Organization and Management of Coopetition
- Trust the Competition, Not the Competitor

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ABSTRACT

In the search for innovation, high technology firms in the same industries turn to each other for R&D collaborations. The collaboration form where competitors cooperate have been defined as “coopetition” and the term builds on the interplay between competitive and cooperative forces. While coopetition brings benefits such as shared risks and costs, it implies organizational and managerial challenges as two opposing logics merge. This complexity calls for a deeper understanding of how firms organize and manage coopetition and why they organization and manage coopetition in the way they do. This thesis is set to answer these questions by empirically investigate coopetition at a case firm active in a high technology context with a long experience of collaborating with competitors. By acknowledging coopetition as a phenomenon carried out in the shape of projects, the internal organization and management could been thoroughly understood as project management allows a more detailed view of coopetition. Key findings concludes that in this empirical context, finance is the prior reason for engaging in coopetition, competitive forces are superior to cooperative forces in coopetition projects and that coopetition influence innovation more through contributing with funding than by an exchange of knowledge between competitors. All these aspects are further stated to impact organization and management of coopetition.

Key Words: Coopetition, Competition, Cooperation, Organization, Management, High Technology Industry, Innovation, Project Management
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When two best friends that already spends all waking time in each other’s company, decides to write a master thesis together, some may say it is bound for a catastrophe. We argue to differ. After spending five months researching and writing this thesis, we are happy to announce that we have come out of the social challenge with our minds and friendship intact, but with greater knowledge and an extended English vocabulary.

Our greatest thankfulness and recognition goes to our supervisor and judge, Katarina Hamberg Lagerström. Without her pressure on us “to just decide” and her valuable feedback, we would not have enjoyed the thesis progress as much as we’ve had. We would also like to thank our opponents, Gustav Dahlin and William Dannevig, as well as our seminar group for valuable discussions and insights. A loving thanks also goes out to our parents who have acted as social ventilators and constant critical reviewers during this process.

Finally, we did decide, and it resulted in this master thesis, which marks the end of five years of studying. Now, we look forward to the next chapter.

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“Keep your friends close, keep your enemies closer”
- Marlon Brandon, The Godfather

1. INTRODUCTION

In high technology industries, the demand for increased innovation and cutting edge research and development (R&D) have long been a strategic challenge. This is due to high R&D costs, complex products and importance of technological standards (Gnyawali & Park, 2011). In 2007, a McKinsey Global Survey acknowledged that 70 percent of the responding top executives believed innovation to be one of their most important competitive weapons for driving growth but also the most difficult to attain (McKinsey, 2007). Organizing internal resources was mentioned as one of the top challenges for companies striving for successful innovation. In 2010, a new survey was made and confirmed the need of organizing for innovation. The percentage of executives believing that innovation was one of their top strategic priorities for growth had increased and as much as 42 percent of the 2010’s top executives respondents experienced that organization was the biggest challenge for innovation. The report stated that improvement in organization alone would make the most profound difference in innovation performance (McKinsey, 2010).

In the search for innovation and advanced R&D, firms in high technological industries are becoming increasingly aware that it is more or less impossible to acquire and keep all industry leading knowledge and employees in-house (Chesbrough et al., 2006). According to a report conducted by PwC, one of the most significant differences between innovative firms and companies with less innovative success is the approach to collaborations with external partners (PwC, 2008). Even the most technically self-sufficient firms have a history of searching for knowledge outside their boundaries (Dyer & Singh, 1998; Rigby & Zook, 2002). By complementing internal know-how with external knowledge acquisition, companies in high technological industries can increase their marginal return in R&D and innovation projects (Cassiman & Veugelers, 2006). Hence technical innovation has often become the result of joint creations between firms in collaborative R&D projects. R&D could thus be defined as activities

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1 34 % of respondents mentioned internal allocation of resources as their biggest challenge.
2 The percentage had rose from 70% to 84%.
3 The most innovative companies collaborated over three times more often (34%) than the least innovative firms (10%) according to a PwC report (Shelton & Percival, 2013 p. 5).
related to research and development, whereas innovation refers to what these activities are aimed to accomplish.

While such collaborations can bring speed and knowledge to R&D projects (Gnyawali & Park, 2011), collaborative R&D projects between firms also mean giving up control and sometimes share the reward of technical innovation (Schilling & Phelps, 2007). Prahalad and Hamel (1989) further argues that collaboration is competition in a different form, since even in collaborative innovation projects, firms always strive to acquire as much knowledge and resources as possible. Consequently, R&D projects that are developed in a collaborative network frequently bears the characteristics of both competitive and collaborative forces (Clarke-Hill et al., 2003). Proper organization of such projects is crucial for firms (c.f. Cassiman et al., 2009) that address innovation as a top strategic priority.

Aspiring for technological improvement and successful innovation, inter-organizational relations have evolved as a new sort of business arena where the forces of competition and cooperation meet and merge. By combining the two juxtaposing logics, the phenomenon “coopetition” has unfolded and conceptualizes the inter-firm sphere where both competitive and collaborative features co-exist (Brandenburger & Nalebuff, 1996; Bengtsson & Kock, 2000; Chin et. al., 2008). A general and brief description of coopetition summarizes to when competing firms decide to collaborate simultaneously (Bengtsson & Kock, 2000; Luo, 2004; Zineldin, 2004), often in the shape of projects (Cassiman et al., 2009). The coopetition relationship affects both internal and external innovation strategies (Cassiman & Veugelers, 2006) and the link between coopetition and increased innovation has repeatedly been established (c.f. Bouncken & Fredrich, 2011; Ritala, 2012; Bouncken & Kraus, 2013; Yami & Nemeh, 2014). However, it is considered a risky decision to team up with a competitor in R&D projects where the greatest risk is competitors’ absorption of firm specific knowledge (Nieto & Santamaria, 2007; Cassiman et al., 2009). Protection of knowledge thereby becomes a managerial issue in coopetition (c.f. Cohen et al., 2000; Gnyawali & Park, 2011). In order to drive innovation forward, a prerequisite is although to keep knowledge free floating through mutual sharing and appropriation of knowledge (Gulati, 1999; Lavie, 2007). To simultaneously manage knowledge protection and knowledge acquisition thus creates a rather complex situation in coopetition projects. The complexity is especially prominent in high-technological industries with high knowledge-intensity (Gnyawali & Park, 2009). To create technological diversity has often required actors to pool knowledge, technologies and complementary resources together (Quintana-García & Benavides-Velasco, 2004). Joint
innovation efforts in the form of coopetition are therefore argued to be a successful strategy to increase innovation for firms in such industries (Gnyawali & Park, 2011). Referring back to the McKinsey survey, acknowledging that firms struggle with organizing innovation, it is likely to believe that if these firms were to successfully organize and manage coopetition projects, they could achieve their top priority of growth - increased innovation (c.f. McKinsey, 2013).

The attractive opportunities that coopetition provides for high-technological organizations is clear but also that it requires a reflection of both the opportunities and threats of cooperative as well as of competitive forces (c.f. Bates & Flynn, 1995; Dyer & Nobeoka, 2000). Though, despite the growing scholarly interest in coopetition, less attention have been paid to how the coopetition projects should be internally organized. Such organization regards how coopetition projects and in-house R&D could be simultaneously arranged and structured. In addition, even if the managerial dilemma of knowledge acquisition versus knowledge protection has been highlighted as a main challenge (Ritala & Hurmelinna-Laukkanen, 2013), less focus has been directed to how these two elements are internally managed. Management is here assigned to illustrate how actions are planned for and carried out in coopetition projects. Organizational and managerial insights would provide better understanding of how to succeed in coopetition according to Ritala (2012), who suggests further research on the subject. Studies on coopetition have so far been mainly theoretical and empirical contributions are still quite rare (Gambardella, 2014). To develop the understanding of coopetition theory, an examination of the internal organization and management of coopetition is critical. The following research questions addresses this issue and constitute this study’s focus:

*How do firms organize and manage coopetition?*

*Why do firms organize and manage coopetition in the way they do?*

### 1.1. Research Purpose and Contribution

The growth of coopetition agreements between high technology firms as a strategy for R&D and innovation, and the limited research of its internal organization and management, calls for a knowledge expansion of the phenomenon. The main purpose of this thesis is therefore to investigate the internal organization and management of coopetition in order to enhance the knowledge of how coopetition unfolds in high technology firms. A further purpose is to deepen the
understanding of how coopetition can be organized and managed to support firms’ internal R&D and innovation.

A better understanding of coopetition organization and management will provide meaningful contributions to both academia and practitioners. In the theoretical field, the study contributes to a less explored area of coopetition literature by providing insights of how high technology firms organize coopetition, especially in relation to firms’ internal R&D. Further, the study contributes to an enhanced understanding of how coopetition is organized and managed in order to support firms’ internal R&D and innovation. This contributes to the coopetition research that previously have established the relation between coopetition and innovation but where research falls short on explaining how this relation unfolds within firms and why it unfolds in that way. By revealing important managerial implications, the study contributes with a better understanding for managers in high-technology firms on how coopetition can be pursued as a complement to firms’ in-house R&D, and important factors to consider in the internal organization and management of coopetition. Empirical insights into management of knowledge acquisition and knowledge protection in coopetition provide managers with guidance of how these challenges could be handled.
1.2. Thesis Disposition

Chapter 2 - Theoretical Framework
This chapter presents the theoretical framework where the concept of coopetition is mapped and discussed. Coopetition is covered from a project management perspective with suggested ways of organizing. Projects in turn are built on three structural properties, which is reviewed. A summary of the theoretical framework ends the chapter.

Chapter 3 - Methodology
The chapter provides a description of the methodological choices and describes how the data was collected and processed as well as the case selection. Limitations and a discussion of the study’s quality finish the chapter.

Chapter 4 - Case Findings
The case findings present the discoveries from the empirical data. Reasons why the case firm engages in coopetition and how they organize and manage coopetition is illustrated.

Chapter 5 - Analysis
This chapter analyzes the empirical findings in contrast to theory, and provides an explanation of how firms organize and manage coopetition, and why it is organized and managed in that way.

Chapter 6 - Conclusion
The conclusion answers the research question and review main findings. The chapter also includes managerial implication, academic contributions and suggestions for further research
2. THEORETICAL FRAMEWORK

In the following theory section, the concept of coopetition as a framework to enhance firms’ innovation will be mapped and reviewed. Firstly by an overview of its origin and firms’ incentives to combine competition and cooperation, thus forming a coopetition relationship. Secondly, coopetition will be mapped through the lens of project management, as coopetition in high technology and complex R&D settings often unfolds as projects (Lindkvist et al., 1998; Cassiman et al., 2009). The view of projects as temporary constellations, demarcated from the permanent organization, and their properties task, time and team will be explained and used to gain insight in the characteristics of the coopetition projects (c.f. Lundin & Söderholm, 1995). These properties of projects have an indisputable presence in the literature of project management (c.f. Manning, 2008; Bakker et al., 2011). Thirdly, the organization of coopetition projects in the firm is discussed and two approaches of doing so is presented; either by separation or by integration (c.f. Johansson et al., 2007; Fernandez et al., 2014). Fourthly, important implications for the management of coopetition are brought up. Knowledge acquisition and knowledge protection are discussed thoroughly as they are important elements of coopetition and accordingly needs to be managed in coopetition projects (c.f. Luo, 2007; Gnyawali & Park, 2011). The matter of trust, its effect and importance in coopetition (c.f. Chin et al., 2008) will end this chapter.

2.1. Coopetition - a Combination of Competition and Cooperation

Forming collaborative alliances to gain financial and human resources have historically been a familiar strategic move for many firms (Parkhe, 1991; Powell, 1990; Eisenhardt & Schoonhoven, 1996). The special collaborative relationship between competitors was defined and labeled as “coopetition” in the beginning of the 1990s, and has since then been highlighted by several scholars and in business press. In the book Co-opetition from 1996, Brandenburger and Nalebuff (1996) popularized the term and gave it a rather broadly description. Coopetition was by them defined as a value creating interplay between a firm and its stakeholders, such as suppliers, customers or competitors (Brandenburger & Nalebuff, 1996). In more recent literature, Gnyawali and Park (2011) limited coopetition to a more narrow description; “a simultaneous pursuit of collaboration and competition between a pair of firms” (Gnyawali & Park, 2011, p. 651), which is the adopted definition in this thesis. Coopetition thus builds on the primary idea of a dynamic interplay between cooperation and competition (Lado et al., 2007; Chen, 2008; Gnyawali & Park,
The frame of reference in co-opetition literature naturally stretches from competition theory (Smith et al., 1976) and cooperation theory (Dyer & Singh, 1998).

In the competition literature, competition is seen as a constant struggle, where opposing firms strive for competitive advantage (Smith et al., 1976). In pure competition, boundaries between rival firms are sharp and distinct (Oliver, 2004). This heritage from organizations’ will to solely capture the value they produce by attaining full control over their product development processes and thus monopolizing the returns on their internally developed product (Oliver, 2004). Competition concerns the opportunity to be the first and only beneficiary of a product domain or market segment through the exploitation of internal capabilities and knowledge (Oliver, 2004). By securing resources or market positions a firm may improve financial performance (Hunt & Morgan, 1995). The logic of competition triggers firms to upgrade and improve their own resource and R&D portfolio (Porter, 1990). Competition is thereby a crucial source of innovation and progress in a market. Bengtsson and Kock (2000) further bring up the psychological factor where prestige and pride spurs competition and brings opponents to outperform each other. Thus, in pure competition, organizations do not exchange information or jointly perform R&D, instead manipulative activities intended to increase the organization’s competitiveness is the norm (Oliver, 2004).

Contrary to competition, cooperative business strategies create networks based on interdependent relationships, which entails mutual advantage and development (Miles & Snow, 1986; Yoshino & Rangan, 1995; Quintana-Garcia & Benavides-Valesco, 2004). The boundaries between collaborating organizations may be blurred and a free flow of information, such as research findings and scientific exchanges, is the norm (Oliver, 2004). Such exchange enables quick acquiring of necessary resources (Chan et al., 1997), reduced asset commitment and increased flexibility (Schilling & Phelps, 2007) and are important sources of learning (Mowery et al., 1998). The exchange is often long lasting, built on trust and close personal relations between members in the collaborating firms (Oliver, 2004). Formal contracts might be established but much of the information exchange relies on informal exchange between units in the firms (Oliver, 2004). Knowledge resources are jointly established by the collaborating firms meaning all could benefit from the resources and the parties share the rights to the knowledge (Oliver 2004). Collaboration has long been known as a low-cost strategy to gain technology and market access (Prahalad & Hamel, 1989).
Merging the two forces, coopetition enables firms to capture the benefits from both competitive and cooperative forces in the relationship (Luo, 2007; Bouncken & Kraus, 2013). The fact that 50% of new cooperative agreements are between competitors (Luo, 2007) implies that coopetition is a highly actual strategy among firms.

2.2. Understanding Features of Coopetition

Firms enter coopetition to gain benefits such as shared risks (c.f. Doz et. al., 1989), R&D opportunities (Hennart, 1991), increased innovation (Stuart, 2000) and new knowledge (Huang & Yu, 2010). Besides these valuable effects, the competitor engagement bring uncertainty and reason for caution since the presence of a competitor close to core business increases the risk of exposing confidential material on firm-specific knowledge (Ritala & Hurmelinna-Laukkanen, 2013). Factors such as trust (Zineldin, 2004), commitment (Cullen et al., 2000) and an observant eye for opportunism (c.f. Garud, 1994; Luo, 2004) are all argued important to keep coopetition projects unstrained and potential tensions low (c.f. Tidström, 2014). One way of maintaining coopetition fairly intact from competitive forces is to only engage in coopetition that concerns activities far away from the customer in the value chain (Bengtsson & Kock, 2000; Tether, 2002). Such activities could be the development of new technologies and common industry standards (Luo, 2007). Other researches have found similar patterns; Oliver (2004), Nieto and Santamaria (2007) and Cassiman with colleagues (2009) all argue that coopetition is most rational in early and more exploratory stages of innovation processes and when performing basic research and establishing standard settings. In contrast, firms compete in activities close to the customer and do so by applying and utilizing unique firm specific resources and competences (Bengtsson & Kock, 2000). As a result, coopetition is not a favorable strategy for innovation when the particular innovation is of a highly original nature and should instead be directed to innovations of a more basic character (Bouncken & Kraus, 2013). Firms thereby need to strategically decide which partner to involve in a coopetition relationship and when in the innovation process (Cassiman et al., 2009). Different partners provide admission to different knowledge, capabilities and resources and firms are said to be more likely to look for complementary external resources when they are moving away from their knowledge domain (Cassiman et al., 2009). This make coopetition more likely in areas that are not core competences at the partnering firms (Tidström, 2014).
While coopetition brings a possibility of generating competitive advantage, the involved firms face a high risk of tensions and conflict (Bengtsson & Kock 2000; Gnyawali et al., 2008; Ritala & Hurmelinna-Laukkana, 2009; Fernandez et al., 2014) as coopetition bring together the opposing factors of competition and collaboration. Tension is stated to be more common in collaborations between competitors than non-competitors (Das & Teng, 2003; Tidström, 2014) since a coopetition relationship entails simultaneous value creation to benefit the collaboration (Yami et al., 2010) and a struggle of appropriating resources to enhance competitive advantage for the individual firms (Doz et al., 1989). When levels of cooperation and competition are high, the tensions consequently increase (Clarke-Hill et al., 2003). This enhances the risk of project failure (Tidström, 2014). Reduction of one of those forces, foremost competition, would likely decrease tension. A division between the two forces has also been suggested as sufficient (Fernandez et al., 2014). For instance dividing upstream and downstream business, i.e. the R&D department from the Marketing department. Such action is common in high technology industries (Quintana-Garcia & Benavides-Velasco, 2004) but consequently interfere with the beneficial characteristics of coopetition where competition and cooperation play equal parts (Fernandez et al., 2014). Tensions in coopetition should therefore not be faced with an urge of diminishing, but instead acknowledged and strategically handled in order to keep the project intact (Fernandez et al., 2014).

2.3. Coopetition Organized in Projects

As previously stated, coopetition in high technology and complex R&D settings is often carried out as projects (c.f. Lindkvist et al., 1998; Cassiman et al., 2009). Coopetition projects thereby become demarcated from the firm’s permanent organization due to projects general temporary character (Lundin & Söderholm, 1995). The demarcation is favorable when concrete action is to be made within a limited time and when multiple organizations jointly work on a shared activity (Jones & Lichtenstein, 2008). Project organization has its origin in large high technology organizations (Meridith & Mantel, 2000) where innovation and product development in the form of projects has become an established strategy (Lindkvist et al., 1998). Accordingly, the work within firms’ R&D departments is often formulated as internal projects. The coordination of complex product development in uncertain and competitive environments under project settings requires the characteristics and dimensions of projects to be considered (Jones & Lichtenstein, 2008). These characteristics and basic properties of projects have by Lundin and Söderholm (1995) been described in terms of task, time and team and are adopted in a wide area of project
management literature as well as by research on inter-organizational collaborations (see e.g. Goodman & Goodman, 1976; Lanigan, 1994; Smith-Ring, 2000; Grabher, 2002; Harrison et al., 2002; Johansson et al., 2007; Buuren et al., 2009). Organization of inter-organizational collaborations requires consideration and evaluation of these properties as they affect the organizational and managerial planning of projects (Smith-Ring, 2000). It is argued that the task, time and team have a prominent role in the organization and management of inter-collaborative projects (Smith-Ring, 2000). By recognizing these properties in the organizational context of coopetition, we can increase and facilitate understanding of the aimed projects and its organization and management.

A project is initiated and motivated by a task that needs to be accomplished (Johansson et al., 2007). The task provides guidance on how project activities should progress toward the achievement of goals (c.f. Goodman & Goodman, 1976). The task may be regarded as a once in a lifetime event, (Lundin & Söderholm, 1995) but could equally be of a more repetitive character (Brady & Davies, 2004; Bakker, 2010). Regardless if the task is unique or repetitive (c.f. Bakker et al., 2011), project tasks are commonly of sovereign character, meaning they are only performed in that specific project, and not anywhere else in the permanent organization (Lundin & Söderholm, 1995). In coopetition projects, the task is often of R&D kind and related to innovation (Luo, 2007). Innovation projects have a natural character of novelty, which makes project goals imprecise, and project tasks often remain subject of negotiation among projects participants and stakeholders (Goodman & Goodman, 1976). Coopetition project tasks should therefore not be seen as a terminal assignment but instead as an evolving joint effort that may disintegrate into sub-tasks, allocated between the project participants (c.f. Lindkvist et al., 1998; Manning, 2008).

The second dimension, time, guides project activities in terms of how fast, in what order and until when a project task is to be accomplished (Manning, 2008). A time horizon and time limit must be conceptualized in order for the project to be defined (Goodman & Goodman, 1976). Projects are by definition time-limited organizations (Grabher, 2004), which is an implication to consider when coordinating project activities since the temporal dynamics influence the collaboration among the project participations (Jones & Lichtenstein, 2008). Frequency, duration and density of interaction among participants are all examples of such collaborative activities that are dependent on the time of the project (Jones & Lichtenstein, 2008). During the project, the time limit is controlled by planning activities and deadlines seeking to keep track on the progress towards the end of the project (Lindkvist et al., 1998).
The third constituting element of projects is teams (Goodman & Goodman, 1976). Teams represent a group of people joined together in a temporary setting (Johansson et al., 2007; Manning, 2008). As the teams are temporarily engaged in a project they have another organization to which they permanently belong (Johansson et al., 2007). Individuals in coopetition project teams could due to loyalty to their firm therefore be resistant to collaborate with a competitor and it could be hard to convince the team of the coopetition potential (Fernandez et al., 2014). Teams are organized to mirror project members’ individual knowledge and each project member is expected to contribute to the assigned task (Bechky, 2006). In coopetition settings, individuals from competing organizations often want to demonstrate their know-how and superiority towards each other, which could create tensions and blame cultures within the project team (Fernandez et al., 2014). Relations among team members could thereby both facilitate and constrain the project depending on the individual’s mindset (Manning, 2008). The sure termination of temporary organizations could however establish tolerance among the team members if conflicting interests occur (Lundin & Söderholm, 1995).

To sum up, projects are characterized by the task at hand, the time limit of the project and the team appointed to solve the task. Categorization of projects according to these dimensions facilitates analysis of projects’ properties and its organization. The following section will describe ways in which coopetition projects could be organized and implemented internally by an organization.

2.4. Separation and Integration of Coopetition Projects

Projects are either embedded in, or disconnected from, the permanent organization. While some scholars claim that “no project is an island” and believe in the full integration of projects into the their parent firm (Engwall, 2003 p.1), others promote a separation approach to projects in order to avoid redundant complexity (c.f. Johansson et al., 2007). In coopetition, the choice of either integrate or separate projects becomes an additional managerial challenge as the coopetition relationship requires extra effort to handle competitive tensions, increased knowledge uncertainty and higher risk of conflict between actors (Gnyawali & Park, 2009; Tidström, 2014). Firms’ internal organization of coopetition projects has an essential impact on projects outcome but ways of doing so have though rarely been discussed in coopetition literature (Gnyawali & Park, 2011). Johansson and colleagues (2007) uses the separation and integration principles as the two foremost options of organizing projects and so do Fernandez, Le Roy and Gnyawali (2014) in their
recent framework on ways of handle tensions in coopetition. By combining insights from these two frameworks, an understanding of coopetition projects organization can be accomplished.

### 2.4.1. The Separation Principle

According to the principle of separation, projects can be held separated from each other (Johansson et al., 2007). In a coopetition context, this mean for instance that coopetition projects could be held separated from the permanent organization’s internal projects. This would keep the competitive forces on a distance from the firm, meaning less chance of internal R&D exposure towards competitors (c.f. Tether, 2002). Innovation projects are especially gained by separation since they are more visual (Teece, 1992). Interactions between a project and the permanent organization are viewed upon as a hinder for the execution of the determined project task (Johansson et al., 2007), and it becomes natural for a team to concentrate on their own project and disregard actors and knowledge areas not part of that project (Goodman & Goodman, 1976). Separation of projects makes team members develop their own identity and create norms within the project that might differ from the permanent organization’s norms (Johansson et al., 2007). It is therefore a challenge to align such projects with the permanent organization’s goals and strategies (Manning, 2008). A benefit with separation of projects is though that they bring flexibility to the permanent organization and create an ability to quickly start up or shut down joint activities (Jones & Lichtenstein, 2008). This is argued to be beneficial in industries with high uncertainty and high technological complexity (Jones & Lichtenstein, 2008; c.f. Gnyawali & Park, 2011). Although separation entails many advantages, it could also bring a risk of conflict and negative tensions to the organization (Fernandez et al., 2014). This is due to different priorities between internal projects and coopetition projects (c.f. Fernandez et al., 2014). Scholars thereby argue that the separation principle is insufficient (e.g. Das & Teng, 2000; Oshri & Weber, 2006; Chen, 2008) and that an integrated approach could be needed (Fernandez et al., 2014).

### 2.4.2. The Integration Principle

The integration approach promotes the embedding of different projects into sets of connected projects (c.f. Priemus, 2007). When projects are integrated in the permanent organization, emphasis is put on a general context and not on single units (c.f. Bakker et al., 2011). In terms of coopetition, this would mean that coopetition and internal projects are integrated with each other. An organization where coopetition is a prominent strategy, not its building blocks competition and cooperation, is argued to enhance individuals’ understanding of the possibilities and challenges of
coopetition (Tsai, 2002) hence lead to better absorptions and use of its benefits. Processes of project development as well as the interrelatedness between projects can then be managed with a goal of accomplishing high quality development across the organization as a whole (Williams, 2006). Through integration, financial, juridical, administrative and other project service functions can be merged into one service center that is used by various projects (Buuren et al., 2009). This improves efficiency and assists in the staffing of the teams in multiple projects since all teams can use the same supportive organizational resources (Buuren et al., 2009). In addition, integration plays a facilitating role to management, as project ambitions and goals can be aligned with other activities and projects and are therefore easier to achieve (Buuren et al., 2009). Mutual coordination of projects and to recognize these projects as a portfolio to the permanent organization enables resource sharing leading to additional advantages and synergies to the firm (Bakker et al., 2011). The permanent organization thereby acts as an umbrella of projects, simplifying the implementation of projects’ outcomes in the firm (Johansson et al., 2007). As projects are more embedded, the transfer of knowledge between the permanent organization and projects becomes easier (Johansson et al., 2007). Knowledge transfer followingly reinforces and so does the organizational learning (Bakker et al., 2011). The next section will deal more specifically with how knowledge to the permanent organization could be appropriated and protected in coopetition projects.

2.5. Management of Coopetition Projects

Within coopetition projects, the key managerial issues are argued to be the acquiring and protection of knowledge, which is stated to determine projects potential benefits and hazards (c.f. Ritala & Hurmelinna-Laukkanen, 2013). To simultaneously handle these issues thus create a rather complex situation for management of coopetition projects.

2.5.1. Knowledge Acquisition

Once the organization of a coopetition project has been established and the project is about to start, it requires ongoing project management (c.f. Bakker et al., 2011). Since the coopetition project is carried out in an inter-organizational setting, the project management regards foremost strategic choices related to a firm’s interactions with coopetition firms and the overall project team (c.f. Fernandez et al., 2014). Managing this interface, where competition and collaboration merge, and to capture the value created is crucial for the coopetition strategy to succeed (Gnyawali & Park,
One of the primary motives of engaging in coopetition is said to be the creation and appropriation of new knowledge (Luo, 2007; Yami & Nemeh, 2014). The ability for a firm to recognize the value of new external knowledge and to apply it to its own operations is critical for a firm’s innovative capabilities (Bouncken & Kraus, 2013) and knowledge acquisition therefore becomes an important element of the coopetition project management.

Cohen and Levinthal (1994) state that knowledge appropriation is related to the intensity of effort. A firm is required to constantly allocate resources to the learning process in order to absorb skills and learn from its partners (Bengtsson & Kock, 1999; Cassiman et al., 2009). Such investments in learning could be managed by allocating human resources such as a variety of qualified personnel to the project, known as the project team (c.f. Seeley & Duguid, 1991). Research within inter-organizational learning has shown that firms are better able to obtain new knowledge when their competence base is similar to the new knowledge they are looking to gain (Cohen & Levinthal, 1994; Dussauge et al., 2000). To have similar industry specific knowledge and resources therefore becomes critical for firms’ ability to learn in coopetition (Ritala & Hurmelinna-Laukkanen, 2009).

On the collaborative side, personal interaction between firms and the development of social relationships are argued to facilitate learning (Tsai, 2002). The more tacit and technical advanced the knowledge is, the more personal interaction is needed (c.f. Kale et al., 2000; Hansen, 1999). A firm striving to appropriate as much knowledge as possible further needs to maintain a high flexibility in resource allocation by changing and swap resources depending on learning asymmetries (Khanna et al., 1998).

2.5.2. Knowledge Protection

An ongoing dilemma for firms in coopetition projects is the issue of balancing learning and protection of knowledge (Gnyawali & Park, 2011; Bouncken & Kraus, 2013; Raza-Ullah et al., 2014). Participants in coopetition would like to access know-how from their partners and internalize complementary skills and capabilities possessed by counterparts (Bouncken & Kraus, 2013). At the same time, they want to protect their core capabilities from being absorbed by partners (Doz et al., 1989; Gnyawali & Park, 2011). When both partners are equally determined on absorbing and internalizing the other’s skills, distrust and conflict could possibly spoil the relationship (Doz et. al., 1989). There is also a significant risk that learning becomes asymmetric likewise resulting in tensions between the parties (Ritala & Hurmelinna-Laukkanen, 2009). Consequently the two forces of “trying to learn” and “trying to protect” need to be balanced in
coopetition (c.f. Kale et al., 2000; Ritala & Hurmelinna-Laukkanen, 2009). The failure of protection of core assets from partner firms could result in significant market and knowledge loss (Gnyawali & Park, 2011). Problems arise with technically novel projects, which need innovative problem solving, possible causing delays and unwanted cost overruns (Cassiman et al., 2009). Competitive forces in coopetition projects may require formal governance to protect against such hazards (Cassiman et al., 2009). Rules that find the balance between what to share and what to keep secret between the firms (Tidström, 2014) among with specific contractual arrangements (Cassiman et al., 2009) is a way to protect a firm’s knowledge. A difficulty with contractual arrangements is although the high degree of uncertainty in coopetition projects making outcomes less obvious (Cassiman et al., 2009). Legal frameworks are argued to offer limited help as coopetition relationships and its tasks are evolving over time (Fernandez et al., 2014).

In addition to formal contracts there is suggested that informal agreements among the parties could be an effective way of balancing uncertainty and protection of knowledge. Kale and colleagues (2000) use their notion of relational capital to explain how such informal agreements evolve. They suggest that relational capital creates a mutual confidence that no party will exploit the other’s vulnerability even if an opportunity arises. This confidence arise out of repeated interaction and rests upon informal agreements or codes of conduct (Bakker et al., 2011). Partners in coopetition, often specify what their core capabilities are and develop informal agreements to restrict behavior that could potentially exploit such capabilities (c.f. Kale et al., 2000). Relational capital are said to reduce the desire to break such informal agreements and partners are likely to have a good faith in each others’ behavior (Kale et al., 2000). The risk to expose valuable knowledge and capabilities to a competing partner is thus limited if a high level of trust in the coopetition relationship is maintained since cooperative, not competitive, behavior is promoted (c.f. Chin et al., 2008).

2.6. Trust

Trust as a success factor for long-term relationships and collaborations has been established by a variety of researchers (c.f. Anderson et al., 1994; Morgan & Hunt, 1994; Cannon & Perreault, 1999). Likewise in the context of coopetition, where competitive forces are present, trust has been labeled as a critical factor for relationships’ progression (Chin et al., 2008; Osarenkhoe, 2010). Trust indicates to what extent organizational members have a collectively held confidence orientation towards each other and the willingness to sacrifice short-term benefits to achieve long-term gains (Osarenkhoe, 2010). A firm is more likely to learn from its partner when there is a high
degree of transparency and openness. Trust-based coopetition can therefore contribute to a freer and greater exchange of information and know-how (c.f. Kale et al., 2000). This is due to that decision-makers do not feel they have to protect themselves from opportunistic behavior from the partner’s side (Gnyawali & Park, 2011), which is said to be the main reason for firms’ limited transparency (Kale et al., 2000; Yami & Nemeh, 2014). Hence the information exchange will be low in accuracy, not timely and hard to comprehend if the degree of trust between actors is low. The responsibility for the development of trust rests on the individual team members (Osarenkhoe, 2010). The commitment and loyalty among team members signalize a willingness to contribute to the coopetition relationship (Osarenkhoe, 2010). This is in line with Luo (2004) who argues that firms need to adapt a behavior that support cooperation and not competition. Such behavior is founded in the creation of trust towards the counterpart (Luo, 2004). To behave in a trustworthy way in coopetition projects thereby becomes a priority for managers in order to acquire new strategic knowledge to the firm and to carry out coopetition projects successfully (Chin et al., 2008).

2.7. Summary of Theoretical Framework

The framework illustrates how coopetition can be internally organized and managed. In order to fully understand how such organization can be accomplished and what managerial implications coopetition may bring, the framework takes off in the competitive and cooperative forces. The competitive aspect brings features such as competitive advantages, resource protection and battles of markets shares. Competition is the force that keeps firms striving forward on a constant search to beat one’s competitors. The cooperative force on the other hand entails long-lasting relationships between firms where knowledge transfer and learning from each other serve as incentives. Such relationships build on reliance and a wish to jointly harvest the profit from the collaboration. Coopetition is the strategy resulting from the merge between competition and cooperation and these two forces are thus constantly present. When firms engage in coopetition, it is primarily in the constellation of projects. Projects in turn are built on three structural properties; task, time and team and these properties determine how the project unfolds. Coopetition is as followed broken down into the organizational strategies of either separation or integration. Organization through separation means the coopetition project and the permanent organization are detached, hence limit the interaction and influence between the projects. Contrary, organization through integration embeds the coopetition project in the permanent organization. Projects are thus viewed as a portfolio with the purpose of enhancing synergies among the projects. In addition to
organization, coopetition projects need to be managed. Key issues for management is stated to be the acquisition and protection of knowledge within the project. Trust is argued to be a factor influencing the management of these key issues and affects the progression in coopetition projects. Trust has an impact on behaviors and actions within the project and the overall spirit and results of coopetition. Management and organization could be expected to be interrelated since the chosen way of organize is likely to affect managerial choices and vice versa. The model below summarizes the theoretical framework.

Figure 1. Summary of Theoretical Framework
3. METHODOLOGY

3.1. Research Approach

The intention of the present study is to understand how firms organize and manage coopetition and why they organize and manage coopetition in the way they do. There has been extensive research within the field of coopetition and its link to firms’ R&D and innovation is established (c.f. Bouncken & Kraus, 2013; Park et al., 2014). However, few studies have been made where a firm’s internal organization and management of coopetition is examined and understood more in depth. In this thesis, organization refers to how coopetition projects are arranged and structured. A special focus is directed to the organization of coopetition projects in relation to a firm’s in-house R&D projects. Management in this thesis primarily concerns the management of knowledge acquisition and protection within coopetition projects, argued to be a main managerial dilemma in coopetition (Ritala & Hurmelinna-Laukkanen, 2013).

In order to address the limited research, a descriptive and exploratory research approach has been chosen. A descriptive approach provides the advantage of illustrating the situation in a clear manner (Saunders et al., 2009) and is useful regarding the organization and management of coopetition since the components of the organization and management are yet to be discovered through the study (c.f. Dul & Hak, 2008). An explorative approach aids understanding what is happening and the reasons behind it (c.f. Saunders et al., 2009). The explorative approach thereby complements the descriptive approach to achieve a more comprehensive view of the studied phenomenon and provides depth to the study. A mixed approach has been selected as the how and why questions can be answered by describing the organization and management of coopetition in its context and explore its reasons (Yin, 2011).

When the research approach is descriptive and explorative, the use of a qualitative research design is valuable. The qualitative design aids for understanding the organizational and managerial choices of coopetition more in detail, as it allows for the exploration to take place within its setting (Bryman & Bell, 2011). Using a qualitative design, environmental, institutional and social aspects as well as other contextual factors can be included and taken into consideration (Yin, 2009). A qualitative study enables depth in studies rather than width (Bryman & Bell, 2011), and since the purpose of this study is to investigate the internal organization and management of coopetition to
enhance the knowledge of how coopetition unfolds in high technology firms, a qualitative approach is essential.

3.2. Case Study

The literature of coopetition is still in its theory constructing stage (Yami & Nemeh, 2014), which makes a case study method suitable for this study as it enables a more systematic and deeper examination of the organization and management of coopetition (c.f. Eisenhardt, 1989). The need for such in-depth investigations is highlighted by Ritala and Hurmelinna-Laukkanen (2009), reasoning that case studies of innovation related coopetition could provide additional understanding of the phenomenon. Bengtsson and colleagues (2010) agree and accordingly recommend case studies to better understand the challenges of coopetition. The explorative and descriptive approach of this study together with the aim of answering how and why questions thereby makes a case study favorable (c.f. Yin, 2009). Case studies further provide the advantage of investigating the organization and management of coopetition within a particular context, as contextual factors could be included in the study (c.f. Yin, 2009). Within coopetition research, the ability to include contextual factors has been highlighted by Park and colleagues (2014), as such factors often are relevant for a richer understanding of the phenomenon. For this study, the context of a high-technology industry is of special interest and in order to fully understand the organization and management of coopetition in this particular context, and to gather thorough empirical evidence, a single case study has been chosen (c.f. Bryman, 1988). One benefit of such approach is that a holistic picture of how coopetition unfolds in a high-technology firm can be created since it enables to gather both present and retroperspective data. The single case study is thus based on the specific environment of a high-technology industry in this study (c.f. Baxter & Jack, 2008) and the unit of analysis in this case is the organization and management of coopetition within a firm in such an industry. In line with recommendations of Yin (2009) the unit of analysis is directly related to the research question in order to achieve a clear definition of it.

3.2.1. Case Selection

In the industry context of high-technology industries, characterized by knowledge-intensity, excessive R&D costs and changing dynamics, a number of firms can serve as a case firm. In order to obtain the benefits provided by a single case study the conducted case was chosen to figure as
an example for the investigated phenomenon (c.f. Eisenhardt, 1989). The following selection criteria were therefore considered when choosing a suitable case firm.

1. The firm should have multiple ongoing co-opetition projects. In order to investigate the organization of co-opetition it is beneficial that several collaborations can be incorporated and compared in the study. This makes the study more rigorous and patterns among the projects can be discovered.

2. The firm should have extensive experience of co-opetition projects. The ability to reflect back on historical co-opetition projects and to discuss their success and failures are viewed as important in this study since both the beginning and the end of projects can be examined. This adds a time dimension to the study, which provides a deeper insight in the studied phenomenon.

3. The firm should have experience of co-opetition projects in the fields of both product and technological development. There is reason to believe there is a difference between developing a product with a competitor and developing basic technology, (c.f. Bengtsson & Kock, 2000) and in order to investigate the features on various types of co-opetition projects, this spectrum on co-opetition projects is viewed as an important criterion.

Out of these criteria a case firm was selected where access during the period of the study could be guaranteed. To preserve the company’s desired anonymity, neither the company’s real name, its industry or its geographical origin will be revealed. This is due to the oligopolistic structure of the industry making the case company fairly easy to discover once the industry and country is revealed. What could be said is that the firm has substantial experience of co-opetition and has used the collaboration method for close to 30 years (Firm website, 2014). It has a broad range of operations in-house and develops, manufactures and sells products with the majority on export (Annual report, 2014). The products are spreading in a broad spectrum but all are characterized by cutting edge technology with excessive developments costs (Firm website, 2014). Throughout history, the firm has been an early adopter of technology and has a strong focus on developing critical technologies through co-development with other actors (Firm website, 2014). The firm participates in many research collaborations with academia and other companies and spends approximately 30% of its sales on R&D (Annual report, 2014). The case firm will hereafter be mentioned as “Maverick”.

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3.3. Data Collection

Multiple data sources have been used in this case study. Personal interviews served as the primary data source and were complemented with secondary data.

3.3.1. Pre-Study

Before the primary data was collected, a pre-study was made in order to understand the background of the case firm, its specific industry and how it operates. An understanding of both the complex industry as well as the firm per se, was vital in order to explore if the firm was suitable for the study. After the firm was selected, the pre-study was used to design an interview guide. The pre-study was made through telephone interviews with a former manager at a product unit and with a Portfolio Manager at the case firm. Due to the distinctive context the firm operates in, a thorough understanding of the company and its regulatory environment was necessary in order to conduct successful interviews where the technical language could be hard to understand for an outsider. As such, the knowledge developed in the pre-study formed a base for an understanding of the case firms specific industry and operating conditions.

3.3.2. Primary Data

The collection of primary data has been conducted through personal interviews with informants at the case firm. In this thesis, the phenomenon of organization and management of coopetition is of primary interest. To achieve depth in the study, multiple projects, both ongoing and completed where the firm collaborated with competitors, were selected. This enabled an overview of the studied phenomenon and to discover overall similarities of the firm’s organizational and managerial choices. The part of the data regarding completed projects was gathered in retroperspective and dependent on the informants’ memory and recollection. Memories are often influenced by subjectivity and personal impressions and to limit potential bias of the study, informants at different positions and divisions at the firm were chosen. The diverse experiences and viewpoints of the informants provided an equalized view of coopetition as a phenomenon. To make sure the informants possessed an extensive knowledge (c.f. Yin, 2009) of collaboration with competitors, final decisions regarding the used informants were made together with one of the Portfolio Managers, who is in charge of all the external relationships at the firm. The involvement of the Portfolio Manager in the selection process helped guarantee that the chosen informants also had a prominent role in the various collaborations and that relevant company divisions were covered. The informants’ range of profession, from Technical Specialists to overseeing functions
such as Head of Marketing and Sales, were important due to the various insight these employees are likely to have in the firm’s organization and management. The scope on various divisions and hierarchical levels of the firm provides altered perspective to the study and is likely to limit potential bias, compared to if only Technical Specialists at the Product Division would have been interviewed (c.f. Eisenhardt & Graebner, 2007).

<table>
<thead>
<tr>
<th>Informant</th>
<th>Division</th>
<th>Years at Case Firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio Manager</td>
<td>Corporate Strategy</td>
<td>18</td>
</tr>
<tr>
<td>Portfolio Manager</td>
<td>Corporate Strategy</td>
<td>35</td>
</tr>
<tr>
<td>Head Marketing &amp; Sales</td>
<td>Marketing &amp; Sales</td>
<td>20</td>
</tr>
<tr>
<td>Senior Director Business Development</td>
<td>Marketing &amp; Sales</td>
<td>23</td>
</tr>
<tr>
<td>Project Manager</td>
<td>Project Division</td>
<td>30</td>
</tr>
<tr>
<td>Technology Strategy Manager</td>
<td>Product Division</td>
<td>20</td>
</tr>
<tr>
<td>Technical Specialist</td>
<td>Product Division</td>
<td>20</td>
</tr>
<tr>
<td>Senior Technical Specialist</td>
<td>Product Division</td>
<td>30</td>
</tr>
<tr>
<td>Product Manager/Senior Technical Specialist</td>
<td>Product Division</td>
<td>35</td>
</tr>
<tr>
<td>Product Manager</td>
<td>Product Division</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 1 displays the interviews, which were held during two days at the case firm. All interviews lasted for about an hour and were conducted with a semi-structured approach where themes were set beforehand and guided the conversation. This approach is argued to be useful when the study is of an explorative nature as rich comprehensive empirical data can be gathered by steering the conversation around relevant topics (c.f. Saunders et al., 2009). This resulted in mostly open-ended questions, which made the informants free to elaborate and extend their answers. The possibility to ask follow-up questions during and after the interviews was also taken into consideration in the chosen format. Such questions helped to avoid misunderstandings as well as provided the possibility to dig deeper into interesting findings during the interviews.

3.3.3. Interview Guide and Process

Prior to the interviews, an interview guide was created with assistance of information gathered in the pre-study. The guide was made to secure that relevant topics was covered and that all interviews where aligned and touched upon the same themes. The two main concepts organization and management were broken down into detailed questions related to each concept. The aim of the questions regarding organization was to capture the overall level of the organization of
projects, and especially how coopetition projects were arranged and structured in relation to the firm’s in-house R&D projects. This led to questions about the organizational setting, the division and consolidation of in-house R&D and coopetition projects as well as the allocation of resources. To cover the management aspect in coopetition projects, meaning how actions related to acquisition and protection of knowledge are planned for and carried out in coopetition projects, questions were asked of how learning occurs and how decisions regarding knowledge and information sharing with competitors are made. Questions about the social aspects of coopetition indicated the firm’s mindset towards their coopetition partners and aimed to capture the relational spirit in coopetition projects. Prior to the interviews, an email with background information of the study was sent out to all the informants. In this way the informants could prepare themselves for the general topics that was to be discussed during the interviews.

Overview of the themes in the interviews:

1. Competitive and collaborative features of the firm’s coopetition relationships
2. Internal organization of coopetition projects
3. Management of knowledge acquisition and knowledge protection within coopetition projects
4. Organizational and managerial challenges in coopetition

An issue with interviews is to establish trust between the researches and the interviewees. This was facilitated by signing a confidentiality agreement and to promise to keep informants anonymous, which was appreciated. Throughout the interviews, the informants were encouraged to share their experiences and insights, which enabled a deeper understanding of the subject and provided the authors with more nuanced information. In order for the full conversations to be used, all interviews were recorded. According to Saunders and colleagues (2009) this enhances the ability to produce reliable data for the analysis.

3.3.4. Secondary Data

Secondary data was gathered from the firm’s website, annual report, news articles, company fact sheets and company specific information. Company information was given in the form of a presentation at the firm with complimentary material handed out. The presentation covered an overview of the firm’s organization with its business and market areas and an explanation of some innovative products. In addition, documents of the firm’s innovation strategies, Intellectual
Property Rights (IPR) strategies and product development strategies were handed out. The presentation of the material beforehand gave the authors the possibility to ask questions and to make sure the material was correctly understood before continuing the study. The secondary data has been used to broaden the understanding of the company and the context in which it operates. It further enables triangulation with the information received from the primary data collection adding to a richer understanding of the studied phenomenon (c.f. Eisenhardt, 1989).

3.4. Data Presentation and Analysis

The first step when processing the empirical findings was to transcribe the interviews to get a comprehensive view of the collected data. After the transcription, the interviews were categorized into determined categories. These categories were constructed out of the interview guide to make sure the different aspects of the organization and management of coopetition were covered. Structuring the data within categories made it easier to target the most important aspects of the empirical findings and to exclude the less relevant parts (c.f. Langley, 1999). This facilitated a comparison of different responses in order to discover patterns (c.f. Eisenhardt, 1989; Langley, 1999). The data was gradually processed and reduced into categories by both of the researchers. During the process, the findings were continuously debated to make sure they were accurately interpreted and possible alternative explanations were discussed between the researchers (c.f. Yin, 2009). To illustrate the high importance of certain findings, quotes were highlighted. The use of quotes in the data presentation provides support for the evidence and enabled an easier comparison across the interviews and towards theory (c.f. Eisenhardt & Graebner, 2007). To clarify some quotes, comments within brackets have been included. In the interviews, informants commonly used the term “external projects” when talking about collaborative projects together with a competitor. To simplify for the reader, when informants refer to such projects, the term “coopetition project” is used by the authors throughout the data presentation and in the rest of the thesis. The term coopetition was thus not familiar to any of the informants at the case firm. The data presentation does further on not make any individual differentiation between informants on the same position in the firm. This enables comparing the views between specialists and management positions rather than individual viewpoints. In addition, no differentiation is made between single coopetition projects since the study seeks a holistic explanation of how coopetition is organized and managed within the firm.
3.5. Quality of Study and Research Limitations

In order to improve the quality of the study and to strengthen its accuracy and validity, numerous actions have been taken.

Firstly, all the interviews were conducted in a personal manner, which means facial expressions and body language could be taken into account. This reduces the likelihood of misunderstandings as the observations become complemented with personal impressions (c.f. Bryman & Bell, 2011). In personal interviews there is however a risk that interviewers’ personal expressions and mere presence may have an impact on the informants and lead them to give desirable, rather than honest, answers (c.f. Eisenhardt, 1989; Baxter & Jack, 2008). To avoid such situations, the researchers used a neutral tone during the interviews and did not reveal their standpoints in the questions, which was asked in an open manner.

Secondly, the transcripts from the interviews were sent out to the informants and the informants were given the possibility to verify and clarify the data. The possibility for informants to review transcripts and provide altered explanations reduces the risks of misinterpretations thereby enhancing the validity of the data (Baxter & Jack, 2008).

Thirdly, numerous informants were interviewed from each of the chosen divisions at the case firm (c.f. Yin, 2011). Collecting data on past events possess a risk of the data being affected by the informants’ memory, jeopardizing that important information becomes neglected or portrayed in a faulty manner. The usage of numerous informants enabled triangulation, meaning the data could be independently supported from different sources. The secondary data served as an additional source in this processes and was used to verify informants’ responses. Besides triangulation, the use of multiple data sources enabled a comprehensive understanding of the studied phenomenon as multiple perspectives could be promoted (c.f. Eisenhardt, 1989). Each data source has been treated as one piece of a puzzle and has been convergent in the analysis process rather than handled separately (c.f. Baxter & Jack, 2008). This strengthens the validity of the study.

This study has been conducted in a rigor manner, nevertheless there are limitations to be aware of. One such limitation regards the informants, which had to be selected. All employees involved in coopetition projects are thus not included in the study. Therefore, the study risk missing valid information. To mitigate this, informants with excessive knowledge of the investigated subject were chosen. These informants had been at the case firm for a long period of time, holding multiple positions during their career. The informants thereby had extensive knowledge of the
firm’s operations and could provide first hand information regarding coopetition at other divisions than currently employed within. However, the long time at the firm could have affected the informants’ perception of how the firm currently operates due to the risk of being stuck in old routines. To diminish such limitations, secondary data in the form of company strategy documents was used to compare informants’ responses with the firm’s current strategies for collaboration with competitors. The internal validity could thereby be strengthened.

It should be noted that the case firm is surrounded by industry-specific conditions that limit the generalizability of the study, which is an implication commonly highlighted in case studies (c.f. Yin, 2009). Coopetition is highly affected by contextual factors and might unfold differently in industries with dissimilar context. For instance, as competition is high in the investigated high technology industry, it could make the case firm’s organization and management of coopetition of limited applicability in industries with less competitive pressure. Instead of aiming for overall generalizability, this study rather seeks to provide an example of a phenomenon that could be theoretically conceptualized (c.f. Eisenhardt, 1989).
4. CASE FINDINGS

4.1. Features of Coopetition

This episode captures reasons for Maverick to engage in coopetition, and financial support is highlighted as a prominent motive. The coopetition projects are executed on basic levels of technology in earlier stages of the value chain together with competitive partners, not necessarily endorsed by Maverick.

Coopetition has been a commonly used collaboration strategy in Maverick since the company was founded in the mid 20th century. Collaboration with competitors always takes its form as projects and usually last for three to five years. The project approach comes natural for Maverick since much of their internal operations are carried out in the form of projects. The heavy R&D costs due to technically complex products are mentioned as the foremost reason for engaging in coopetition. Maverick tries to keep coopetition projects on a distance from intact products, and is more open to coopetition within technology development in the beginning of the value chain, far away from the market. Coopetition projects thereby do not become firm or product specific but instead often regard basic technology components that are too expensive for a single firm to develop and that could be used as industry standards. When Maverick has engaged in coopetition regarding joint product development with competitors, difficulties have arisen concerning the deliveries to customers, which are sensitive for delays, and if it happens often involves monetary penalties. Maverick has experienced situations when competitors did not have the same time perspective as Maverick, which lead to complications regarding the division of the shared penalties. The commitment towards customers has led Maverick to avoid complete product development with competitors in favor for novel technology development.

The industry Maverick operates in is highly capital intensive with their home country’s government as the largest customer and Maverick’s business commonly integrates with governmental contexts. From time to time, the industry as such also operates on assignment from a European Industry Association (EIA), which coordinates and initiates R&D collaboration project between companies in the industry. Several governmental and EIA initiatives concerning the industry emerge from political desires of product or technology collaborations with other countries and participation in international projects. When Maverick develops a new technology it is therefore many times based on an assignment from EIA or on customer demands from the government and its associated institutions. A typical example of how these projects emerge is a 50-
year-old case that was initiated by the government in coherence with several other countries. All involved countries wished to develop a highly essential and basic technology, as it would enable future development of individually constructed products. The technology was extremely expensive and all involved partners agreed that a mutual development was financially beneficial. Even if the involved companies collaborated on the specific technology, everybody was fully on board and conscious of the fact that all firms planned to use the mutual technology in the same type of product, and launch it on a market where they all were strong competitors. The technology development process therefore became a slower project that otherwise where individuals and their firms tip-toed around each other, trying to figure out as much as possible about the other parties progress and future plans, without spilling anything of their own strategy. Freedom in the development process was also limited due to constraints in the project description. A Senior Technical Specialist comments on the project:

“We knew our agenda, but the project did not go in that direction all the time, but when you get these huge sums of money, you kind of accept that and adjust” - Senior Technical Specialist

The 50-year-old project exhibit how coopetition projects generally works at Maverick. When Maverick receives funding from governmental institutions or EIA they act on the initiatives of these institutions and is thereby not in complete charge of choosing their collaborative partners. One consequence of not choosing or have limited ability to influence which firms to cooperate with, collaborators are sometimes competitors that Maverick would not have engaged in business with otherwise. They may have a significant different work and cooperation culture or may not possess the technical level that Maverick believes is sufficient enough in order to fully contribute to the project.

“Sometimes we wonder why some actors are even included, what can they contribute with? But then it’s a government decision, [in these projects] we have no influence over the international participating companies - you just take the good with the bad” - Technology Strategy Manager

A Project Manager replies that it is not rare that some parties in these larger collaboration projects are just in it for the ride.
“They have to participate because of assignments from their governments, but they do not contribute, they just pitch in money in all parts of the project to get hands on the technology, we have nothing to gain from such relationships” - Project Manager

What Maverick does gain from these projects is financial coverage and the financial benefits from participating in these collaborations do however countervail the sometimes less wanted collaboration partners. Since the industry is driven by highly capital intensive R&D, in many cases companies lack financial coverage to develop a new technology or product by themselves. Coopetition projects where companies not only share development costs, but governmental institutions monetarily contribute to the development, enables Maverick to engage in R&D projects that otherwise would not have been possible. By collaborating with an opposing firm, R&D costs may be cut in half. Instead of developing all components in a product alone, to a large cost, Maverick engages in coopetition project, where they receive financial coverage for those smaller parts, and then place them in their own production. This is a common way of cutting costs.

“Sometimes we may throw in a test of our own component in a mutual project trial. You don’t have to say that [to your competitive partners]. Or you realize that a jointly developed component could be even sharper. Then we bring that home and add something extra, and use it for ourselves. You don’t say that either.” - Portfolio Manager

All informants highlight the use of the coopetition project to enhance internal R&D. Exchange of technical knowledge is however not a prime reason since the technical competence is rather identical between competitors. Technicians and managers agree with each other that it is the financial aspect and the possibility to use external project monetary resources for internal development that make coopetition worthwhile. They are also on the same page on what kind of business relationship they prefer; cooperation with a non-competitor or to develop products on their own. All informants are clear that if it was not for the money involved and the possibility of cutting costs, they would not engage in collaborations with competitors.

“If we just had the money, we could do it much better on our own” - Product Manager

“If we can choose our collaboration partners, we prefer to work with companies that complements us and which we do not compete with. I see no extra benefits of collaborating with a competitor”

- Portfolio Manager
Even if coopetition is not preferable towards other collaboration forms, informants do mention some positive side effects. The Head of Marketing and Sales brings up the extended network and influence Maverick gains when engaging in larger coopetition projects. One Senior Business Developer elaborates and says that coopetition is obviously a great way of gaining knowledge of competitors’ business, R&D and research progress. It allows Maverick to do a sanity check on their technology and for all companies in the industry to see if they are aligned with the industry’s technology trends.

### 4.2. Coopetition Projects Characteristics

*This episode captures the task, time and team dimensions of Maverick’s coopetition projects. The task is commonly of a novel kind and divided into sub-tasks in projects that last between three to five years. The project team is selected foremost on their technical skills.*

A Technical Specialist describes Maverick’s coopetition projects as dedicated to a certain project task that is further divided into sub-tasks between the participating firms. Within the project, each firm has to lobby to be allocated a sub-task of interest. The division stems from the participating firms’ shared wish to work independently on tasks on their own premises. Tasks in coopetition projects are often of a novel technological kind and results could therefore not always be definitely set in the initial project description. New technological possibilities can be discovered during the project, which were not known at the project start. Depending on these results, a project task can be re-negotiated several times among the participating firms and therefore steer the project into new directions. Project teams regularly consist of around three members from each participating firm and meetings between firms take place two to three times a year. During the time between meetings, both Maverick and its competitors work independently with their allocated sub-task. The results of the sub-tasks are shared at the jointly meetings and summarized in reports shared with all participating firms.

Team members are selected based on how their technical skills are equivalent to the project assignment. One Portfolio Manager highlights the need for team members to be technically eminent as they have to recognize and analyze present technologies but also forecast what technologies Maverick might need in the future. When allocating human resources to coopetition projects there is also a need of social skills as team members are required to listen and substantially evaluate shared information when meeting their competitive partners.
“We need people to listen to our competitors in these projects. We’re not participating to tell them what we have done, but to listen to their [competitors] progress and opinions. People [Maverick’s project team] need to have an interest in what others are doing” -Technical Specialist

4.3. Organizing Coopetition Projects

This episode captures how Maverick organizes coopetition projects in parallel to their internal R&D projects. Through such alignment, Maverick can coordinate resources between the projects. Having the same team members in both project is presented as a key factor as knowledge can be directly transferred directly between the projects.

When Maverick organizes their coopetition projects, they do so with an agenda; coopetition projects should result in internal use and support internal business strategy. This is primarily accomplished by organizing internal R&D project in line with what is produced in coopetition projects, and vice versa; steer coopetition projects in direction to what Maverick needs for its internal product development. Maverick facilitates this by running internal R&D projects parallel to the coopetition projects and aligns the two so technology results gathered in coopetition projects could be re-used in the internal R&D processes. This is a commonly used and important strategy at Maverick in order to support internal R&D and innovation as it enables technicians to transfer externally acquired knowledge direct into Maverick’s internal R&D.

Since Mavericks products are very complex, and composed by a large number of technical components and techniques, internal R&D projects can be ongoing for up to 20 years. This complicates strategy planning, as Maverick has to form their innovation strategy with a mindset of what technology they will need in the future. The long internal product development cycles at Maverick makes the coopetition projects foremost involve future technologies, which are used long, time after the coopetition projects are terminated.

“When we can start internal development projects at the same time as we engage in an external [coopetition] project, that is the best scenario. Even if we don’t come up with a finished product ourselves during this time [during the coopetition project], we can go back to what we gained from the external [coopetition] project, and use it a decade later in our product”

- Senior Technical Specialist
“In short term, four to five years, we can barely see anything of the transfer between internal and external [coopetition] projects, but in the long run, history tells us that we almost use everything. What we did 15 years ago, we place in our products today” - Technology Strategy Manager

4.3.1. Working in Parallel Projects

Maverick organizes projects so the persons involved in an internal R&D project simultaneously are working in coopetition projects that have similar agendas. For Maverick, the strategy means a fast and consistent transfer of valuable knowledge between projects.

“Before, we didn’t have the same people involved in the internal and external [coopetition] projects and we lost much of the knowledge transfer. It is much better to have the same people involved in both [internal R&D and coopetition] projects. People’s heads are very important”
– Technology Strategy Manager

Coopetition projects last for three to five years while internal product development processes can proceed for up to 20 years. The long internal product development cycles enable Maverick’s Technical Specialists to participate in several coopetition projects whilst working continuously on one internal R&D project. Internal projects are often more prioritized and it is the coopetition projects that receive cutback in resources if important internal issues are pressing. At Maverick, continuance is however an important aspect and so is having the same people involved during a whole project. A preferred scenario is when Maverick is involved in a coopetition project from the start and therefore can be co-responsible of setting the agenda. Portfolio Managers together with Technology Strategy Managers have a responsibility of what Maverick should do in order to support and drive internal R&D. The most cost efficient techniques and products are developed when Maverick is able to cross develop between the different R&D departments and when internal projects are aligned with coopetition projects.
4.4. Knowledge Acquisition in Coopetition Projects

This episode captures how Maverick manages knowledge in coopetition projects and that it results in limited technical learning. Instead, gaining vital knowledge about competitors’ operations and what business areas competitors have prioritized is highlighted as important for Maverick.

The firm’s strategy of running coopetition and internal projects simultaneously, enables Maverick to capture important and significant knowledge in coopetition projects, which is valuable and usable in internal R&D. Knowledge transfer from coopetition sources into Maverick does however not follow a formal or standardized procedure and it is up to each team member in the coopetition projects to assemble information and transfer it back to Maverick. Documentation and reports from coopetition projects are meant to be used to transfer and spread knowledge but several informants witness they seldom read the reports from coopetition projects. The Portfolio manager explains that the essence of a research project is hard to capture in writing and that direct involvement and physical participation are better for learning.

“Knowledge is spread by working together, not by reading documents” - Portfolio Manager

Having a quick and natural knowledge exchange between external and internal projects is favorable according to all informants. Though when it comes to if Maverick learns from a technical standpoint in coopetition projects, i.e. from their competitors, a Product Manager explains that he always has an idea of what type of knowledge he is aiming to gain, but that he always ends up disappointed. It is further explained that Maverick has a tradition and culture where they believe they are superior to competitors, a view shared among informants. A Portfolio Manager exemplifies that in a successful coopetition project 1+1 should equal at least 2, illustrating that a mutual competence base has fruitful potential for Maverick as they should gain twice in return on what they would have by going solo. However, another Portfolio Manager provide a slightly different view and states that more often does 1+1 equals 1.5 in coopetition projects. Technical competence is similar between competing firms meaning there is limited technical learning between the technicians in projects. Due to the competitive relationship firms often pass on sending their best technicians to a coopetition project, since these are seen as too valuable and their competence should stay intact inside the firm, explains a Product Manager.

Although employees have end up disappointed in the acquisition of technical knowledge from competitors, all informants agree that learning about the competitors operations is a vital aspect in
external projects. The learning process is described as puzzling of bits and pieces where a look at a patent, a glimpse at a competitor’s presentation and an overhearing of a conversation together provide a good indication of the direction a competitor is heading.

“If we are able to get an insight in our competitors’ operations, even just on a general or principal level, we can tell they have identified these areas as important. That information is extremely essential for us and provide us with the first screening of future technologies”

– Technical Specialist

Gaining knowledge about competitors is further as much about what they do, as what they do not do. If Maverick founds out that competitors went to a halt in a certain technical experiment, there is no reason for Maverick to go down the same road in their own experiments. Similarly, when Maverick faces a technical complication with no obvious solution; a hint from a competitor’s progress concerning that same complication may be what determines if Maverick proceeds with the experiment or not.

4.5. Knowledge Protection in Coopetition Projects

This episode captures how Maverick manages to formally secure their background information and legal rights to their deliverables within the project. More informally, vague descriptions of technical details and withholding of project information from competitors are commonly used methods of knowledge protection.

In the same way as Maverick searches for information concerning their competitors, competitive firms scan for insights in Maverick’s business. The Senior Director Business Development explains that just as Maverick; opponents aim to use the co-developed technology in their own product development. Coopetition projects therefore implicate a strong need to protect the firm’s knowledge and prevent competitors from absorbing and using information deriving from Maverick. When entering a coopetition project, Maverick and its competitors are therefore very thorough with mapping what knowledge they bring into the project and what knowledge they had before entering. This prevent accusations of stealing technology from competitors. Mapping previous knowledge is described as background information and is provided in the beginning of every coopetition project by all participating firms, in the shape of formal contracts. Maverick has to consider how detailed the background knowledge should be since the information becomes
visible to the competitor and could be used in their operations. Maverick therefore tries to provide
as broad and fuzzy background information as possible, formulated in terms of knowledge
regarding technique areas rather than explicit component knowledge. After the background
information is secured, the next step is to secure the knowledge developed within the scope of the
coopetition project. The golden rule is that the firm who is creating the knowledge owns it and
owns the Intellectual Property Rights (IPR) to use it. Competitive firms in coopetition projects are
therefore always highly aware of what has been developed by them and to make sure that it is
explicitly legally stated in their project deliverables. If two firms develop an invention together
both companies own the IPR to it and both companies must give their permissions for the
respective company’s internal use of the invention. This can create great tensions, according to a
Product Manager.

In addition to the firm specific knowledge protections, coopetition projects contracts include a
collective Non-Disclosure Agreement, which is valid during the project and five to ten years after.
The Non-Disclosure Agreement states that knowledge developed within the project are to remain
within the frame of the project during this period. In practice, it means that the involved firms
cannot spread the knowledge from a coopetition projects to its internal organization. Though as a
Project Manager mentions; information is spread informally where it is needed so that Maverick
internally can build further on research they been a part of developing, and not start from scratch.

“The contractual agreements do not allow us to spread the information within the project other
than on a need to know basis. Actually we should not spread it at all but of course we need to find
ways to spread it to the ones who otherwise repeatedly do the same work in other projects”

– Project Manager

In a coopetition project setting all informants agree on the importance of knowledge protection and
describe the constant consideration of what to share and what not to as challenging. A Portfolio
Manager explains that Maverick can share what they are doing but seldom tells a competitor how
and why they act in a certain way. He illustrates this as Maverick bringing a black box to a
competitor - they can see what it is, but not what is inside. An incident exemplifying such behavior
was when Maverick held responsibility for technical measurements in a coopetition project, hence
also was in charge of sharing the result. Maverick however found some additional and helpful
ways of accomplishing this, which were not within the scope of the project. Those additions was
thoroughly used internally, but not included in the final report shared with competitors.
“We try to sneak with it [the measurements] and we write a report that is truthful, but it doesn’t show the best parts” – Portfolio Manager

Similarly, there have been situations when Maverick has stopped working on specific development processes in a coopetition project to hinder competitors from discovering additional possibilities.

“There have been times where our technicians have discovered more than what was expected [in the coopetition project]. Then we stopped working on that specific part in the project and kept on developing back home [at Maverick], we don’t want to give away anything that is not in the deal”

- Portfolio Manager

Technical details and principles are ranked as highly sensitive parts of research and Maverick are generally not positive to share those. In coopetition projects reports, Maverick may formulate sensitive information in a very vague manner with figures that are difficult to read and interpret. Principles and detailed information are instead placed in internal reports, which are never shown to the rest of the coopetition project.

“In the reports, we become very fuzzy when it comes to details and principles we don’t want to describe. It could be figures and graphs in a bad resolution making it hard to read what is actually on the axis.” – Technical Specialist

A counter weight is although needed between information sharing and protection, as the competitor should not sense information is being hidden. In general, the informants agree that competitors accept that Maverick do not want to share everything. A Senior Director in Business Development explains that they are all competitors and equally protective of their firm specific knowledge and competitive advantage. Therefore it is common that firms explicitly denies competitors’ request for information concerning internal R&D.

“I tell them explicitly that I do not want to talk about the subject in detail and that they will have to draw their own conclusion from what I have showed. They usually accept that. It is part of the game” – Senior Director Business Development
The balance of what information to share and not is much up to the individuals in the projects. The Project Manager highlights that these people are experts within their fields and therefore sense what information is sensitive. The Technology Strategy Manager explains that it however could be a problem with inventors that want to brag about what they are doing. Maverick has, as far as informants know, managed to avoid such situations well but competitors have been less successful. Maverick continuously pays attention and uses such knowledge in internal development.

4.6. Trust Your Competitors?

This episode captures the lack of trust from Maverick towards their competitors in the coopetition projects.

When informants were asked about their relationship to competitors and if they to some extent trust competitors, it is explained that the only thing they trust is that competitors use the information.

“We have trust in the manner that everything we tell them will be used. We count on it [information] to be used directly in their internal product development” – Technical Specialist

A Portfolio Manager says that trust is the wrong word to use in this industry. It is absent. The other Portfolio Manager contrary says that trust is present, but in the form of competence. If a competitor says something technical, their competence is trusted. A Technical Specialist is onto the same notion and explains that trust is created at the competitor when a task in the project is done in a professional manner. The Project Manager laughs at the question if there is trust towards a competitor.

“Do you hear what you’re saying? Trust your competitor? I would never do that”
– Project Manager

The Senior Director Business Development sums up that business is the main priority for Maverick in all their coopetition relations.

“Trust? When you got to know people, you can trust them. But you should always understand that for any company, business comes first. And be aware of that!”
– Senior Director Business Development
5. ANALYSIS

5.1. Motives for Coopetition and its Organization

The novelty of coopetition may be rather new to scholars, but not to our case firm, which has used the strategy for decades. Due to the capital intensive R&D in Maverick’s industry, the firm can not develop all technologies on their own, even if they possess adequate technical skills. Maverick instead searches for finance by engaging in projects with many participating firms, often in direct competition to Maverick. These coopetition projects consequently bring competitive forces close to Maverick’s operations. However, when the gain in financial funding is determinant of which technologies and products to develop, coopetition becomes the best alternative even if it entails many unfavorable aspects to Maverick. It can therefore be argued that in order to become a profitable actor in the high technological industry in which Maverick operates, coopetition likely becomes a necessary strategy. The explicit statement that finance is the superior motive for collaborating with competitors indicates that established reasons for engaging in coopetition, such as gaining complementary resources and a goal of knowledge acquisition from competitors (Bengtsson & Kock, 2000) can be disregarded in the case of Maverick. Due to the financial aspect’s dominance over a knowledge aspect, it is reasonable to believe that Maverick’s internal organization of coopetition is affected primarily by financial motives rather than increasing the firm’s knowledge base and competence.

Maverick’s low prioritization of an enhanced competence base could likely be a consequence of the restrained choice of partners, since the firm not always is in charge of which competitors to collaborate with. Firms are said to engage in coopetition with partners baring complementary resources and skills to enhance the firm’s knowledge (Cassiman et al., 2009). As the ability to choose partners sometimes is restricted for Maverick, it is assumable that in such cases Maverick has a minor interest in partners’ competence. Maverick’s internal organization of coopetition is thereby not focused on enhancing their competence base but instead on the ability to use operational results from coopetition projects.

The financial reasons for Maverick to engage in coopetition indicates a cost-efficient use of resources could be expected to act as a main driver for Maverick’s chosen way of organizing. The prioritization implies a need for the organization of coopetition through integration as financial and human resources could be shared between projects. The restriction in the selection of partners
would however indicate that Maverick wants to limit interaction with competitors implying a need for organization through separation. In the case of Maverick, a combination of the two strategies enables Maverick to organize coooperation and internal R&D projects in parallel to each other while still limit interaction with competitors. The combination of organization through integration and separation is influenced by the characteristics in the coooperation projects and is discussed below.

5.2. Project Characteristics Influence on Organization

5.2.1. Project Task

In line with what was expected (c.f. Luo, 2007), Maverick only engages in coopetition on lower and more basic levels of technology in the beginning of the value chain. Since projects regard technology with a novel character, the task is often re-negotiated by the participating firms as projects progress. The possibility to re-negotiate indicates that each time a project task is debated, Maverick has a chance of steering coopetition projects towards their own agenda. This is likely to have motivated Maverick to integrate and align their coopetition projects with internal R&D projects. The quick information exchange between two integrated projects enable increased communication (c.f. Johannson et al., 2007), facilitating projects influence on each other. An integration approach would simplify steering the coopetition projects toward internal R&D projects’ goal, compared to if the two projects were held separated. Thus, the task character and possibility to re-negotiate have likely had an impact on Maverick’s internal organization of coopetition, hence making it more integrative.

Although the character of task could have affected the organization towards integration, the task also enables Maverick to organize through separation. In coopetition projects, the task is often separated and divided into sub-tasks between the competing firms, which mean that competing firms’ operational work within projects is pursued individually. Maverick is thereby enabled to execute their own R&D agenda within the scope of coopetition projects. This is illustrated by how Maverick secretly combines internal component tests with official tests within coopetition projects. It is likely that such actions would not have been performed with competitors present due to potential tensions (c.f. Tidström, 2014). The competing firms possibility to pursue their own agenda separately would reasonable facilitate a good working climate among the competing firms since consensus concerning the overall project task still can be maintained. Contrary to what
research suggest (Fernandez et al., 2014), organization through separation seems in Maverick’s case not to bring negative tensions.

5.2.2. Project Time

The long internal R&D projects (up to 20 years) open up for integration possibilities of the shorter coopetition projects (lasting 3-5 years). Such integration would enable coupling of the projects’ operations and for internal R&D projects to utilize the finished results from the coopetition projects (c.f. Williams, 2006). Maverick could thereby organize long-term development projects to act as an umbrella for many coopetition projects (c.f. Johansson et al., 2007) and efficiently incorporate results from coopetition projects. By such integration, Maverick could potentially bring about a more agile and cost efficient development process due to capitalization of coopetition projects’ result and operations. Accordingly, in Maverick’s case the time dimension of projects has led to the possibility of integration.

The overall industry time aspect with long product development cycles implies that Maverick needs to rigorously plan their integration and what outcomes are wanted (c.f. Lindkvist et al., 1998). Since the coopetition projects often results in components and technologies that can be applied in Maverick’s internal R&D many years later, leveraging on coopetition projects becomes a matter of strategic planning for future technologies. This could explain why Maverick is keen on lobbying for their own interests in coopetition projects since valuable time could be saved in their future R&D.

5.2.3 Project Teams

The teams involved in coopetition are strategically considered by Maverick, which uses a staffing model where the same project members are simultaneously active in both internal projects and coopetition projects. The emphasis is put on sharing resources among projects and to align activities (c.f. Buuren et al., 2009, Bakker et al., 2011). Maverick’s team members in coopetition projects were said to be selected foremost on technical skills. To use coopetition projects as a mean for internal R&D requires employees with a broad range of specialist knowledge as work is performed in parallel projects and knowledge equivalent to both projects is needed. If Maverick aims to integrate coopetition projects with internal R&D, high technical skills can be argued as a necessity to align activities in the best possible way.
The integrated team composition has additional benefits for Maverick from a contractual perspective. Non-disclosure agreements prohibit Maverick to freely spread information gained in coopetition projects to the permanent organization. By using the same team members in both projects simultaneously, Maverick can respect the contract but still incorporate the necessary information effectively. Integration of teams thereby becomes a solution for Maverick in order to utilize the results of coopetition projects without breaking formal agreements. The forces of competition present in coopetition makes Maverick eager to capitalize on results quickly, as it could enable a competitive advantage. This however requires Maverick to have an insight into competitors' operations in order to gain information on their prioritized areas and their headed direction. Integrated teams permit this information to be captured and incorporated straight into Maverick’s internal R&D. In a coopetition context, this could explain how an integration approach is used to create additional advantages for a firm (c.f. Bakker et al., 2011).

Coopetition brings about that team members could be restrictive to work with competitors and hard to convince about projects’ potential (Fernandez et al., 2014). This could explain why Maverick have chosen to integrate projects since such resistance could likely be limited if internal R&D benefits are visual. However, despite Maverick’s integration there still seems to be a repulsion towards collaborating with competitors as indicated by how Maverick often believes they are superior to competitors. This implies that even in an integrated context, team members resist coopetition, suggesting that integration is not sufficient enough to suppress the forces of competition.

5.3. Management of Knowledge Acquisition

One of the primary reasons for engaging in coopetition is said to be the possibility for a firm to acquire new complementary knowledge (Huang & Yu, 2010) and by that support innovation. It was therefore expected that Maverick would have managerial routines in place to facilitate technical learning from competitors within the coopetition projects. However in the case of Maverick, technical learning from competitors is not prioritized. Maverick believes that learning occurs by working operational together but the organization of strictly separating sub-tasks between competitors in coopetition projects signify that no learning, between Maverick and its competitors, could occur. As the technical work instead is located inside of Maverick’s internal organization, learning is limited to take place between Maverick’s project team members.
Therefore, knowledge acquisition and learning in coopetition projects seem in Maverick’s case to have little to do with competitors’ competence, contrary to what is suggested (Cohen & Levinthal, 1994; Dussauge et al., 2000). In addition, the fact that coopetition projects are organized to separate sub-tasks from each other delimit the participating firms’ team members from working operational together. The requirements of learning, such as personal interaction and a free flow of information (Chan et al., 1997; Mowery et al., 1998) are therefore absent. This brings about that much of the benefits stemming from coopetition concerning knowledge, learning and thereby in extension innovation (c.f. Bengtsson & Kock, 2000) are missing in the case of Maverick. The organizational setting accordingly affects the management of knowledge acquisition within the coopetition project and in this high technology context, it is questionable if learning can occur in a separated project setting. It is however debatable if Maverick would acquire more knowledge even if coopetition projects were organized with the aim to support learning. Team members in Maverick’s coopetition projects are stated to have a rather superior view of their firm and share the belief that they have little to gain from competitors, implying it is less likely that any learning will occur (c.f. Cohen & Levinthal, 1994). This indicates that apart from a supportive organizational structure, employees’ mindset becomes important for learning and management consequently would have to align that mindset with organizational goals if learning would to become a priority.

Contrary to the lack of a managerial goal to learn from competitors, there seem to be more attention given to learning about competitors. Learning about competitors’ operations was stated rather explicitly as a goal in Maverick’s coopetition projects. As interaction with competitors is limited to project meetings, attending such gatherings give Maverick’s team members a possibility to collect pieces of information about competitors’ activities. This indicates that the mutual outcome of the project and the collaborative climate is not highly prioritized at such meetings. The desire to sneak peak into competitors’ operations instead implies that the meetings would be surrounded by tensions (c.f. Fernandez et al., 2014). However, the case shows that Maverick is aware of how competitors have the same wish for operational insight indicating there is consensus among the participating firms. Such shared competition consensus lead to an avoidance of tensions. This suggests the complexity of the two opposing forces competition and collaboration might be smaller than suggested in coopetition (c.f. Bengtsson & Kock 2000; Gnyawali et al., 2008; Ritala & Hurmelinna-Laukkanen, 2009). Competition is evidently stronger than cooperation in this high-technology context and the coopetition projects should therefore be managed thereafter.
5.4. Management of Knowledge Protection

In line with what was expected (c.f. Raza-Ullah et al., 2014), Maverick is very conscious on what knowledge they share in their coopetition projects and extensively emphasize the usefulness of formal contracts to protect their knowledge, contrary to what is suggested (Fernandez et al., 2014). To Maverick, management of knowledge protection through formal contracts is essential in coopetition projects, as the contracts specify both the firm’s background information and the firm’s IPR within the projects. It could be suspected that detailed legal frameworks provide sufficient security towards competitors’ internalization of firm-specific skills. However, the case of Maverick shows that although the reliance and usage on formal contract is emphasized, Maverick still searches for additional protection. This indicates that formal contracts are not sufficient. The separation of coopetition into sub-tasks, where every participating firm accordingly owns the exclusive IPR to their results, could act as an extra protection of knowledge. As the separation of task means operational work is performed independently and limits competitors’ insight, firm-specific knowledge and IPR could be secured. Therefore, the wish for avoidance of legal complications could explain why coopetition projects are organized through separation of tasks. Regulative aspects could reasonably provide a strong incentive for the organizational choice. The organization through separation could further be explained by a wish for an increased managerial flexibility, which separation entails (c.f. Jones & Lichtenstein, 2008). To Maverick this means a possibility for management to shut down joint activities when technologies have become too vital to expose to competitors. In these situations, competition obviously pulls stronger than cooperation.

In addition to formal contracts, it has been proposed that relational mechanisms could be efficient compliments when protecting knowledge in coopetition projects (c.f. Kale et al., 2000). Following this reasoning, is could be assumed that the case of Maverick would present elements of trust between the firms in coopetition projects. However, Maverick’s case shows no sign of relational capital and despite management through contractual agreements and the division of sub-tasks, Maverick still acts highly protective within the project. The total absence of trust towards competitors brings Maverick to further secure firm-specific knowledge through informal actions of protection. Fuzzy figures in reports and an unwillingness to spare details illustrate that knowledge protection is more vital than achieving jointly progression in coopetition projects. The absence of trust draws attention to competition rather than cooperation and accordingly the actions taken within the project by Maverick bears characteristics of opportunism. The adherence to competition
and lack of trust seems to create a strong need for protection within Maverick’s high technology context, limiting potential cooperative benefits such as the acquisition of new knowledge and complementary resources. The link between coetition and increased innovation is built upon the leverage of competitors’ resources and competence (c.f. Gnyawali & Park 2011) and knowledge protection could therefore be seen as superior to the achievement of innovation within Maverick’s coetition projects. It could therefore be argued that coetition in this case would inhibit innovation, contrary to what has been established in other studies (Bouncken & Fredrich, 2011; Ritala, 2012; Bouncken & Kraus, 2013; Yami & Nemeh, 2014).
6. CONCLUSION

The intention of the study was to understand how firms organize and manage coopetition and why they organize and manage coopetition in the way they do. As research on internal organization and management of coopetition is relatively scarce, focus of the thesis was set to contribute with empirical insights on the topic. Coopetition occurs regularly in high technological industries with a main objective to support innovation. Investigating organization and management of coopetition in a high technological setting enables a discussion on how firms may use coopetition to support internal R&D and innovation.

The study suggests that financial motives act as the main driver for engaging in coopetition. In this context, coopetition is a strategy to primarily receive funding for internal R&D projects to support innovation. This has impacted the internal organization of coopetition at the case firm, where the leverage on finance to support internal R&D is in primary focus. Identifying what motives are behind a coopetition relationship consequently becomes important for an understanding of the organization of coopetition.

Coopetition at the case firm is organized using a combination of organization through integration and separation. An integrated approach is used for organizing teams, and a separated approach is used for organizing tasks. By integrating team members in both projects, a direct connection to the case firm’s internal R&D and innovation is achieved. The separation of task restricts competitors’ insight in operations and enables the case firm to pursue internal R&D priorities within the scope of coopetition. The combination of organization through separation and integration permits the case firm to effectively share and utilize resources between coopetition projects and internal R&D. The used combination of integration and separation suggest the organizational forms of coopetition projects are complex and that organizational strategies should consider an efficient way of employing resources.

Protection of knowledge could be suggested to act as a main factor of influence on organization and management within the coopetition project. The internal organization of coopetition is structured towards limiting risks and to facilitate an efficient management of knowledge protection within coopetition projects. Trust towards competitors is absent and knowledge needs to be protected by formal contracts and by not revealing operational processes. It is thereby implied that
if protection of knowledge is a priority, a proper organizational arrangement supporting equivalent managerial actions is preferred.

The study indicates that competition is the primary force in coopetition. The case firm’s organization and management of coopetition show that cooperation is secondary to the firm’s internal R&D and innovation priorities. It could therefore be argued that the case firm never left competition during the limited time it cooperated with competitors. Instead organizational and managerial actions were likely taken with a goal of enhancing the case firm’s competitive advantage. Even though coopetition entails cooperation, this study suggests that competition is superior. Coopetition as a way to support innovation by utilizing competitors’ competence in collaboration could therefore reasonable in this case be questioned. Rather, in this context it seems that coopetition influence innovation through the increased funding that coopetition contribute with to firms’ internal R&D.

6.1. Managerial Implications

Most coopetition literature builds on the perception that motives behind coopetition primarily are of cooperative character and that firms engage in coopetition to exchange knowledge and learn from competitors. If motives to engage in coopetition are of other nature, e.g. financial as in the investigated case firm, it is likely that an organization building on knowledge exchange will not be the most useful. The notion that the motive behind coopetition highly influence how a firm organize their coopetition projects, implies that managers should put effort in identifying what reasons are driving coopetition in order to properly organize coopetition projects. Additionally, if the motives are of financial character, this thesis provides insight on how to organize accordingly. Moreover, this thesis emphasizes the legal aspect of coopetition explaining how to manage knowledge protection and what organizational precautions can be taken in order to utterly secure firm-specific knowledge. It can also be suggested that this study makes managers more aware of the presence of competitive forces in coopetition projects and the implications these forces bring. Such awareness would suggest that managers become better inclined to manage theses forces suitably.
6.2. Academic Contributions

Coopetition research has so far been scarce concerning internal organization and management and there are few studies made that empirically map how coopetition is organized and managed in firms. The first and foremost research contribution is therefore in the scope of internal and managerial empirical insights from a high technology industry context, where coopetition occurs regularly. Secondly, by discussing and identifying the competitive and cooperative forces in coopetition, and to propose that the competitive forces are superior in coopetition, this thesis add an altered view to coopetition literature, which hitherto been mostly centralized around the cooperative forces and its benefits in coopetition. A third contribution is the identification of coopetition as a phenomenon executed in the form of project, which unfold analyses through the lens of project management. To identify coopetition as projects using the project elements of task, time and team enabled a more thorough investigation of how coopetition is organized and managed. A final contribution is made to research concerning the relationship between coopetition and innovation. Coopetition has in previous research been argued to have a positive effect on innovation, but by studying our case firm such relation could be put into question as our study found several features that could be suggested to have a rather declining influence on innovation.

6.3. Limitations and Suggestions for Future Research

In this thesis, organization and management of coopetition have been investigated in a contextual setting of a high technology industry. Due to the emphasis on the empirical context, the study should not be seen as comprehensive but rather as a way to provide a first overview of the internal organization and management of coopetition. This brings about that the results might unfold differently in an industry where knowledge is not valued as extensively as in the investigated high-technology industry with its complex products. Consequently, further research in industries with other characteristics is encouraged to establish additional ways of organizing and managing coopetition. How industry contexts influence the structure and arrangement of coopetition would be interested to include in such studies.

As this study seeks to create an overview of the organization and management of coopetition, multiple projects were investigated, many in retroperspective. This provides the result with a limitation and it would be interesting for future research to follow a single coopetition project’s progression during a longer period of time to gather real time data. Such studies would preferable
include what happens after a coopetition project dissolves, how the relationship between the firms develop during the time and how the internal R&D at a firm operationalize the results gained in the coopetition project.

In the study, not all investigated coopetition projects at the case firm steamed from a free choice of collaborative partners by the case firm. This could have impacted how the case firm organize and manage coopetition, as other motives could be present at firms that are able to choose coopetition partners more freely. While this opens for an interesting discussion on what effect such restricted choice may have on a coopetition project, it thus provides a limitation concerning the results on organizing. Future research is therefore encouraged to explore additional organizational and managerial strategies that firms in coopetition use, with a special emphasis on how the selection of partners could impact internal R&D and innovation. Since competition is identified as a primary force in coopetition more research is finally suggested on firms’ behavior in coopetition and how competition elements within the project impact the outcome.
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APPENDIX

Interview Guide

1. *Competitive and collaborative features of the firm’s coopetition relationships*
   - Reasons for engaging in coopetition, character of coopetition projects, relationship to competitors, competitive and cooperative actions and potential obstacles.

2. *Internal organization of coopetition projects*
   - Resource allocation to projects: task, time and team aspects. Organizational setting and implication, division and consolidation of in-house R&D and coopetition projects.

3. *Management of knowledge acquisition and knowledge protection within coopetition projects*
   - Strategies of knowledge acquisition and protection from competitors, how is it executed and what knowledge is targeted/protected.

4. *Organizational and managerial challenges in coopetition*
   - Challenges of cooperating with competitors, actions and precautions. Trust in competitors.