco is a small firm positioned in overlapping network, dependent upon its supplier relation with the large buyer in the region. The strategic network, SSMG, was comprised of five small manufacturing suppliers, also being competitors in some activities, who joined forces to complement and strengthen their resources, offering to take the role of a system supplier to extend their market reach. The timing of this study was appropriate as the SMEs experienced tensions and role-conflicts in their coopetitive interactions, and as they needed to balance and maintain cooperative and competitive demands and expectations from their overlapping network positions.

The setting in the second case study was the dynamic and high-tech semiconductor industry. This case study was conducted from 2000 to 2012 (years 2000-2004 were studied retrospectively). The semiconductor industry is comprised of a few dominant global firms and a number of pioneering small firms. The industry is characterized by rapid technological innovations, high R&D costs, an interdependence and a complexity of integrated IT and telecommunication systems. In this setting, a small and entrepreneurial firm, Xelerated was studied. Xelerated pioneered with its technological innovation of a new data flow architecture and network processors. The architecture and its network processor families were patented and recognized world-wide as a best-of-breed products. The case study of Xelerated is longitudinal and follows the company over a 12-year period, from its start-up and growth, collaborations with competitors, and how the firm balanced cooperation in its portfolios of alliances to create and sustain innovations and business opportunities. Xelerated was selected as a comparative case study to Sanco and SSMG. However, the high-tech case firm, its innovative behaviour, and the dynamic setting of the semiconductor industry was very interesting and the study of Xelerated continued over a 12-year period. The findings in this case study and how an accelerating pace of technological development and convergence of industries affected the firms' strategies and ability to balance dilemmas of cooperation eventually initiated the third case study of the converging IT and telecommunication industry.

The setting in the third case study, conducted during from 2010 to 2012, was the convergence of IT and telecommunication industries. This setting was characterized by turbulence and an ambiguity with blurring industry boundaries (Bröring, 2010) dynamic networks (Dong, et al., 2004) and nascent markets (Santos and Eisenhardt, 2009) affecting the firms' cooperative strategies and interactions. The timing of this case study was appropriate as the firms were in the middle of a technology and market convergence with rapid changes and an intense competition. In this setting integrated value chains were deconstructed with a large number of new market entrants and where firms from the previous demarcated industries competed for the same customers. In this case study several cooperative relationships was explored with Ericsson as a focal firm. Ericsson is a multinational company and a leading actor within the telecommunication industry. With the convergence it faced stronger competition from both other large firms from IT and management consultancy industry who could offer the same integrated system solution and from new, small firms with pioneering technologies.

One study was conducted of the relationship between two large competitors, Ericsson and Oracle and the processes of three acquisitions were Oracle

bought Ericssons partners and suppliers. Another study was conducted of how Ericsson and its partners, suppliers and customers balanced cooperation and adhered to different roles in the creation of system integrations and customized solutions. A third study focused on three SMEs and their development of portfolios of alliances to balance their asymmetric relationship with large competitors to create and sustain entrepreneurial opportunities. These small firms all pioneered their market niches with innovative technologies. Contacts with two of these firms was initiated by Ericsson and perceived as interesting case of SMEs cooperation in this context. In the setting of this third case study of the converging IT and telecommunication industries, cooperation was perceived as a reality that the actors experienced in their interactions with partners, customers and suppliers. Table 2 presents key aspects of the selected case firms.

<b>Case Firm</b>	<b>ISIC code</b>	<b>Found Year</b>	<b>No. empl</b>	<b>Turn over<sup>1</sup></b>
<b>Sanco</b>	25620 Metal sub-contracting	1984	37	5,7 Million USD
<b>Eltech Electronics Nord</b>	27120 Electronic sub-contracting	1993	57	9 Million USD
<b>Bergströms Nya Mekaniska</b>	25620 Metal sub-contracting	2000	24	5,2 Million USD
<b>AQ Elsack</b>	27120 Electronic sub-contracting	2004	30	3,7 Million USD
<b>Oskar Strandbergs Industri</b>	25610 Industrial painting, sub-contracting	1946	60	7,5 Million USD
<b>SSMG</b>	n/a System supplier	1998	2	1,8 Million USD
<b>Xelerated</b>	72190 Other science and technological R&D	2000	65	21,6 Million USD

<sup>1</sup> The descriptives of Sanco, Eltech, Bergströms Mechanical. Oskar Strandbergs and SSMG represents year 2004 when this case study was conducted. The descriptives of Xelerated, Ericsson, Digitata and Seamless represents year 2010 when these case studies was conducted.

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<b>Ericsson</b>	26300/27320/ 72190 Manufacturing communication, electronics, other science and R&D	1876	90 261	30,6 USD	Billion
<b>Mobile Telecom Operator</b>	61200/6100/61900 Fixed, wireless, other tele-communication	1985	< 1000	n/a	
<b>Digitata</b>	n/a Wireless telecommunication	2006	60	8 USD	Million
<b>Seamless</b>	61200/62010 Wireless telecommunication, computer programming	2001	36	7,5 USD	Million

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**Table 2:** Descriptive of Case Firms.

All the papers in this thesis build on two or more of the case studies. The case study of Sanco and the network of suppliers within SSMG are reported in paper 1 and in paper 3. The case study of Xelerated is mentioned in all five papers; this case study is also conducted over the longest time-span. The case study of Ericsson and its interaction with competitors, customers and suppliers, is reported in papers 2, 3 and 5. Paper 5, concentrates on the SMEs and how they balance their relationships with large competitors.

### **Data Collection**

Several data sources have been used in the case studies (cf. Eisenhardt and Graebner, 2007): 1) archival data including newspaper articles, industry and company reports, and press-material, used to prepare questions and to complement and interpret the interview data collected; 2) semi-structured interviews with executives, entrepreneurs and middle-managers within the case firms, their customers, suppliers and competitors; 3) attendance at meetings and workshops; and 4) informal follow-ups through emails, meetings and phone calls. To obtain multiple perspectives from both large and small firms in different industries, the main data source has been semi-structured interviews. A total of 53 in-depth interviews were carried out with CEOs, entrepreneurs, executives and managers within different functions and responsibilities, such as R&D management, product and system

development, sourcing, business development and marketing. Table 3 describes the case data.

<b>Case Firms</b>	<b>No. of interviews</b>	<b>Title of Informants (no. of interviews)</b>
<b>Sanco</b>	6	CEO/Founder, Marketing Manager (2) Founder, VP, Purchasing (2) Site Manager Production Manager
<b>Eltech Electronics Nord</b>	2	CEO Purchasing Manager
<b>Bergströms Nya Mekaniska</b>	2	CEO (2)
<b>AQ Elsack</b>	2	VP, Production Manager (2)
<b>Oskar Strandbergs Industri</b>	2	CEO (2)
<b>SSMG</b>	3	CEO, Marketing & Sales (2) Head of Admin.
<b>Xelerated</b>	6	CEO, Founder 1 (3) COO, Chief Operating Officer 2 VP, Business Development and Marketing
<b>Ericsson</b>	26	VP, Sourcing (2) VP, Global Services Directors of Sourcing (3) Director of Sourcing (3) Director of Sourcing (3) Head of Operations (5) Strategic Sourcing Manager I (3) Strategic Sourcing Manager II Strategic Sourcing Manager III Strategic Sourcing Manager IV Strategic Sourcing Manager V Key Account Manager System Architect Sourcing Manager, markets R&D Management, Product Manager I R&D Management, Product Manager II (2)

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<b>Mobile Telecom Operator</b>	1	Strategic Sourcing Manager
<b>Digitata</b>	2	CEO, Chairman of the Board Client Executive Manager
<b>Seamless</b>	1	CEO

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**Table 3:** Description of Case Data.

Two important criteria in selecting the respondents within the different firms were that they had long experience within their industries and network relationships and that they were knowledgeable and could view a focal phenomenon from different perspectives, which is a key approach in studying complex as well as strategic issues in organizations (Eisenhardt and Graebner, 2007). Using multiple respondents lowers the risk of bias of relying upon a single respondent's perceptions of a cooperative relationship or situation. One example was the interview of Sanco and SSMG in the first case study. All CEOs and a number of middle managers from the firms that were interacting to produce and deliver system supplies were interviewed at least twice. A second example is interviews in the third case of Ericsson, studying cooperation in this case a number of managers in different functions were interviewed about how they perceived the cooperative relationships, critical incidents, how upcoming problems were solved and its consequences. As far as possible, interviews were conducted with suppliers, partners, competitors and customers of Ericsson. By interviewing several respondents at different times, the information of firms' action, interactions, decisions and its implications were confirmed by several sources (Miller, Cardinal and Glick, 1997). Multiple respondents also allow researchers to induce richer and more elaborated constructs as the stories can complement each other (Schwenk, 1985; Santos and Eisenhardt, 2009).

In advance of the interviews the respondents received a short presentation of the research project and research aims together with an interview guide. The interviews ranged from one to three hours in length. All interviews were recorded and transcribed verbatim. The questions were open ended and thematically arranged. The respondents were asked to talk rather freely of their relations, interactions, critical incidents and projects they decided to describe. The narratives were followed up with questions of how, why and exemplify to grasp the richness of the stories (Merriam, 1988). The intention was to elicit the meaning making and conceptualization of the informants of how they managed and cope with dilemmas in cooperation in both their daily



interactions and long-term strategic issues, for example how to discuss future road maps and technology and market direction with the partners also being competitors (c.f. Santos and Eisenhardt, 2009).

The interviews were followed up through emails and phone-calls with requests for clarification and confirmations. To validate the findings the interview data used in the cases was sent back to the informants for approval. Depending upon the request of the respondents, either the complete interview transcription or selected quotes and statements used were sent back. Furthermore, informal feedback meeting and discussions were continuously held with key informants in the case firms to validate the research findings (Kumar, Stern and Anderson, 1993).

Data was also collected through observation and attendance of meetings and seminars. This method was used in the case study of Sanco and the SSMG network, reported in papers 1 and 3. In these seminars arranged by a university-led competence program called KrAft<sup>2</sup>, the SMEs met to discuss issues in coordinating specific customer projects, how to solve practical problems and manage tensions. CEO/entrepreneurs and managers with different responsibilities within the firms attended the seminars. The observations were very useful to understand how the firms interacted, how issues were discussed and solved by the managers within the firms who both cooperated and competed simultaneously.

The interview data was, when possible, triangulated with archival data of company- and industry reports and media reports to avoid biases when respondents were asked to describe relations and events retrospectively (Spradley, 1979; Kumar et al., 1993). Examples were Sun Microsystems' acquisition of the open source MYSQL and later Oracle's extensive process of acquiring Sun Microsystems. These endeavors were extensively covered and reported upon in the industry and business media and reports. Another example was interactions within the SSMG network. In this case multiple documents, meeting notes, and material from the university-led KrAft program were used to validate the stories of the respondents from the different firms of how the cooperation between the competitors evolved and critical incidents, decision makings within the network and organization of specific customer projects.

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<sup>2</sup> The KrAft program was a policy-supported program conducted in Sweden between 2000 and 2005. It was driven as collaboration consortia between a number of universities and groups of small firms. The aim was to increase competence development and business development on the individual and firm level. The abbreviation KrAft stands for competence, reflection, business development and growth.

Taken together, multiple sources of data, collected during different time phases, and being triangulated arguably strengthens the confidence of the accuracy of the findings (Jick, 1979; Ozcan and Eisenhardt, 2009). The collection of data from multiple sources, in-depth interviews with numerous knowledgeable respondents over time have both given rich and rigorous case descriptions and a comprehensive and robust understanding of how the selected firms over time and in different settings coped with strategic dilemmas and developed capabilities to manage coopetition.

## **Analysis**

The qualitative case analysis approaches used relied upon the specific purposes in each of the papers. Several key similarities of the case analysis can be found. Firstly, the case studies within the research papers were exploratory and were intended to develop and extend existing theories; the analysis sought relationships between theoretical concepts and empirically generated categories. Secondly, all case studies analyses, following the particular research aim, started by writing comprehensive and detailed case descriptions of each case firm, its coopetitive relationships and interactions. Thirdly, the transcribed interviews were coded and categorized into broad categories depending upon research inquiry of each paper. All case analyses followed an iterative process going back and forth between theory and data, categorizing and comparing the data, and refining the findings in relation to existing theories and concepts (Orton, 1997; Siggelkow, 2007).

The five papers relied upon longitudinal case study analysis, and a categorization and theme analysis technique, suggested by Miles and Huberman (1994) and Eisenhardt (1989). The case study analysis of paper 4 and 5 relied more explicitly upon guidelines specified for a constant comparison technique, inspired by grounded theory (Strauss and Corbin 2008), and categorization and theme analysis (Miles and Huberman, 1994). Both these approaches are suitable answering exploratory research inquiries where prior research is limited (Edmonson and McManus, 2007; Glaser and Strauss 1967). Although coopetition is a growing field of research, the exploratory approach was found suitable for enhancing the understandings of this complex and context-dependent phenomena not limited to structural conditions (Eisenhardt, 1989). The analysis procedure in papers 4 and 5 followed three steps of coding and categorization of the empirical data. In the initial phase, the interview transcripts were coded on the basis of the respondent's phrases, wording and terms into first-order categories (van Maanen 1979). In the second phase, the coded first-order categories were collapsed into theoretically distinctive second-order themes. These secondary themes were induced by the authors and generated from theory,

although with the attempt to apply the respondents wording if these were representative for theoretical concepts (Nag, Corley and Gioia, 2007; Nag and Gioia, 2012). In the third phase, the second-order themes were wrapped into aggregated dimensions and overarching concepts (cf. Nag et al., 2007). These analytic steps and procedures allowed developing conceptual models that linked the relationship among categories, themes and concepts generated from the case data and related to established theories (Strauss and Corbin, 2008). The research design and level of analysis of each paper is described in table 4.

<b>Paper</b>	<b>Purpose</b>	<b>Level of analysis</b>	<b>Case data</b>	<b>Analysis</b>
<b>Paper 1:</b>	The purpose is to enhance the understanding of how SMEs in the overlap between different network structures can balance and take advantage of their position.	Firm/ Dyad Network	Two in-depth, longitudinal case studies of SMEs in different industry settings	Longitudinal and comparative case study analysis of SMEs action and interaction to balance and benefit from overlapping networks and its implication on the firm's competitiveness.
<b>Paper 2:</b>	The purpose is to develop a theoretical framework of three contending market regimes in convergence, use this framework to study clashes between market regimes and its implication on firms' strategies.	Firm/ Dyad/ Industry	Case study of large firms' cooperative interactions in competitive acquisitions.	Case study analysis of interactions between competitors, strategies to manage tensions and how it changed the relationships and the industry.
<b>Paper 3:</b>	To explore the role that social capital has for the balancing of cooperative relationships.	Firm/ Dyad/ Network	Longitudinal case studies of cooperative relationships within different industry settings.	Comparative longitudinal case analysis focusing on cooperative interactions and implications in form of firms capabilities to balance dynamic cooperation.

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<b>Paper 4:</b>	To explore how firms interact and play different roles within upstream and downstream relationships, and to discuss the implications that firms' role-playing has for innovation.	Firm/ Dyad/ Network	Longitudinal case study of large firms and SMES' upstream and downstream interactions.	Longitudinal case study analysis technique with constant comparison focusing on firms role-playing and its implication on innovation.
<b>Paper 5:</b>	To explore the managerial challenges that SMEs face when collaborating with large powerful competitors and examine how they balance the relationship to create and sustain business opportunities through coepetition.	Firm/ Dyad	Longitudinal case study of SMEs action and interaction to balance asymmetric relationships.	Exploratory case study analysis with constant comparison focusing on how SME balance asymmetric coepetitive relationships and its implication on creation and sustenance of opportunities

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**Table 4:** Research Design and Analysis.

Throughout the research process measures have been taken to secure trustworthiness and credibility of the qualitative case study approach (Eisenhardt 1989). Several actions have been taken to secure credibility and avoid biases through the data collection and analyses described above. Statements from informants were when possible triangulated with multiple sources, other respondents and, or archival data to limit the risk of bias (Jick 1979; Eisenhardt and Graebner 2007) and securing internal validity (Eisenhardt 1989; Gibbert et al., 2008). Moreover, the detailed descriptions of the research procedures, data collection and analysis secure a transparency and a trustworthiness of the selected research approach and findings (Gibbert et al. 2008). To ensure trustworthiness in the qualitative studies, the case data used from interviews was sent back to the respondents for corrections and approval, as described above.

Taken together, the theoretical and practical contributions are based on a strong research design of exploring coepetition over time and place, in different industrial settings, at multiple levels (of firm, dyad, networks and industries), and between large as well as small firms. The research questions in each paper are generated from 'the observation of real-life phenomenon, not from scholars struggling to find holes in literature' (Hambrick

2005:124). The exploratory case studies have enriched the research of firms' capabilities to manage coopetition in their daily interaction and on a strategic agenda.

The findings in the research papers are discussed further in the concluding discussion section. Before this section, the research papers are summarized.

# Overview of Reserach Papers in Part II

## **Paper 1: Dynamics of Supply Chains, a Study of SMEs in Overlapping Networks**

Marlene Johansson

*Licentiate thesis, Umeå University, 2009*

The purpose of the paper is to enrich the understanding of how SMEs positioned in the overlap between different network structures can balance and take advantages of their position. Two types of networks were examined: vertical supply chains, and multilateral strategic networks.

This study adopted a qualitative approach. Its research design was an exploratory, multiple case study, consisting of two longitudinal case studies of SMEs in overlapping network positions. The two case companies differed in their value propositions and ways of adding value. The first case firm had a low or middle level technology. Its industry was characterized by stability with long product life cycles which are suitable for a planning approach and sequential logic of coordination in the supply chains. The SME had no proprietary products of its own; its main role was to act as a subcontractor for other companies, most of which were locally based large firms. The second case company was a high-tech firm in the turbulent semiconductor industry. It had patented its pioneering innovative products and most of the firm's activities were concentrated on R&D. It offered its propriety product with service, maintenance and system integrations to large telecom system providers.

This paper contributes to the body of literature of supply chains and small business research. It sheds light on the interdependencies among networks and illuminate how the supply chain is embedded in surrounding network structures that under some circumstances support and strengthen each other and under other circumstances undermine and destroy each other. In addition, it offers new insights and enhanced the understanding of how SMEs balance and benefit from being part of both vertical supply chains and strategic, multilateral partnerships.

This study illustrate different structural and relational conditions on the firm and network level that affect SMEs' ability to balance and take advantage of

their overlapping network position. Two dimensions are critical in this regard: firms' time-horizon in their relationships, having temporary or long term intentions and secondly, firms' knowledge and competence, being unique or complementary. These dimensions were found critical for their ability to balance and utilize overlapping position and stay independent as SMEs. The study uncovered tensions in the forms of role-conflict and strong competition on the intra-network level and in overlap between networks. Rigidities were found of overembeddedness and network inertia, being destructive for the SMEs' competitiveness. The study cast light upon how these tensions and rigidities could either revitalize or destroy the competitiveness of the firms. These challenges have implications for SMEs' ability to balance and take advantage of their position in overlapping networks. Consequently, the SME need to balance cooperation and competition and their roles to manage tensions and rigidities in order to take advantage of its overlapping position.

These findings merit further examination in relation to challenges to uphold and balance cooperation in relationships, supply chains and portfolios of alliances.

## **Paper 2: Clashes between Contending Market Regimes, a Challenge for Firms in Converging Industries.**

Maria Bengtsson and Marlene Johansson

*European Business Review, Vol. 23, No 5, 2011*

The purpose of this paper is to develop a theoretical framework of three contending market regimes; cooperation, competition and cooptation in converging industries, and to use this framework to study clashes between market regimes and the implications for firms' competitive strategies and interactions with competitors.

A case study approach was used to examine the interaction among competitors in the converging IT and telecom industries. The case study explored the action and interaction among competitors in cooptation and how the competitors managed clashes between cooperation, competition and cooptation in the process of three acquisitions. A series of interactions between competitors related to three acquisitions, and strategic challenges caused by clashes between different market regimes was explored and how the clashes did change the relationships between firms, and the industry.

This paper contributes to the cooptation and strategy literature by describing the clashes between market regimes in converging industries. Five propositions were formulated to describe the necessary conditions for the competitive relationship to stay in balance and to evolve, and when tensions, in form of clashes between market regimes, cannot be defused. The paper provide insights into managerial challenges for firms to transform from a competitive to a cooptative regime as well as transforming from a cooperative to a dynamic cooptative regime as industries change.

Few empirical studies have been conducted of the converging IT and telecom industries and this paper revealed several new insights about this market context and the accompanying changes. This study demonstrated how firms responded differently to a market- driven convergence and pressure of openness. Some continued to act in accordance with a traditional competitive logic, strived to withhold a dominant position and to exclude others, whereas others followed the cooptative logic; adapted their strategies to an increased use of open source communities and collaborated with their competitors to develop new product offers and create new market niches.



The paper develops a theoretical framework of cooperation, competition and coopetition for an analysis of converging industries which provided insights about clashes between market regimes. The study extends research on coopetition with empirical findings of how firms balance and uphold the logics of cooperation, competition and coopetition in their relationships and in dynamic and complex markets, and the implications for competitors' strategies and actions.

### **Paper 3: A Study on Balancing Cooperation and Competition in Coopetitive Relationships through Bridging and Bonding**

Marlene Johansson, Maria Bengtsson, Jessica Eriksson, Joakim Wincent

*To be submitted to European Management Journal*

The purpose of this paper is to explore the role that bridging and bonding social capital have for the balancing of coopetitive relationships.

This study relied on two longitudinal qualitative case studies focusing on coopetitive interactions of firms within different industries, the stable manufacturing industry and the dynamic and complex semiconductor industry. The two cases illustrate the dynamics of coopetition and the implications of social capital to balance the cooperative and the competitive interaction in the formation and evolvement of coopetitive relationships.

This paper contributes to the literature of coopetition and the social capital literature. The paper develop theory and utilizes prior research of dynamic coopetition by illustrating how coopetitive relationships form and evolve, how the dimension of competition and cooperation conceptualized on two continua changes over time and how firms act to balance the contradicting logics of interactions.

This study provides new insights into balancing of coopetitive relationships by demonstrating how bridging and bonding activities of social capital facilitate and restrict cooperation and competition in coopetitive relationships under different network contingences. We reveal how both the cooperative and competitive dimension can be weakened and strengthened with the use of social capital and how bridging social capital is important to balance a coopetitive relationship where the cooperative continuum is strong.

A conceptual model is proposed that relate conditions of complexity and dynamism within the industry and on the firm-level that create bridging and bonding possibilities and is linked to the ability to balance dynamic coopetition. We propose that the managerial capabilities to use bridging and bonding activities, to maneuver within networks and is mostly important in

dynamic industries. We further propose that managers within dynamic industries with intense competition develop an understanding of the dilemmas of coopetition with for instance a sensitivity concerning what information that should be shared with competitors. We also found that firms having high dependency are restricted to use bridging and bonding activities to shorter time-periods.

## **Paper 4: Interaction in Dynamic Networks: Role-playing and its Implications for Innovation.**

Marlene Johansson

*IMP Journal, Vol. 6, No 1, 2012*

The purpose of the study is to explore how firms interact and play different roles in upstream and downstream interactions within business relationships and the implications firms role-playing has on innovation.

The empirical study adopted a case study approach and examined interactions in system integration projects where firms managed different roles in cooperation and competition. The setting was the converging IT and telecommunication industries. The case demonstrates action, interactions and role-playing by small and large firms that meet in cooperation.

This paper contributes to industrial network literature and supply chain literature by bringing in cooperation and concepts derived from role theory. The study provides insights into firms' engagement in cooperation and play different roles simultaneously in their upstream and downstream interactions. Role-playing can create tensions that need to be managed in order to trigger innovations in networks. The paper identified three underpinning categories of role-playing that could illuminate the dynamics and potential triggers for innovation: role-flexibility that was created by firms' role-taking and role-making actions; role-ambiguity with ambiguity in role-expectations which created an uncertainty how to act; and role tensions when role expectations towards an actor become conflicting. Different aspects of tensions were expressed in the study; competitive tensions in innovation projects, tensions to manage short-term interaction in long-term relationships, and tensions related to role-conflicts.

Moreover, this study reveals how firms are challenged to manage shorter-term cooperative interactions within their traditional long-term supply chain relationships. In a context of shorter product life cycles and increased customization, firms must become more flexible and open as well as having a more short-term orientation in their interactions. This creates new dynamics and new tensions. Consequently firms need to develop capabilities to interact in both cooperation and competition, on a short-term basis within their long-term relationships. To manage and balance these dualities and contradictions is vital for the creation of innovation in dynamic and complex networks.

The paper develops a conceptual model that links long-term relations, short-term interaction and firms' role-playing to the implications of innovation in networks. An innovation network model is proposed to depict interactions in dynamic innovation network and as a managerial tool for the management of different and contradictory roles.

## **Paper 5: Managing Coopetition to Create Opportunities for Small Firms**

Maria Bengtsson and Marlene Johansson

*International Small Business Journal, in press*

The purpose of this paper is to explore the managerial challenges that SMEs face when collaborating with large powerful competitors and examine how they balance the relationship to create and sustain business opportunities through coopetition.

The approach was an exploratory case study based on three qualitative cases of new and small firms in the converging IT and telecom industries. This approach was suitable for exploring firms' involvement in different relationships and adds to the understanding of complex and context-dependent phenomena.

The paper contributes to the literature on coopetition, alliance portfolios, and entrepreneurial opportunities by demonstrating how asymmetric cooperative relationships can be balanced to create and sustain opportunities. The study shows how the technological- and market driven convergence within the IT and telecommunication industries and an increased temporality of relationships loosened the competitive structure and made it possible for SMEs to enter and to create opportunities. This industry is globally integrated and dominated by large firms so SMEs need to build relationship with these large firms to access the markets. This paper shed lights on two challenges for SMEs in coopetition with large competitors: how to manage the liabilities of smallness and newness, and how to sustain independence in and balance cooperative relationships with large firms.

This paper brings insights into SMEs' capabilities to manage cooperative relationships with large firms to create and sustain opportunities. We identify three interrelated capabilities of importance for a firm's ability to manage these challenges and thereby create and sustain opportunities: the creation of legitimacy, agility, and the ability to develop role flexibility. The study reveals how legitimacy is needed both to fit in and stand out in order to survive in cooperative relationship with large firms. Agility regards the capability to be alert, responsive and the speed in building and reconfiguring relationships. Role flexibility is the ability to maintain many relationships simultaneously, to balance multiple roles and relationships with

contradictions and tensions and having a mindset to accept the rules of competition. The paper demonstrates how these capabilities are needed by SMEs to balance asymmetric relationships with large firms and thereby create and sustain business opportunities.

Moreover, the paper proposes a theoretical model. The model expresses that conditions in fast-paced industries of technological and market-driven convergence along with increasingly temporal relationships not only create opportunities but also managerial challenges that SMEs face and links alliance portfolio management capabilities of building legitimacy, agility, and ability to develop the role flexibility that is needed to create and sustain opportunities.

## **Concluding Discussion and Suggestions for Future Research**

This chapter concludes the thesis by reiterating the findings and contributions of the five studies in the frame of the research questions and overall aim.

The thesis contributes to the literature by exploring firms capabilities to manage coopetition and balance strategic dilemmas in different industry settings and of firms with different structural characteristics. The following sections elucidate how each paper responds to each research questions and then distills the conclusions of the five studies. How each paper more specifically contributes with theoretical and empirical underpinnings has been summarized in the overview of dissertation paper above, and is reported upon in detail in each of the papers. This chapter also discusses limitations of the thesis and offers suggestions for future research.

### **Contributions to Literature of Capabilities to Balance Strategic Dilemmas in Coopetition**

#### ***The Act of Balancing Interactions, Roles and Expectations***

In terms of firms' capabilities to uphold and balance interactions, roles and expectations in coopetition, researchers have stated that coopetition is paradoxical as it relies on two contradicting logics of interactions (Clarke-Hill, Li and Davies, 2003; De Rond and Bouchikhi 2004; Chen, 2008). Deriving from prior research a key issue in managing cooperative relationships is to cope with the dualities of cooperation and competition that vary in strength respectively (Padula and Dagnino, 2007). Research into the dynamics of coopetition proposes that if either the cooperative or the competitive logics of interaction becomes too strong, cooperative relationships are jeopardized (Bengtsson et al., 2010).

This thesis brings new insights of how firms act to uphold and maintain a balance of contradicting logics of interactions in coopetition, live in paradox situations and manage tensions, which are critical for the relationships to evolve and be beneficial. Paper 2 contains rich data and insights into firm's act to balance and ways of preserving the logics of cooperation and competition over time in a cooperative relationship and the implications for firms' competitive strategies. The paper proposes under what conditions firms can and cannot uphold and balance a cooperative relationship after the logics have clashed. Certain conditions were found to be instrumental in



maintaining a balance and for the relationship to evolve; including trust and closeness in personal relationships, a reciprocal exchange of knowledge and capabilities, and reciprocal benefits. The paper demonstrates how a balance could not be maintained after the logics have clashed if one competitor wanted to develop a dominant position; hence acting on the basis of a competitive logic despite the existence of trusting and close personal relationships exist and the possibility of mutual benefits.

This thesis extends the literature of how firms balance contradictory logics of interactions in cooperation over time. Paper 3 explores capabilities to balance cooperative and competitive interactions by using social capital theory (Coleman, 1988; Burt, 1994; Dhanaraj and Parkhe, 2006). This paper provides insights into dynamics of cooperation and the implications of social capital to balance cooperation in different industrial settings. Paper 3 posits that capabilities to use bridging and bonding activities and maneuver within networks may be particularly evident in a turbulent and complex industry, such as the semiconductor industry (Santos and Eisenhardt 2009; Chen et al. 2010). Under condition of intense competition a sensitivity to the kind of information that should be shared between the firms that simultaneously compete and cooperate can be developed. Consequently, managers come to comprehend the dilemmas of simultaneous cooperation, and learn to balance cooperation by using bridging and bonding activities in fast-moving industries with temporary competitive advantages (Tushman and Andersson 1986; Chen et al., 2010).

Paper 3 contribute with theoretical and empirical underpinnings of how cooperation and competition can be balanced using network strategies of bridging (Burt, 1992) and bonding (Coleman, 1990). The papers uncover how these activities both can create and destruct the balance of cooperation. Bonding without bridging can reduce competition, resulting in a lopsided cooperative relationship, and the cooperative relationships will eventually stagnate, or even fall apart. As a result, in a cooperative relationship where the competitive dimension is too weak to stimulate dynamic development, social capital may undermine the relationship. Ultimately, the ability to develop trust and strengthen the cooperative element between competing firms is not the only challenge for firms that want to obtain the advantages of cooperation. In the quest for balance cooperative and competitive interaction paper 3 reveals how it may be equally important to strengthening the competitive element of a cooperative relationship.

This thesis also enhances the understanding of how firms need to adhere to different roles and expectations by acting as partners and as competitors simultaneously and over time. Role-theory arose from research in

psychology and sociology (Biddle, 1986) and organization literature (Katz and Kahn, 1978). This literature addresses the concept of roles from two perspectives. Role-taking defines roles as sets of prescriptions that describe the expected behaviour of a given position in a structure (Biddle and Thomas, 1966), thereby reducing actors to passive role-takers whose position determines their role (Biddle, 1996; Stryker and Statham, 1985). In role-making, roles can be used deliberately to create positions and relationships (Biddle, 1986; Callero, 1994). Prior research in cooptation has neglected firms' abilities to comply with different, sometimes contradictory roles and expectations in cooperative relationships. This is a shortcoming because role-playing behaviour of both role-taking and role-making can create important dynamics in relationships and networks, in addition to dilemmas and potential tensions that need to be managed if the relationship is to be productive. Thus, there is a gap in terms of firms' role-playing behaviour, the related mindset and studies of the implications of these capabilities in cooptation.

This thesis provides important insights of firms' role-playing behaviour in cooptation and the implications for innovation and creation of opportunities. Paper 1 demonstrates how firms' adapting primarily to a role-taking behaviour in vertical supply chains with stable and clear roles can restrict their ability to build and commit themselves to new relationships. This paper uncovers both rigidities and tensions encountered to change the supplier role, and build new relationships in a strategic network. The study adds insights on how rigidities in firms' role-taking behaviour and established business models and internal routines affect their ability to adapt to new roles in multilateral collaboration in a SME context. Tensions appear when the suppliers continue to prioritize their supplier role and expectations inherent in their supply chain position and thereby lack commitment to the SME network. In the case study of paper 1, the firms failed to balance their role-taking and role-making behaviour and related mindsets and the tensions and conflicts in the multilateral strategic network became too strong, the network dissolved.

Paper 4 offers insights of firms' capabilities to adhere to and uphold multiple roles and expectations in upstream and downstream interactions in the turbulent convergence of IT and telecommunications setting. This paper uncovers how firms' role-playing behaviour allows firms to maneuver between positions and related relationships in existing and emerging networks (Baker and Faulkner, 1991; Callero, 1994). Paper 4 demonstrates how the playing of different roles can be beneficial but also creates ambiguities of how to interact and what partners can expect of each other (Sieber 1974). The findings uncover how firms' role-playing in dynamic

networks creates tensions in the form of role-conflicts in the supply chains and networks. Paper 5 contributes with findings of how new and entrepreneurial firms use their capability of role-flexibility to balance their asymmetric relationship with large firms. In paper 5, role-flexibility is related to the mindset that firms needed to be flexible in their role performance, to meet different sets of expectations, and uphold different roles, with sometimes conflicting role expectations (Zeng and Chen, 2003). This mindset is needed if firms are to balance asymmetric relationships, to build and configure portfolios of cooperative relationship in order to create and sustain opportunities.

### ***The Act of Balancing Power and Dependency through Portfolios of Relationships***

The concepts of power and dependency have been extensively covered in the strategy and network literature. Power and dependency asymmetries capture the power imbalances in relationships (Gulati and Sytch, 2007). Buyer-supplier relationships are characterized by some asymmetry, where firms with strong resources and network positions can influence, initiate changes, and dominate the relationship (Harland, 1996; Holmlund and Kock, 1996; Cox 2004). Although a large body of literature has captured various aspects of power and dependencies in inter-organizational relationships, it has overlooked some critical issues. Prior research notes that small firms have little power to influence, and depend upon relationships with large firms for their resources (Katila et al., 2008; Santos and Eisenhardt 2009). However, little research has focused on how power and dependency is balanced in cooperative relationships.

The thesis provides insights on the dilemmas and capabilities to balance power and dependency in cooperation. Small firms are challenged by lack of resources, market research and dependence on a narrow product/service line (Baum et al., 2000; Storey, 1994). Paper 1 demonstrates how SMEs balance their dependencies within large buyer firms by engaging in cooperative relationships with other SMEs. The paper uncovers challenges facing SMEs in an overlapping network position and how such a network position requires the ability to balance divergent demands and expectations. Paper 3 shows how firms with a unique product can use bridging capabilities to establish new ties and balance power and dependency in cooperative relationships. Firms that do not have unique products have a higher dependency and fewer bridging possibilities over time to sustain their independence. This also restricts the possibility of balancing power and asymmetries through cooperation.

Moreover, it can be concluded from this thesis that cooperative relationships cannot be analyzed in isolation; firms engage in many interlinked relationships simultaneously. The perspective of alliance portfolios is a growing conceptual theme in the alliance literature (see e.g. Wassmer, 2010) but not in the cooperation literature. Paper 5 provide new insights into how new and small firms use capabilities to balance its asymmetric relationships with large competitors. The paper demonstrates how small and new firms need to build relationship with large firms to overcome their liability of smallness and newness to bring new technologies into integrated systems and markets. These relationships are tense and pose tremendous risks for the SME as their resources such as intellectual property or know-how easily can be misappropriated by the large firm. We contend that the striving to balance asymmetric cooperative relationship can be a motive to build and reconfigure alliance portfolios.

The thesis contributes by demonstrating the usefulness of applying the alliance portfolio literature in understanding dyadic cooperative relationships. Prior research in cooperation has ignored how dyadic cooperative relationship is affected by other relationships in firms' portfolios. The thesis gives an understanding of how small firms' portfolios of alliances evolve and changes over time and the importance of alliance management capabilities to balance asymmetric relationships. The SMEs' alliance management capabilities are explained in terms of three important and interlinked capabilities: the creation of legitimacy, agility and the ability to develop role flexibility, where role flexibility and agility. Legitimacy is needed for small and new firms to both fit in and stand out in industries that are globally integrated and dominated by large firms (De Clercq and Voronov, 2009). Agility pertains to firms' alertness and ability to respond quickly to changes (Sambamurthy et al., 2003; Santos and Eisenhardt, 2009). Role-flexibility is the mindset needed to adhere to a range of expectations and the capability to uphold and balance many different roles.

### ***The Act of Balancing Temporalities in Cooperation***

The evolution of cooperative relationships has been viewed both as a gradual learning process that can be planned (Dagnino and Rocco, 2009) and as being emergent and unpredictable in its nature (Yami et al., 2010; Czakon 2010). This thesis brings the notion of temporality in cooperative relationships to this debate. The studies witness how cooperation is an unstable process that evolves in different directions with different paces; the process cannot be fully predicted (c.f. Mintzberg and Waters 1982; Mariani 2007; Yami et al., 2010). If a relationship is unstable, it becomes tense (Das and Teng, 2000). Prior scholars have identified the conditions in the

industry setting that shape firms' strategy and the duration of relationships (Chen et al., 2010), where instabilities in nascent markets create rapidly changing opportunities that offer the firms temporary competitive advantages (Santos and Eisenhardt, 2009; Chen et al 2010). In a fast-moving context, the relationship can be short-lived and competition intense with frequent moves and countermoves (Chen and McMillan, 1992; Chen, 2008). Despite these insights, prior insights of how contextual conditions affect firms' competitive strategies, the inherent temporalities in cooperative relationship have not been scrutinized to a full extent (Das, 2004; 2006; Czakon, 2010).

This thesis contributes with an understanding of firms' capabilities to balance temporalities and manage time-related tensions in cooperative relationships (Chen, 2006; Andersson and Mattsson, 2010). The studies show that increased temporalities affect firms' ability to manage cooperative relationships. This was particularly evident in fast-moving industries, a finding that is consistent with prior research. The temporality was both an effect of shortened product life cycles, shorter time to market and an increased projectification, characterizing fast-moving industries (Das, 2006; Chen, 2010), and an effect of the firms' strategic actions to maneuver in the networks (Santos and Eisenhardt, 2009). The findings from the case study of the converging IT and telecommunication industries (papers 4 and 5) show how the increased temporality in relationships opened up the competitive structure in the industries and made it possible for SMEs to build and reconfigure portfolios of relationships and thereby avoid being locked into or being out-competed by large firms. Paper 4 demonstrates how tensions arise in the interaction between firms with temporal and long-term orientations in their interaction (Das, 2006; Andersson and Mattsson, 2010). In the case studies, firms from the telecommunication industry have relied mainly upon building long-term supply chain relationships with their customers and tiers of suppliers characterized by trust and commitment, and also a power imbalance which stabilizes the relationship (Håkansson and Snehota, 1995; Das and Teng, 2000; Gulati, 1995; 2007). Long-term orientation in the relationships can clarify what one partner can expect of the other (c.f. Christensen and Overdorf, 2000; Pralahad and Ramaswamy, 2000). In the convergence of IT and telecommunication industry, firms faced dilemmas to cope with increasingly temporary intention to collaborate in their supply chain relationships (Park and Russo, 1996; Das and Teng, 2000). The temporary intentions are new for many firms, especially in relatively stable industries that have relied on long-term, well-established relationships.

Paper 4 illuminates how long-term intentions in relationships still are a vital source of knowledge exchange and innovation. Stability is needed for

learning in the relationship (Håkansson, 1993; Kale et al., 2002) and to exchange and transfer of codified or tacit knowledge (Ahuja, 2000; Eisenhardt and Schoonhoven, 1996). However, temporary interactions in competition, and its consequences for innovation must be considered especially in increasingly dynamic industry settings. Paper 4 describes how temporary interactions combined with long-term relationships can create both dynamics and tensions that need to be managed in order to be beneficial. Firms are challenged to interact on a temporary basis while sustaining important long-term relations in cooperation. The ability to balance temporalities in relationships becomes crucial in a context of increased competition where the duration of relationships can be short. This thesis finds that firms in converging and fast-moving industries need to be able to combine and uphold long-term and temporary relationships simultaneously, to be flexible but cautious in their mindset, to gain from good relationships and to know how to reduce the tensions and conflicts that can jeopardize potential relationships in the future.

### **Implications of Coopetition Capabilities on Innovation and Creation of Business Opportunities**

Previous research has shown cooperation to be beneficial in terms of market performance and innovation output (Lou et al., 2007; Faems et al., 2010; Gnyawali and Park 2011; Ritala, 2012). The quest of maintain a balance of strategic dilemmas in cooperation has been the focus in the thesis. The thesis brings insights about the capabilities needed to balance interactions, roles and expectations in cooperative relationships. Drawing from insights of the dynamic capability view of firms' strategies (Teece, 2009) cooperation capability entails an ability to sense, seize and adapt to cooperation and competition without suppressing either one in a relationship. Cooperation capabilities have further been conceptualized as a mindset to accept the rules of the game in cooperation (Brandenburg and Nalebuff 1996; Gnyawali and Park, 2011).

The findings in this thesis illuminate that capability of role-playing allow firms to navigate in networks to gain access to the important and novel information and diverse resources that are instrumental for the creation of new and novel combinations in innovations (Nelson and Winter, 1982; Nonaka, 1994). With this capability firms could enter and exit different and competing supply chains and networks (Baker and Faulkner, 1991; Li and Whalley, 2002) to access a variety of new information and knowledge and commercialize new technology. These role-playing actions can lead to pooling of diverse resources and knowledge fields and yields new arenas where business opportunities and innovation can be created. The thesis also

presents insights into the destructive potential of cooptation if firms fail to balance contradictions, adhere to and perform to different roles and expectations.

This thesis presents new insights into small firms' capabilities to balance asymmetric relationships through portfolios of relationships and how it can facilitate the ability to create and sustain business opportunities. It is demonstrated how new and small firms develop their alliance portfolio management capabilities in cooptation to build legitimacy, being agile to respond quickly to changes, and being flexible in their role performance. The findings show how firms need to select, establish, maintain and end relationships with competitors and partners depending on whether the interaction facilitates or interferes with the creation and sustenance of opportunities. New insights are given into how SMEs need to establish portfolios of relationship to be alert, respond quickly to changes and emerging opportunities and thereby balance their asymmetric power relationship with large competitors. Agility and a mindset to adhere to different roles is vital capabilities to configure and reconfigure portfolio of alliance to balance asymmetries, and to enter and exit different relationship and networks (Baker and Faulkner, 1991; Li and Whalley, 2002). With these capabilities manifested through acts of balancing the firms managed to create and sustain business opportunities and new innovations in highly competitive and turbulent industry settings.

## **Conclusions**

This thesis supports recent calls for more longitudinal studies of cooptation and firms' capability to balance cooptative relationships (Bengtsson et al., 2010; Gnyawali and Park, 2011). Scholars have indicated the importance of balancing cooptation for the relationship to evolve and be beneficial (Chen 2008; Bengtsson et al., 2010). It can be concluded with this thesis that balancing cooptation simultaneously and over time is challenging and requires unique managerial capabilities of the firms. This thesis brings the following new and in-depth insights on firms' capability to balance strategic dilemmas in cooptation. Firstly, the thesis explores firms' ability to balance contradicting logics of interactions over time and finds how prior experience to engage in cooptative relationships are important to develop a cooptation capability to sense, see and adapt to potential dilemmas, to manage tensions and act upon opportunities in cooptation. These capabilities are important for the firms to balance dualities of cooperation and competition interactions that vary in strength simultaneously and over time. Secondly, the thesis extends the literature on cooptation and firms cooptation capabilities by investigating firms' role-playing behavior and ability to manage conflicting

role expectations. Thirdly, this thesis examines how firms balance asymmetric relationship through portfolios of relationships. These insights advance prior research on cooptation in a SME context and bring an alliance portfolio lens into cooptation research (Wassmer, 2010). The thesis demonstrates how role flexibility and agility are essential measures of SMEs alliance portfolio management capability. Fourthly, this thesis explores firms' capabilities to balance temporalities in cooptative relationships, which support recent calls to examine how firms manage time-related dilemmas in cooptation (Yami et al., 2010; Czakon, 2010). In line with the notion of temporality the thesis demonstrates how a more dynamic conception of cooptation is needed to acknowledge that firms can participate in many cooptative relationships at the same time, each with its own pace of change, direction and duration. Finally, the thesis provides new insights of how these capabilities to balance strategic dilemmas in cooptation can have implications on innovation and creation of business opportunities.

### **Limitations and Suggestions for further research**

Like all research this thesis has several limitations, which open avenues for further research. The thesis has focused on strategic dilemmas in cooptation and firms' capabilities to balance these. There is room for further research incorporating capabilities on the individual and intra-organizational levels. This thesis concludes that managers need to have a cooptative mindset to balance several dilemmas, tensions and contradictions. This is particularly important in dynamic and ambiguous industry settings with intense competition and rapid changes, for example in converging industries when different market regimes and business models converge or clash. However, capabilities to balance cooptation have foremost been grasped and scrutinized on the strategic level in the form of firms' capabilities.

Strategy scholars have traditionally focused on strategies and capabilities on the firm level. Powell et al. (2011:1369) state that strategic management researchers must "avoid the trap of making simplistic assumptions about mental scaling—for example, assuming that a firm or corporation has the psychology of an individual, that one person chooses for the collective, that the firm's actions correspond to a person's decision". One avenue for future research is therefore to investigate cognitive understandings and mental models of managers' views of cooptation, to depict their cause and effect beliefs of dualities, tensions and capabilities of cooptation, which in turn affect their strategic choices of how to act and lead their organizations (Gnywali and Tyler, 2005). Further research of the individual's cognitions of cooptation is therefore a promising direction for future research as it can



provide a more finely grained analysis of dualities, contradictions, tensions in coopetition and capabilities to manage these dilemmas. It is a promising avenue for research as it can enhance the understanding of how managers interpret and handle paradoxical situations and improve the knowledge of managerial capabilities that is relevant for successful coopetition strategies.

Moreover, a multilevel methodological approach can to a further extent uncover relationships, dilemmas and tensions across levels and go beyond the division into micro and macro organizational processes (Hitt et al, 2007). Managers' cognitions of coopetition may differ by hierarchical level and across functions within an organization. It would thus be worthwhile to investigate in detail how the understanding of coopetition differs among levels and across functions within an organization. Do tensions or conflicts exist between functions and levels due to different cognitive understanding of how to approach and manage a coocompetitive relationship, or a firm's portfolio of coocompetitive relationships? The answers to these questions can lead to new insights into how tensions and conflicts appearing within an organization that is involved in coopetition can be managed. An understanding of multilevel interactions in coopetition may also produce unintended consequences (cf. Siggelkow and Rivkin, 2006) of practices and routines employed at different levels and functions within an organization.

Another promising avenue for future research is to continue with a social network analysis of managers engaged in coopetition. For instance, a potential study of managers' cognition can be investigated in relation to the social network structure of the individuals using social network analysis (Wasserman and Faust 1994). Do managers having strong, redundant social ties have the similar mental model of coopetition, its dilemmas, tensions and potential outcomes in form of benefits and risks? It would also be worthwhile to explore importance of knowledge brokers and boundary spanners within organizations related to capabilities to balance coopetition successfully. Taken together, a multi-method study would further enhance the knowledge of coopetition as a phenomenon and of the capabilities needed to balance coopetition at multiple levels as well as potential outcomes.

Another limitation that is important to mention in this thesis is that outcomes of coopetition capabilities discussed in the form of implication on innovation and creation of business opportunities are limited to the two case studies reported in research papers 4 and 5. Further research is recommended into the ways in which firms' capabilities to balance dilemmas of coopetition influence their performance. Performance measures can be firms' innovative and/or market performance and thereby enrich

prior studies with an understanding how capabilities to balance coepetition can generate success (Faems et al., 2010; Ritala 2012; Gnyawali and Park 2011).

A final remark of limitation and basis for future research is that the case studies in this thesis have provided an understanding of processes, dilemmas and capabilities to balance coepetitive relationship bounded to three industry settings; manufacturing, semiconductors and IT/telecommunication. A future path of research would be to extend the research of firms' capabilities to balance coepetition into other industries using a qualitative case study or a quantitative cross sectional approach.

## References

- Ahuja G. (2000). The duality of collaboration: Inducements and opportunities in the formation of interfirm linkages. *Strategic Management Journal*, 21: 317–343.
- Adler P.S. and Kwon, S-W. (2002). Social capital: prospects for a new concept. *Academy of Management Review*, 27(1):17–40.
- Anand B. and Khanna T. (2000). Do firms learn to create value? The case of alliances. *Strategic Management Journal* 21(3): 295–316.
- Andersson P. and Matsson L-G. (2010). Temporality of resource adjustments in business networks during severe economic recession, *Industrial Marketing Management*, 39, 917-924.
- Arranz N. and Arroyabe J. (2008). The choice of partners in R&D cooperation: an empirical analysis of Spanish firms, *Technovation*, 28 (1-2): 88–100.
- Bae J. and Gargiulo M. (2004). Partner substitutability, alliance network structure, and firm profitability in the telecommunications industry. *Academy of Management Journal* 47(6): 843–859.
- Bain, J.S. (1968). *Industrial organization*. Wiley: New York.
- Baker W., Faulkner R. (1991). Role as resource in the Hollywood film industry, *American Journal of Sociology*, 97: 279-309.
- Barney J. (1991) Firm resources and sustained competitive advantage. *Journal of Management* 17(1): 99–120.
- Baughn, C.C., Denekamp J. G., Stevens J.H. and Osborn R.N. (1997). Protecting intellectual capital in international alliances', *Journal of World Business*, 32: 103–117.
- Baum J., Calabrese, T. and Silverman, B. (2000). Don't go it alone: Alliance network composition and startups' performance in Canadian biotechnology. *Strategic Management Journal*, 21: 267–294.
- Baumard P. (2009). An asymmetric perspective on cooperative strategies, *International Journal of Entrepreneurship and Small Business*, 8(1):6-22.
- Belderbos R., M. Carree and Lokshin B. (2004). Cooperative R&D and firm performance, *Research Policy*, 33(10): 1477–1492.
- Bengtsson M. and Kock S. (1999). Cooperation and competition in relationships between competitors in business networks, *Journal of Business and Industrial Marketing*, 14(3):178-193.
- Bengtsson, M. and Kock S. (2000). "Coopetition" in business networks – to cooperate and compete simultaneously', *Industrial Marketing Management*, 29(5): 411–426.
- Bengtsson M., Eriksson J. and Wincent J. (2010a). Co-opetition dynamics – an outline for further inquiry, *Competitiveness Review: An International Business Journal*, 20(2): 194–214.
- Bengtsson M., Eriksson J., Wincent J (2010b). Coopetition: new ideas for a new paradigm, in Yami S, Castaldo S Dagnino P and LeRoy F. (eds) (2010a) *Coopetition strategy: Winning Strategies for the 21<sup>st</sup> century*, Edvard Elgar, Cheltenham, UK:19-39.

- Benner M.J. and Tushman M. (2003). Exploitation, exploration, and process management: The productivity dilemma revisited, *Academy of Management Review*, 28(2): 238-256.
- Biddle B.J. (1986). Recent developments in role theory, *Annual Review of Sociology* 12: 17-92.
- Biddle B.J. and Thomas E.J. (1966). Role theory: concepts and research, New York, John Wiley.
- Borgatti S.P. and Foster P.C. (2003). The network paradigm in organizational research: A review and typology, *Journal of Management*, 29(6):991-1013.
- Brandenburger, A.M. and Nalebuff B.J. (1996). *Co-opetition*. New York: Currency/Doubleday.
- Brusoni S., Prencipe A. and Pavitt K. (2001). Knowledge specialization, organizational coupling, and the boundaries of the firm: Why do firms know more than they make? *Administrative Science Quarterly*, 46(4): 597-621.
- Bröring S. (2010). Developing innovation strategies for convergence – is open innovation imperative? *Int. J. technology Management*, 49(1): 272-294.
- Burgess R.G. (1984). *In the Field: An Introduction to Field Research*, Allen & Unwin, London.
- Burt R.S. (1992) *Structural Holes: The Social Structure of Competition*. Harvard University Press: Cambridge, MA.
- Callero P. (1994). From role-playing to role-using, understanding role as a resource, *Social Psychology Quarterly*, 57(3): 228-243.
- Caves R.E. and Porter M.E. (1977). From entry barriers to mobility barriers: Conjectural decisions and contrived deterrence to new competition. *Quarterly Journal of Economics*. 91: 241-262.
- Chen M.-J. and MacMillan, I.C. (1992). Nonresponse and delayed response to competitive moves: The roles of competitor dependence and action irreversibility. *Academy of Management Journal*, 35(3): 359-370.
- Chen M.-J. (1996). Competitor analysis and interfirm rivalry: toward a theoretical integration, *Academy of Management Review*, 21(1): 100–134.
- Chen M.-J. (2008). Reconceptualizing the competition-cooperation relationship: a transparadox perspective, *Journal of Management Inquiry*. 17(4):288-304.
- Chen M.-J, Katila R, McDounald R and Eisenhardt K.M. (2010). Life in the fast lane: Origins of competitive interaction in new vs. established markets, *Strategic Management Journal* 31(1): 527–1547.
- Chen Y-S. and Chen B-Y. (2011). Utilizing patent analysis to explore the cooperative competition relationship of the two LED companies: Nichia and Osram, *Technological Forecasting and Social Change*, 78: 294-302.
- Chesbrough H.W. (2006). *Open Business Models: How to Thrive in the New Innovation Landscape*. Harvard Business School Publishing, Cambridge, MA.
- Chesbrough H.W. (2011). *Open Service Innovation, rethinking your business to grow and compete in a new era*, Jossey-Bass, Wiley, CA.

- Christensen C.M. and Overdorf M. (2000). Meeting the Challenge of Disruptive Change. *Harvard Business Review* 78(2): 66–76.
- Choi, D. and Valikangas L. (2001). Patterns of strategy innovations, *European Management Journal*, 19(4): 424–429.
- Clarke-Hill C., Li H. and Davies (2003). The paradox of co-operation and competition in strategic alliances: Towards a multi-paradigm approach. *Management Research News*, 26(1):1-20.
- Cohen W.M. and Levinthal D.A. (1990). Absorptive Capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1):128-152.
- Coleman J.S. (1990). *Foundation of Social Theory*, Cambridge; The Belknap press of Harvard University Press MA.
- Collis D.J. (1994). Research note: How valuable are organizational capabilities? *Strategic Management Journal*, 15(Winter Special Issue): 143-152.
- Conner K.R. and Prahalad C.K. (1996). A resource-based theory of the firm: Knowledge versus opportunism. *Organization Science*, 7(5):477-501.
- Corley K.G. and Gioia D.A. (2011). Building theory about theory building: What constitutes a theoretical contribution? *Academy of Management Review*. 36(1):12-32.
- Cova B. and Salle R. (2008). Marketing solutions in accordance with the S-D logic: Co-creating value with customer network actors. *Industrial Marketing Management*, 37(3):270-277.
- Cox A. (2004). The art of the possible: Relationship management in power regimes and supply chains, *Supply Chain Management: An International Journal*, 9(5): 346–356.
- Czakon W. (2010). Emerging coopetition: an empirical investigation of coopetition as inter-organizational relationship instability, in Yami S, Castaldo S. Dagnino P. and LeRoy F. (eds) (2010a) *Coopetition strategy: Winning Strategies for the 21<sup>st</sup> century*, Edward Elgar, Cheltenham, UK: 58-73.
- Dagnino G.B. and Rocco E. (2009). Introduction- coopetition strategy: a “path-recognition” investigation approach, in Dagnino G.B. and Rocco E. *Coopetition strategy: Theory, experiments and cases*, Routledge Studies in Global Competition, UK: 25-43.
- Das T.K. and Teng B-S. (2000). A resource-based theory of strategic alliances, *Journal of Management*, 26: 31–61.
- Das T.K. and Teng B-S. (2002). Alliance constellations: A social exchange perspective. *Academy of Management Review*, 27: 445–456.
- Das T.K. (2004). Strategy and Time: Really Recognizing the Future. In H. Tsoukas and Jill Shepherd (eds.), *Managing the Future: Foresight in the Knowledge Economy*. Blackwell, Oxford: 58–74.
- Das T.K. (2006). Strategic alliance temporalities and partner opportunism. *British Journal of Management* 17(1):1-21.
- Davies A., Brady T. and Hobday M. (2007). Organizing for solutions: Systems seller vs systems integrator, *Industrial Marketing Management* 36: 183-193.
- D’Aveni RA. (1994). *Hypercompetition: Managing the Dynamics of Strategic Maneuvering*. Free Press: New York.

- De Clercq D. and Voronov M. (2009). Towards a practice perspective on Entrepreneurship: Entrepreneurial Legitimacy as Habitus. *International Small Business Journal* 27(4): 395-419.
- Dhanaraj C. and Parkhe A. (2006). Orchestrating innovation networks, *Academy of Management Review*, 31(3): 659-669.
- Dong D-H., Kim S., Nam C. and Moon J-S. (2004). Fixed and mobile convergence and reconfiguration of telecommunications value chains, *IEEE Wireless Communications*, 11(5):42-47.
- Dosi G. (1982). Technological paradigms and technological trajectories – a suggested interpretation of the determinants and directions of technical change', *Research Policy*, 11(3): 147-162.
- Dittrich K. and Duysters G. (2007). Networking as a means to strategy change: the case of open innovation in mobile telephony, *Journal of Product Innovation Management*, 24(6): 510-521.
- Dussauge, P., Garrette B. and Mitchell W. (2000). Learning from competing partners: outcomes and durations of scale and link alliances in Europe, North America and Asia, *Strategic Management Journal*, 21:99-126.
- Duysters G. and Hagedoorn J. (1995). Strategic groups and inter-firm networks in international high-tech industries. *Journal of Management Studies*, 32 (3): 359-381.
- Dyer J.H. and Sing H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantages. *Academy of Management Review* 23(4): 660-679.
- Easton, G., Araujo, L. (1992), Non-economic exchange in industrial network, in Axelsson, B., Easton, G. (Eds), *Industrial Networks a New View of Reality*, Routledge, London.
- Edmonson A.C. and McManus S.E. (2007). Methodological fit in management field research. *Academy of Management Review*, 32(4):1155-1179.
- Eisenhardt, K.M. (1989). Building theories from case study research, *Academy of Management Review*, 14(4): 532-550.
- Eisenhardt K.M. and Schoonhoven C.B. (1996) Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms. *Organization Science* 7(2):136-150.
- Eisenhardt K.M. and Martin J.A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10-11): 1105-21.
- Eisenhardt K.M. and Graebner M.E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal* 50(1): 25-32.
- Ellig, J. and Lin, D. (2001). A taxonomy of dynamic competition theories, in Ellig, J. (Ed.), *Dynamic Competition and Public Policy: Technology, Innovation, and Antitrust Issues*, Cambridge University Press, Cambridge.
- Emden Z., Calantone R.J. and Droge C. (2006). Collaborating for new product development: Selecting the partner with maximum potential to create value. *The Journal of Product Innovation Management* 23(4): 330-341.

- Faems D., Van Looy B. and Debackere K. (2005). Interorganizational collaboration and innovation: Towards a portfolio approach, *Journal of Product Innovation Management*, 22(3): 238-250.
- Faems D., Janssens M. and van Looy B. (2010). Managing the co-operation-competition dilemma in R&D Alliances: A multiple case study in the advanced material industry. *Creativity and Innovation Management*, 19 (1): 3-22.
- Fai F. and von Tunzelmann N. (2001). Industry-specific competencies and converging technological systems: evidence from patents, *Structural Change and Economic Dynamics* 12(2): 141-170.
- Fjelstad Ö.D. Becerra M. and Narayanan S. (2004). Strategic action in network industries: an empirical analysis of the European mobile phone industry. *Scandinavian Journal of Management*, 20: 173-196.
- Fjelstad Ö.D. and Sasson A. (2010). Membership matters: On the value of being embedded in customer networks. *Journal of Management Studies*, 47(6): 944-966.
- Freeman L.C. (1979). Centrality in social networks: conceptual clarification. *Social Networks* 1: 215-239.
- Fukuyama F. (1995). *Trust: Social Virtues and the Creation of Prosperity*. NY: Free Press.
- Glaser B.G. and Strauss, A.L. (1967). *The Discovery of Grounded Theory: Strategies For Qualitative Research*, Chicago: Aldine.
- Gibbert M., Ruigrok W. and Wicki B. (2008). What passes as a rigorous study case study? *Strategic Management Journal*, 29: 465-1474.
- Gimeno J (2004). Competition within and between networks: The contingent effect of competitive embeddedness on alliance formation. *Academy of Management Journal* 47(6):820-842.
- Gnyawali D.R. and Madhavan R. (2001). Cooperative networks and competitive dynamics: a structural embeddedness perspective, *Academy of Management Review*, 26: 431-445.
- Gnyawali D.R. and Tyler B.B (2005). Cause mapping in strategic management research: processes, issues and observation. *Research Methodology in Strategic Management*, 2:225-258.
- Gnyawali D.R. and Park R. (2009). Co-opetition and technological innovation in small and medium-sized enterprises: a multilevel conceptual model, *Journal of Small Business Management*, 47(3): 308-330.
- Gnyawali D.R. and Park R. (2011). Co-opetition between giants: Collaboration with competitors for technical innovation. *Research Policy* 40(5): 650-663.
- Gomes-Casseres B. (1994). Group versus group: how alliance networks compete. *Harvard Business Review*, 72: 62-71.
- Grant R.M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, Winter Special Issue 17: 109-122.
- Granovetter M.S. (1973). The strength of weak ties. *American Journal of Sociology*, 78 (6): 1360-80.
- Granovetter M.S. (1985). Economic action and social structure. *American Journal of Sociology*, 91:481-510

- Greener I. (2002). Theorizing path dependency: how does history come to matter in organisations? *Management Decision*, 40(6): 614–619.
- Guegen G. and Isckia T. (2011). The borders of mobile handset ecosystems: Is cooperation inevitable? *Telematics and Informatics*, 28: 5-11.
- Gulati R. (1995). Social structure and alliance formation patterns: A longitudinal analysis. *Administrative Science Quarterly*, 40(4): 619–652.
- Gulati R. (1998). Alliances and networks. *Strategic Management Journal*, April Special Issue 19:293–317.
- Gulati R. and Gargiulo M. (1999). Where do interorganizational networks come from? *American Journal of Sociology*, 104: 177–231.
- Gulati R, Nohria N. and Zaheer A. (2000). Strategic networks. *Strategic Management Journal*, 21: 203–215.
- Gulati R (2007) *Managing Network Resources: Alliances, Affiliations, and Other Relational Assets*. Oxford University Press: New York.
- Gulati R. and Sytch M. (2007). Dependence asymmetry and joint dependence in interorganizational relationships. *Administrative Science Quarterly* 52(1):32-69.
- Hacklin F, Marxt C and Fahrni F (2010). An evolutionary perspective on convergence: inducing a stage model for inter-industry innovation. *Int. J. Technology Management*, 49 (1/2/3): 220-249.
- Hagedoorn J. (2002). Inter-firm R&D partnerships: An overview of major trends and patterns since 1960. *Research Policy* 31(4): 477–492.
- Hagedoorn J., Roijakkers N. and van Kranenburt H. (2006). Inter-firm R&D Networks: The importance of strategic network capabilities for high tech partnership formation, *British Journal of Management*, 17(1):39-53.
- Hambrick D.C. (2005). Upper echolons theory: Origins, twists and turns, and lessons learned. In Smith K.G. and Hitt M.A. (eds) *Great minds in management: the process of theory development*, Oxford University Press, New York: 109-127.
- Hamel G. (1991). Competition for competence and interpartner learning within international strategic alliances. *Strategic Management Journal*, 12: 83–103.
- Harrison J.S., Hitt M.A., Hoskinsson R.E. and Ireland R.D. (2001). Resource complementarity in business combinations: extending the logic of organizational alliances. *Journal of Management*, 27(6): 679-690.
- Helfat C. (2007). Relational capabilities: drivers and implications. In *Dynamic Capabilities: Strategic Change in Organizations*, Helfat CE, Finkelstein S, Mitchell W, Peteraf M, Singh H, Teece DJ, Winter SG (eds). Blackwell: Oxford, UK; 65–80.
- Henderson R. and Cockburn I. (1994). Measuring competence? Exploring firm effects in pharmaceutical research. *Strategic Management Journal*, Winter Special Issue 15: 61–83.
- Herrmann P. (2005). Evolution of strategic management: the need for new dominant designs. *International Journal of Management Review*, 7(2): 111-30.
- Heiman B.A. and Nickerson, J.A., (2004). Empirical evidence regarding the tension between knowledge sharing and knowledge expropriation in collaborations. *Managerial and Decision Economics* 25(6-7): 401–420.



- Heimerics K.H. and Duysters G. (2007) Alliance capability as a mediator between experience and alliance performance: An empirical investigation into the alliance capability development process. *Journal of Management Studies* 44(1):25-49.
- Hoffmann WH (2007). Strategies for managing a portfolio of alliances. *Strategic Management Journal* 28(8): 827-856.
- Håkansson H. and Snehota I (1989). No business is an island: the network concept of business strategy. *Scandinavian Journal of Management*, 5(3):187-200.
- Håkansson H. and Snehota I. (1995). *Developing Relationships in Business Network*, Routledge London.
- Håkansson H. and Waluszewski A. (2007). *Knowledge and Innovation in Business and Industry –The importance of using others*, Routledge; London.
- Ingram P. and Yue L.Q. (2008). Structure, affect and identity as bases of organizational competition and cooperation. *The Academy of Management Annals* 2 (1): 275–303.
- Inkpen A.C. and Beamish P.W. (1997) Knowledge bargaining power, and the instability of international joint ventures. *Academy of Management Review*, 22(1):177-202.
- Jacobides M.G. (2005). Industry change through vertical dis-integration: how and why markets emerged in mortgage banking. *Academy of Management Journal* 48(3): 465-498.
- Jacobides M.G., Augier M. and Knudsen T. (2006). Benefiting from innovation: Value creation, value appropriation, and the role of industry architectures. *Research Policy*, 35(8): 1200–1221.
- Jick T.D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, 24: 602–611.
- Kale P., Dyer J. and Singh H. (2002). Alliance capability, stock market response, and long-term success: The role of the alliance function. *Strategic Management Journal*, 23: 747–767.
- Kale P. and Singh H. (2007). Building capabilities through learning: the role of the alliance learning process in alliance capability and firm-level alliance success, *Strategic Management Journal*, 28: 981-1000.
- Katila R., Rosenberger J.D. and Eisenhardt K.M. (2008). Swimming with sharks: technology ventures, defence mechanisms and corporate relationships. *Administrative Science Quarterly* 53:295-332.
- Katz D., Kahn R.L. (1978). *The social psychology of organizations*, Wiley. New York
- Kraaijenbrink., Spender J-C. and Groen A.J (2010). The Resource-Based View: A Review and Assessment of Its Critiques. *Journal of Management*, 36:349-372.
- Kim J. and A. Parkhe (2009). Competing and cooperating similarity in global strategic alliances: an exploratory examination, *British Journal of Management*, 20:363–376.
- Kim T-Y., Oh H. and Swaminathan A. (2006). Framing interorganizational network change: A network inertia perspective, *Academy of Management Review*, 31(3):704-720.

- Kim J. and Parkhe A. (2009). Competing and cooperating similarity in global strategic alliances: an exploratory examination. *British Journal of Management*, 20(3): 363–376.
- Kogut B. and Zander U. (1992). Knowledge in the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3): 383–397.
- Kumar N., Stern L.W. and Anderson J.C. (1993). Conducting interorganizational research using key informants. *Academy of Management Journal*, 36:1633-1651.
- Lado A.A., Boyd N.G. and Hanlon S.C. (1997). Competition, cooperation, and the search for economic rents: a syncretic model. *Academy of Management Review*, 22:110–141.
- Larson A. (1992). Network dyads in entrepreneurial settings: A study of the governance of exchange relationships. *Administrative Science Quarterly* 37: 76–104.
- Lavie D. (2006). The competitive advantage of interconnected firms: an extension of the resource-based view. *Academy of Management Review* 31(3): 638–658.
- Lavie D. (2007). Alliance portfolios and firm performance: a study of value creation and appropriation in the U.S. software industry. *Strategic Management Journal* 28(12): 1187–1212.
- Lei D.T. (2000). Industry evolution and competence development: the imperatives of technological convergence. *International Journal of Technology Management*, 19(7/8): 699–738.
- Lee G.K. (2007). The significance of network resources in the race to enter emerging product markets: The convergence of telephony communications and computer networking 1989-2001. *Strategic Management Journal*, 28:17-37.
- Leonard-Barton, D. (1992). Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. *Strategic Management Journal* 13(Summer Special Issue): 111–125.
- Levitt T. (1983). The globalization of markets, *Harvard Business Review*, 61 (May-June): 92-102.
- Levy M., Loebbecke C. and Powell P. (2003). SMEs, co-opetition and knowledge sharing: the role of information systems. *European Journal of Information Systems* 12(1):3-17.
- Li F. and Whalley J. (2002). Deconstruction of the telecommunications industry: from value chains to value networks, *Telecommunications Policy*, 26 (9–10): 451–472.
- Lorenzoni G. and Lipparini A. (1999). The leveraging of interfirm relationships as a distinctive organizational capability: A longitudinal study. *Strategic Management Journal*, 50(3): 578-604.
- Lou Y (2007). A co-opetition perspective of global competition. *Journal of World Business*, 42 (2): 129–144
- Luo X., Rindfleisch A. and Tse D. K. (2007). Working with rivals: the impact of competitor alliances on financial performance, *Journal of Marketing Research*, 44: 73–83.

- Mahoney J.T. and Pandian J.R. (1992) The resource-based view within the conversation of strategic management. *Strategic Management Journal*, 13: 363-380.
- Malhotra, A. and Gupta, A.K. (2001). An investigation of firm's strategic response to industry convergence', *Academy of Management Proceedings*, Best Paper Series: G1.
- Mariani, M. (2007). Coopetition as an emergent strategy: Empirical evidence from an Italian consortium of opera houses. *International Studies of Management and Organization*, 37(2): 97-126.
- Mauer I. and Ebers M. (2006). Dynamics of social capital and their performance implications: lessons from biotechnology start-ups. *Administrative Science Quarterly*, 51: 262-92.
- Merriam, S.B. (1988) *Case study research in education: A qualitative approach*. San Francisco: Jossey-Bass.
- McKie, J.W. (1970). Regulation and the free market: the problem of boundaries", *The Bell Journal of Economics and Management Science*, 1(1): 6-26.
- Miles M. B., and Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.
- Miller C.C., Cardinal L.B. and Glick W.H. (1997). Retrospective reports on organizational research: A reexamination of recent evidence, *Academy of Management Journal*, 20:189-204.
- Mintzberg H. and Water, J.A. (1982) Tracking strategy in an entrepreneurial firm. *Academy of Management Journal*, 25(3):465-499.
- Mione A. (2009). When entrepreneurship requires coopetition: the need for standards in the creation of the market, *International Journal of Entrepreneurship and Small Business*, 8: 92-109.
- Morris M.H., Kocak A and Özer A (2007). Co-opetition and small business strategy: Implication for performance. *Journal of Small Business Strategy* 18(1): 35-55.
- Mulligan C. (2011) *The communications industries in the era of convergence*, Routledge Studies in Global Competition, UK
- Nag R, Corely KG and Gioia DA (2007). The intersection of organizational identity, knowledge and practice: Attempting strategic change via knowledge crafting. *Academy of Management Journal* 50: 821-847.
- Nag R and Gioia DA (2012). From common to uncommon knowledge: Foundation of firm specific use of knowledge as a resource. *Academy of Management Journal* 55(2): 421-457.
- Nelson R. and Winter S. (1982). *An Evolutionary Theory of Economic Change*. Belknap Press: Cambridge, MA.
- Nelson, R.R. (1991). Why do firms differ, and does it matter? *Strategic Management Journal*, 12(Winter Special Issue): 61-74.
- Nonaka I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science* 5: 14-37.
- Nieto M.J. and Santamaria, L. (2007). The importance of diverse collaborative networks for the novelty of product innovation. *Technovation* 27: 367-377.
- Oakley A. (1990). *Schumpeter's Theory of Capitalist Motion*, Edward Elgar, Aldershot.

- Orton J.D. (1997) From inductive grounded theory to iterative grounded theory: Zipping the gap between process data and process theory. *Scandinavian Journal of Management*, 13:419-438
- Oxley J.E. and Sampson R.C. (2004). The scope and governance of international R&D alliances, *Strategic Management Journal*, 25: 723–749.
- Ozcan P. and Eisenhardt K. (2009). Origin of alliance portfolios: Entrepreneurs, network strategies and firm performance, *Academy of Management Journal*, 52(2): 246-279.
- Padula G and Dagnino G.B. (2007). Untangling the rise of coopetition: The intrusion of competition in a cooperative game structure. *International Studies of Management and Organization*, 37(2): 32-52.
- Park S.H. and Russo M.V. (1996) When competition eclipses cooperation: an event history analysis of joint venture failure. *Management Science* 42(6):875-890.
- Peng, T.-J. A. and Bourne M. (2009). The coexistence of competition and cooperation between networks: implication from two Taiwanese healthcare networks, *British Journal of Management*, 20:377–400.
- Peng, T.-J.A., Pike S., Yang C-H. and Roos G. (2011). Is cooperation with competitors a good idea? An example in practice, *British Journal of Management*, forthcoming
- Pennings, J.M. and Puranam, P. (2001). Market convergence and firm strategy: new directions for theory and research, *Proceedings ECIS Conference, The Future of Innovation Studies*, Eindhoven, Netherlands, 20–23 September 2001.
- Penrose E.T. (1959) *The Theory of the Growth of the Firm*. Oxford University Press: Oxford, U.K.
- Peteraf M.A. and Barney J.B.(2003) Unraveling the resource-based tangle. *Managerial and Decision Economics*,24: 309-323.
- Portes A. (1998). Social capital: its origins and applications in modern sociology. *Annual Review of Sociology*, 24:1–24.
- Porter, M.E. (1979). How competitive forces shape strategy. *Harvard Business Review*, 57(2): 137-145.
- Porter, M. E. (1980). *Competitive Strategy*. New York: Free Press.
- Powell T.C., Lovallo D. and Fox C.R. (2011). Behavioral Strategy. *Strategic Management Journal*, 32: 1369-1386.
- Powell W.W., Koput K.W. and Smith-Doerr L. (1996). Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology. *Administrative Science Quarterly*, 41: 116–145.
- Prahalad CK. and Hamel G. (1990). The core competence of the corporation. *Harvard Business Review* 68(3):79–91.
- Prahalad C.K. and Ramaswamy V. (2000). Co-opting customers competence, *Harvard Business Review* 78(1): 1-8.
- Prashantham S. and Dhanaraj C. (2010). The dynamic influence on social capital on the international growth of new ventures, *Journal of Management Studies*, 47(6):967-994.
- Provan K. G., Fish A., and Sydow J. (2007). Interorganizational networks at the network level: A review of the empirical literature on whole networks. *Journal of Management*, 33: 479-516.

- Quintana-Garci'a, C. and Benavides-Velasco C.A. (2004). Cooperation, competition, and innovative capability: a panel data of European dedicated biotechnology firms, *Technovation*, 24: 927–938.
- Rindfleisch A. and Moorman C. (2003). Interfirm cooperation and customer orientation. *Journal of Marketing Research*, 40(4):421-436.
- Ritala P (2012). Coopetition strategy –When is it successful? Empirical evidence on innovation and market performance. *British Journal of Management* 23(3):307-324.
- Rothaermel F.T. and Deeds D.L. (2006). Alliance type, alliance experience, and alliance management capability in high-technology ventures. *Journal of Business Venturing* 21 429–460.
- de Rond, M. and Bouchikhi, H. (2004). On the dialectics of strategic alliances. *Organization Science*, 15: 56–69.
- Rusko, R. (2011). Exploring the concept of coopetition: a typology for the strategic moves of the Finnish forest industry, *Industrial Marketing Management*, 40: 311–320.
- Sahaym A. Steensma H.K. and Schilling M.A. (2007). The influence of information technology on the use of loosely coupled organizational forms: An industry-level analysis. *Organizational Science* 18(5): 865-880.
- Santamaria L., Nieto M.J and Barge-Gil (2009). Beyond formal R&D: Taking advantage of other sources of innovation in low and medium-technology industries, *Research Policy*, 38:507-517.
- Santos, F. M., and Eisenhardt, K. M. (2009). Constructing markets and shaping boundaries: Entrepreneurial agency in nascent fields. *Academy of Management Journal*, 52 (4) pp. 643-671.
- Sambamurthy V, Baradwaj A and Grover V (2003). Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms, *MIS Quarterly* 27(2): 237-263.
- Sarkar M.B., Echambadi R., Cavusgil S.T and Aulakh P.S. (2001). The influence of complementarity, compatibility and relationship capital on alliance performance. *Journal of marketing science*, 29(4): 358-373.
- Schmalensee, R. (1988). Industrial economics, an overview”, *Economic Journal*, 98(392): 643-81.
- Schwenk, C. R. (1985). The use of participant recollection in the modeling of organizational decision process. *Academy of Management Review*, 10: 496–503.
- Schiavone F. and Simoni M. (2011). An experience-based view of co-opetition in R&D networks, *European Journal of Innovation Management*, 14(2):136-154.
- Shan W., Walker G and Kogut B. (1994). Interfirm cooperation and startup innovation in the biotechnology industry, *Strategic Management Journal*, 15:387-394.
- Sieber S.D. (1974). Towards a theory of role accumulation. *American Sociology Review* 39 (4): 567-578.
- Siggelkow N. and Rivkin J.W. (2006) When Exploration Backfires: Unintended Consequences of Multilevel Organizational Search. *Academy of Management Journal*, 49(4): 779-795.

- Siggelkow N. (2007). Persuasion with case studies. *Academy of Management Journal*, 50:20–24.
- Spradley J.P. (1979). *The Ethnographic interview*. Thompson Learning, Belmont.
- Stinchcombe A. (1965). Social structure and organization. In March J (Eds) *Handbook of Organization*. Chicago IL: Rand McNally.
- Storey DJ (1994). *Understanding the Small Business Sector*. London: International Thomson Business Press.
- Strauss A and Corbin J (2008) *Basics of qualitative research: techniques and procedures for developing theory*, 3 ed. Newbury Park, CA: Sage.
- Stryker A., Statham A. (1985). Symbolic interaction and role theory, in Lindsey G and Aronsen L (eds), *Handbook of Social Psychology*, McGraw Hill, New York: 311-378.
- Suddaby R. (2006). What grounded theory is not, *Academy of Management Journal*, 49: 633-42.
- Teather B.S. (2002). Who co-operates for innovation, and why. An empirical analysis, *Research Policy*, 31: 947–967.
- Tece D.J., Rumelt R., Dosi G., Winter S.G. (1994). Understanding corporate coherence; theory and evidence, *Journal of Economic Behavior and Organization*, 23 (1): 1-30.
- Tece, D.J., Pisano, G. and Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18:509–534.
- Tece, D.J. (2009). *Dynamic capabilities and strategic management*. Oxford University Press: New York.
- Thomas L.G. and D’Aveni R. (2009). The changing nature of competition in the U.S. manufacturing sector, 1950 to 2002. *Strategic Organization* 7(4): 387–431.
- Tushman M.L. and Anderson P. (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly* 31(3): 439–465.
- Uzzi B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: the network effect. *American Sociological Review* 61: 674–698.
- Van Gils A. and Zwart P.S. (2009). Alliance motives in SMEs: An explorative conjoint analysis study, *International Small Business Journal*, 27(1): 5-37.
- Van Maanen, J (1979). The fact of fiction in organizational ethnography. *Administrative Science Quarterly* 24: 539–550.
- Wasserman S. and Faust K. (1994). *Social network analysis methods and applications*, Cambridge University Press. Cambridge
- Wassmer U. (2010). Alliance portfolios: A review and research agenda. *Journal of Management* 36(1):141-171.
- Wernerfelt B. (1984). A resource-based view of the firm. *Strategic Management Journal* 5(2): 171–180.
- Wincent J. and Örtqvist D. (2009). Role stress and entrepreneurship research, *Int. Entrep. Management J.*, 5: 1-22.
- Windahl, C. and Lakemond N. (2010). Integrated solutions from a service-centered perspective: Applicability and limitations in the capital goods industry. *Industrial Marketing Management*, 39(8): 1278–1290.

- Winter S.G. (2003). Understanding dynamic capabilities. *Strategic Management Journal* 24(10): 991–995.
- Wirtz, B.W. (2001). Reconfiguration of value chains in converging media and communications markets, *Long Range Planning*. 34: 489–506.
- Van Gils A. and Zwart P.S (2009). Alliance formation motives in SMEs: An explorative conjoint analysis study, *International Small Business Journal*, 27(1): 5-37.
- Wassmer U. (2010). Alliance portfolios: A review and research agenda. *Journal of Management* 36(1):141-171.
- Yami S, Castaldo S Dagnino P LeRoy F and Czakon W (2010) Introduction – coopetition strategies: towards a new form of inter-organizational dynamics?, in Yami S, Castaldo S Dagnino P and LeRoy F. (eds) (2010a) *Coopetition strategy: Winning Strategies for the 21<sup>st</sup> century*, Edward Elgar, Cheltenham, UK. pp:1-18
- Yoffie, D., and Slind, M. (2006) *Apple Computer, 2006*. Harvard Business School Case no. 3706496.
- Zeng M and Chen XP (2003). Achieving cooperation in multiparty alliances: A social dilemma approach to partnership management, *Academy of Management Review* 28 (4): 587-605.
- Zollo M, Winter SG. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science* 13(3): 339–351.