A Leadership Perspective:

Navigating the Coopetition Paradox to foster Innovation in the Insurance Industry

Sizhu Chen

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by

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Preface

During the writing process of my master thesis, I have learnt a lot. I expanded my knowledge regarding leadership and obtained new insights into coopetition. Selecting qualitative study is not only an opportunity but challenge for me. Qualitative analysis is different from quantitative study, and it is my first time to conduct case study by interviewing with outstanding leaders in insurance industry. Without my experience in NHH and RaCE program, I cannot cultivate capabilities in academy area.

I would like to express appreciation to my supervisor, Synnove Nesse. She accompanied me throughout the whole process. She also encouraged me with targeted suggestions and dedicated to support me in each phase. I would like to express my gratitude to the CEO of Finance Innovation and other participants in insurance companies as well. Without their patience and responses, it would be hard for me to collect data with high quality. Overall, the RaCE program provided me a platform to start my research by aligning with many professional experts.

Finally, I would like to thank my parents. They are the most selfless, generous, and dedicated "angel investors" in the world. Without their support, I cannot chase my dream. I would also like to thank my friends, Yixin Xu and Qian Sun. Whenever I needed, they were always there. I am very grateful to my alma mater, Tianjin University as well. "Seeking truth from fact" would be my lifelong credo. I would be most grateful to my motherland, China. Without her backing, I would not realize my personal value and create value to the society of China in the future.

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Sizhu Chen

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1. Introduction

Coopetition, generally defined as pursuing competition and cooperation simultaneously (Brandenburger & Nalebuff, 1996), is an approach firms use to achieve competitive advantage, including added value, secure contacts, improved productivity and quality, access to raw materials, and reduced risk (Walley, 2014). Other benefits for firms include developing new technology, accessing complementary resources, entering new markets, and creating new products (Cygler et al., 2018). More specifically, coopetition facilitates different forms of innovation, such as new product development (Bouncken et al., 2018), business model innovation (Ritala et al., 2014), and technological innovation in high-tech and knowledge-intensive industries (Bouncken & Kraus, 2013). Beyond these advantages, increasing environmental uncertainty, fast-changing customer demands, rapid technological growth, and rising capital costs force corporations to cooperate with their competitors (Zacharia et al., 2019).

Firms pursuing coopetition hope to achieve benefits in line with their strategies (Czakon et al., 2020). However, as a type of strategic alliance, coopetition is risky and does not always lead to positive results because of the dark side of a coopetitive relationship and the tension that may arise from it (Fang et al., 2011). Coopetition is a paradoxical activity that involves mutually exclusive behaviors that are either cooperative or competitive. Unless the risks, vulnerability, and tensions that arise from the relationship are managed, it can suffer from opportunism. This, as well as safeguarding toward opportunism, can lead to behaviors that cause inefficiency of activities and goals (Cygler & Sroka, 2017), extremity of coopetition intensity and increased tensions (M. Crick, 2019), and inability to manage knowledge and capture and share value effectively (Bouncken & Kraus, 2013). The high failure rate of strategic alliances reveals that conflicts, switching behaviors, opportunistic behaviors, and network inertia are prevalent and need to be managed effectively for such alliances to be successful (Fang et al., 2011).

Despite the leadership role's importance in managing this relationship, this role and its impact on coopetitive relationships and desired successful outcomes, such as innovation, remain under-researched (Nesse, 2018). Leadership is required in many coopetitive situations. For instance, Bengtsson and Kock (2014) proposed the significance of

understanding the management of the cognitive aspect of paradoxical tension, as well as key approaches, tools, and strategies to deal with such tensions effectively. Devece et al. (2017) proposed strengthening the significance of the management of coopetition to yield advantages that outweigh the risks and tensions created by coopetition. Furthermore, trusting relationships are deemed central to coopetition. Devece et al. (2017) pointed to the importance of exploring how and under which conditions trust is built and activated in coopetition, concluding that more strategic management tools should be investigated. While these studies acknowledge the significance of managing coopetitive paradoxical tensions to achieve coopetition success, build trust, and avoid risks, they do not delve into the leadership roles or which functions leaders perform, especially when it comes to the interpersonal tensions that arise from paradox (Nesse, 2018). Moreover, despite that leader at different organizational levels are likely to perform differently to navigate paradoxical tension to sustain coopetitive relationships and fostering innovation, past research has not to differentiate the roles of leaders at different levels. Thus, my research question is as follows:

> *How operational versus strategic leaders navigate paradoxical tensions in coopetition to foster innovation?*

To address this question, I conduct a qualitative case study to explore the phenomenon whereby leaders on different levels in the coopetition context perform different functions to navigate paradoxical tensions aiming to foster innovation. The scarcity of theoretical development in this domain calls for the use of a qualitative research design suitable for nascent research designs. Thus, I conduct semistructured interviews with informants from a coopetitive fraud detection project in the Finance Innovation Cluster using operational- and strategic-level leadership respondent interviews in my data collection, who are engaging in coopetition projects and experiencing paradoxical tensions.

The results indicate that leaders navigate their own experience of paradoxical tensions as well as that of their subordinates and other parties to sustain the coopetition relationship while aiming to foster innovation. Strategic leaders acknowledge emotional ambivalence and reconcile conflicts among different parties, whereas operational leaders rely on the positive effects of emotional ambivalence to create a

constructive environment for cooperation. Operational leaders create values with competitors to transcend paradoxical tensions, whereas strategic leaders capture value for their firms and interact with operational leaders via resources supports. Strategic leaders' task-performance-oriented functions are supported by a transparadox mindset to embrace paradoxes, whereas operational leaders retain a paradox-blurring mindset to avoid paradoxes.

I contribute to the literature on managing paradoxical tensions in firms, especially when engaging in a coopetitive strategy, by adopting a functional leadership perspective. I specifically to expand the understanding of leadership roles when using coopetitive strategies for innovation, by exploring and comparing differences between leaders at the operational and strategic levels. Moreover, I expand the studies of leadership roles in innovation facilitation by pointing out that functional leadership moderate paradoxical tensions in coopetition to foster innovation. Finally, I explore the relational-oriented functions of leaders through an emotional lens, which is a new and recent turn in the field of paradox as well as coopetitive research.

I organize the thesis as follows: I start by reviewing existing theories regarding functional leadership, innovation, and coopetition. Thereafter, I present the methodology along with its strengths and weaknesses, followed by ethical considerations. I then display the main findings and discuss these in relation to existing studies in the literature and discuss my contributions. Finally, I describe my conclusions, and outline implications and suggestions for future research.

2. Literature Review

In this section, I review the literature in relation to my research question. The theoretical framework is structured by summarizing the current research regarding coopetition, innovation, and functional leadership. From this I derive a framework and show that there is a research gap in how leaders manage paradoxical tensions where a functional perspective may be useful in differentiating strategic and operational leadership roles.

2.1 Coopetition

Raymond John Noorda, the chief executive officer of the American multinational software and services company Novell, introduced the term "coopetition" in the 1980s (Bagshaw & Bagshaw, 2001; Bouncken et al., 2015; Dagnino & Padula, 2002). Brandenburger and Nalebuff (1996) used game theory to elaborate on the concept that coopetition is a sum-win game rather than a zero-sum game, in which competitors win even when rivals do not lose (Devece et al., 2017). Managers overcome traditional competitive thinking by cooperating with competitors to create value in strategic alliances (Dorn et al., 2016). This represents the conflicting logics of competition and cooperation, and their interactions lay the foundation for coopetition (Bengtsson et al., 2010; Smith & Lewis, 2011).

Cooperation includes openness, knowledge sharing, mutual dependence, and trust, emphasizing convergent interest stemming from collective actions. In contrast, competition is based on divergent interests when each firm aims to earn above-normal profits at the expense of the other, each taking different and opposing actions (Padula & Dagnino, 2014). Thus, emerging literature depicts coopetition as "a relationship simultaneously containing elements of both cooperation and competition" (Bengtsson & Kock, 2000, 2014). Emphasizing its paradoxical nature, Bengtsson and Kock (2014, p. 182) defined coopetition as "a paradoxical relationship between two or more actors, regardless of whether they are in horizontal or vertical relationships, simultaneously involved in cooperative and competitive interactions".

Coopetition is commonly used in strategic management to handle supply chain relations, maintain market power, foster innovations, and win global competition (Bouncken et al., 2015). Its critical impacts encompass all levels, including intrafirm and interfirm

levels (Dorn et al., 2016). The dynamics and uncertainty in the environment mean that competition versus cooperation is not necessarily mutually exclusive but can potentially be combined as a "hybrid activity" to achieve a "win-win" situation (Bouncken et al., 2015). However, coopetition processes remain problematic, and there is a need for leadership to manage conflicts, tensions, and problems in which the two opposing logics—competition and cooperation—become paradoxical (Chen, 2008). To summarize:

> *Coopetition refers to a strategic and dynamic process in which economic actors jointly create value through cooperative interaction while simultaneously competing to capture part of that value.*

2.2 Innovation

Coopetition facilitates creativity in various industries and is used as an innovation strategy (Barney et al., 2016; Nesse, 2018). Definitions of innovation originate from different perspectives, including technology, business, politics, and other domains. From a systemic perspective, for instance, innovation is defined as the application of new ideas with the aim of creating value (Johannessen, 2013). Considering both marketing and technological perspectives, as well as macro- and micro-levels, Garcia and Calantone (2002) defined *innovation* as an iterative process initiated by the perception of the possibility of a new market and/or new service opportunity for a technology-based invention, which leads to development, production, and marketing tasks striving for the commercial success of the invention.

2.2.1 Coopetition and Innovation

The relationship between coopetition and innovation has been developed in current literature. Samsung Electronics and Sony Corporation, for instance, are coopeting in the mobile phone and music technology markets to change the entire market structure (Bouncken et al., 2018). Toyota and General Motors have common interests in resource utilization, competencies exchange, and knowledge sharing to fuel research and development (R&D)—in the latter case, for the invention of cell-powered vehicles— and intensive competition has persisted in the market segment (Chin et al., 2008).

Business model development is another potential benefit of engaging in coopetition. Ritala et al. (2014) investigated how Amazon increases the possibility of capturing increased customer value by allowing competitors to expand their market size and including competitors as a part of their business model (coopetition), allowing the company to strengthen the application and synergy of resources and enhance competitive advantages in the industry. Similarly, Quintana-García and Benavides-Velasco (2004) used European biotechnology firms as a sample to present the impact of coopetition on both technological diversity and new product development.

Traditionally, innovation was identified as motivation, predicted results, or antecedents that encourage firms to establish coopetition relationships with close competitors. According to Bengtsson and Kock (2014), development of technological innovations is one of the identified outcomes in the research stream. Furthermore, some literature explicates the relationship between coopetition and radical/incremental innovation in a causal sense. For example, Ritala and Sainio (2013) tested whether coopetition facilitates radical innovation. The negative association with technology radicalness revealed that coopetition would be more beneficial for incremental technological development than radical innovation, while the positive relationship between business model radicalness and coopetition could be reflected in the abovementioned study of Amazon (Ritala et al., 2014).

To explicate the effect of coopetition on new product development, Bouncken et al. (2018) showed that there is causality between coopetition and incremental innovation in both the prelaunch and launch phases, whereas radical innovation benefits only from coopetition in the launch phase. The beneficial consequences of R&D (Huang & Yu, 2010) and innovation in small and medium-sized enterprises include economic scales, reduction of uncertainty/risks, and speeding up the product development process (Gnyawali & Park, 2009). However, the potential inefficiency of coopetition may not only decrease the innovative performance of firms but also terminate the coopetition relationship, considering the opportunism, uncertainty, knowledge leakage, and asymmetry of the relationship (Bouncken et al., 2015). Therefore, it is necessary to explore the relationship between innovation and the management of coopetition from a leadership perspective, especially because this is a process involving a paradox that needs to be dealt with effectively.

2.2.2 Innovation and Leadership

Innovation is often the core intended outcome of coopetition. The relationship between leadership and innovation has been well examined from different perspectives, but mixed results have been obtained (Anderson et al., 2014; Hughes et al., 2018). The moderating role of leadership in innovation facilitation is attracting increasing attention (Hughes et al., 2018). However, the related studies lack a theoretical framework for classifying the array of moderators in a taxonomic way, which further fails to explicate the mechanism and conditions rendering these moderators. To explain the effect of leadership in "context" on different levels, Anderson et al. (2014) claimed that leadership is one of the contextual factors and pointed out that certain supervisory behaviors correlate with creativity by explaining how leadership could facilitate innovative behavior.

The leadership process affects innovation via mediating variables. To facilitate innovation, motivational, cognitive, affective, identity, and relational elements are recognized as mediators (Hughes et al., 2018). However, when considering leadership as a process, it is hard to explicate the mechanisms by which leaders influence followers' innovative behaviors (Hughes et al., 2018). Among the mediators, cognitive, affective, and relational mediators are noticeable in causal relationships between leadership and innovation, reflecting the importance of affective, cognitive, and psychological states in innovation stimulation (Anderson et al., 2014). Because followers' emotional ambivalence can foster innovation (Anderson et al., 2014; Fong, 2006; Hughes et al., 2018), leaders could influence the followers' cognitive process to shape their consequent psychological state, for instance, to build trust in the social exchange process (Hughes et al., 2018).

2.3 Paradox and Coopetition

Paradox is used to describe conflicting demands, opposing perspectives, or seemingly illogical relationships between aspects, such as collaboration–control, individual–collective, flexibility–efficiency, exploration–exploitation, and profit–social responsibilities (Smith & Lewis, 2011). To elaborate on the components of paradox, researchers propose that paradox manifests in the learning, organizing, belonging, and performing dimensions (Lewis, 2000; Smith & Lewis, 2011). Such framework

elaborates the core activities and elements on the organizational level used to accept and manage paradoxes to enable sustainability or radical change (Lewis, 2000; Smith & Lewis, 2011). It also acknowledges that dualities are grounded as the essence of paradox when contradictory elements exist within a unified whole persisting over time (Smith & Lewis, 2011).

Coopetition entails paradox and is regarded as a double-edged sword (Lewis, 2000) because it simultaneously encompasses two contradictory logics—cooperation and competition. Cooperation underscores mutual benefits and collective interests, whereas competition emphasizes opportunistic behavior and private interests (Bengtsson et al., 2016). Such opposing logics, forces, and activities taken by firms indicate complexity and ambiguity on an organizational level and require leaders to explore and clarify paradoxical challenges (Lewis, 2000). A particularly interesting perspective is described by Chen (2008), who argues that the essence of managing such dualities is taking "both/and" logic as "transparadox," as opposed to "either/or" philosophy (Collins & Porras, 1997). According to Chen (2008), the duality of two contradictory forces has three generic relationships—independent, interrelated, and interdependent. This new conceptualization is based on a Chinese "middle way" perspective, wherein two opposites are inherently interrelated with the nature of inclusion and accommodation (Chen, 2008). This theory provides us with the potential to leverage capabilities and balance the paradoxical "yin/yang" as a dynamic unity (Chen, 2008). To summarize:

> *The coopetition paradox is defined as contradictory yet interrelated elements that exist simultaneously and persist over time.*

2.3.1 Paradoxical Tension

Tension is an integral part of the coopetition paradox (Das & Teng, 2000), representing an underlying source of paradox (Lewis, 2000) or role conflict (Bengtsson & Kock, 2015). Here, the paradoxical tensions are distinct from nonparadoxical and normal tensions because of the contradictory yet interrelated elements of the coopetition paradox (Bengtsson et al., 2016). This reveals the unique nature of paradoxical tensions in these situations, where the tensions could be caused by interactions between firms

with contradictory logics, as well as by how individuals experience such tensions (Raza-Ullah et al., 2014). Moreover, Gnyawali et al. (2016) claimed that paradoxical situations in coopetition lead to felt tension, an actual or experienced state of cognitive and emotional stress. Alternatively, Raza-Ullah (2020) proposed that paradoxical tension is experienced as a "cognitive difficulty" when managers pursue coopetition. In addition, the strength of the coopetition paradox in a given situation determines the intensity of external tensions (Bengtsson et al., 2016). Thus, paradoxical tension is experienced as a phenomenon with a cognitive nature.

Tensions appear to be experienced and managed differently by people with diverse roles at different levels and in distinct forms. For example, top managers at the strategic level seem to experience more external tension, and internal tension is mostly experienced by lower levels of managers, such as project managers (Bengtsson et al., 2016). Raza-Ullah (2020) claimed that strategic managers experiencing paradoxical tensions find it hard to maximize coopetition because of cognitive complexity. Similarly, Raza-Ullah et al. (2014) recognized that paradox in coopetition creates tensions at the interorganizational and intraorganizational levels, and hence, induces conflicting emotions. Further, Gnyawali et al. (2016) illustrated a sequential process for people from the individual level to the organizational level to experience external and internal tensions. To summarize:

> Paradoxical tension refers to the cognitive challenges perceived by leaders at both the strategic and operational levels when they engage in contradictory yet interrelated situations in coopetition.

2.3.2 Emotional Ambivalence

According to Lewis (2000), paradox denotes contradictory yet interwoven perspectives, feelings, messages, demands, identities, interests, or practices, while the paradoxical tension underlying paradox is inherent and socially constructed—a perceptual perspective. This indicates that the contradictions and dualities of paradox trigger inconsistent cognitions through the cognitive appraisal process (Raza-Ullah, 2020). Many studies have shown the relationship between paradoxical tensions and conflicting emotions. Bengtsson and Kock (2015) claimed that coopetitive tensions could be shown

as three types of role conflicts—intrapartner conflicts, inter-role conflicts, and interpartner conflicts. Such conflicts are grounded in inconsistent expectations among different individuals but fail to reflect the cognitive challenges of paradoxical tension.

Raza-Ullah et al. (2014) attempted to explicate the manifestation of paradoxical tension through an emotional lens and introduced the concept of emotional ambivalence, a state in which leaders uphold both positive and negative emotions simultaneously. This study addresses whether tension is a psychological and behavioral phenomenon and whether cognitive and emotive dimensions should be used to understand the nature of paradoxical tension in coopetition (Bengtsson & Kock, 2014). Taking a cognitive perspective, Bengtsson et al. (2016) claimed that if the intensity of emotional ambivalence cannot be managed on a moderate level, managers will either feel torn or lack passionate engagement, and such negative emotion will spread to a lower level (Bengtsson et al., 2016). Based on appraisal theory and inconsistent cognitions in paradoxical tension, Raza-Ullah (2020) proposed that conflicting emotions result from tension. Torn-ness felt by managers emerges when the intensity of the conflicting emotions is high. Gnyawali et al. (2016) proposed that strain is created by dualities in the paradox under the distinction between latent and salient paradoxical tensions suggested by Smith and Lewis (2011). Latent strain is perceived as incompatibility because it is challenging for people to understand and reconcile the opposing nature of dualities, but conflict is generated from deep-rooted differences in their interests, strategies, and identities (how distinct they are), all of which become salient during interactions in coopetition.

Despite the introduction of cognitive appraisal theory, most studies have not to assessed positive and negative emotions equally. Yet, empirical research has shown that people often experience blends of emotions, mixed emotions, and simultaneous conflicting emotions instead of holding purely positive or negative emotions in coopetition (Raza-Ullah et al., 2020). Q. N. Huy (2002) explained emotional ambivalence and introduced a framework with two dimensions—pleasant/unpleasant and high/low activation—to elaborate emotion and motivation systems. Leaders experiencing emotions of an opposing nature, such as positive and enthusiastic versus negative and distressed emotions, should manage this emotional ambivalence (Q. N. Huy, 2002). In this regard, the torn-ness should come from an emotional state that comprises conflicting emotions

(emotional ambivalence) rather than discrete emotion—positive or negative (Ashforth et al., 2014). To summarize:

> *Emotional ambivalence is likely to occur in the coopetition context and refers to an emotional state experienced by people where simultaneous positive emotions and negative emotions coexist.*

2.3.3 Managing Paradoxes and Tensions at Different Levels

The critical role of leadership in navigating paradox is underscored by that the tensions derived from paradoxes may terminate coopetition relationships among close competitors. Past literature in relation to paradox management has predominantly addressed paradoxical strategies and contradictions in ambidexterity. For instance, at a strategic level, Smith and Tushman (2005) examined the mechanisms by which top management teams reconcile contradictions in exploring versus exploiting, through which the organization obtains sustained performance by adapting to short-term efficiency and long-term innovation simultaneously. They use a cognitive perspective to explicate how top management teams recognize the contradictions through a paradoxical frame by embracing "both/and" instead of "either/or" logic which increases organizational performance by differentiating and integrating the juxtaposition of current products and innovation (Smith & Tushman, 2005).

Smith (2014) studied how strategic-level senior leaders sustain strategic paradoxes through decision making, by acknowledging that persistent paradoxes coexist with trade-offs that are grounded on either/or decisions but conducted on an organizational level and solely focus on exploring versus exploring as an example of strategic paradox (Smith, 2014; Smith & Tushman, 2005). Exploring leads to long-term sustainability by introducing innovation, whereas exploiting aims for short-term performance by leveraging the operational efficiency of existing products (Smith, 2014). These definitions are commonly adopted in ambidexterity literature (Cameron, 1986; Jay, 2013), which has further suggested that the successful management of strategic paradoxes affects organizational performance in the long run (He & Wong, 2004; Tushman et al., 2010). The dynamic decision-making model indicates a process in

which top management teams experience tensions and practice leadership by differentiating and integrating within a decision-making context (Smith, 2014).

Except for differentiating versus integrating, accepting and accommodating are favored by the leader but not solely by the top management team (Smith, 2014; Smith & Lewis, 2011). Smith and Lewis (2011) proposed that the latent tensions aroused by organizational complexity are experienced by other organizational actors as well. Through acceptance, paradoxical tensions can be confronted via iterative responses, splitting, and integration (Smith & Lewis, 2011). Like in the studies mentioned above, short-term peak performance fuels long-term performance to reach sustainability as an outcome (Smith & Lewis, 2011). In the equilibrium dynamic model of Smith and Lewis (2011), accepting denotes the importance of living and working with paradox by recognizing and embracing the contradictory tensions (Lewis, 2000; Murnighan & Conlon, 1991). To do this, workable certainty (Lüscher & Lewis, 2008), communication, and humor (Hatch & Erhlich, 2016; Jarzabkowski & Sillince, 2016) may help. Accommodating involves synergizing and addressing oppositional forces together (Smith, 2014; Smith & Lewis, 2011).

Even if previous studies elaborated on effective behaviors performed by leaders at the strategic or top level to make decisions in a dynamic and iterative way, the paradoxes originating from ambidexterity, an architecture change of organization, are not necessarily the same in the coopetition relationship. Paradoxical strategies applied in organizations may also be different from strategies launched in coopetitive innovation strategies. What is more, these studies took the perspective of team leadership, which may obscure how different roles affect behaviors used in addressing strategic paradoxes. Ultimately, paradoxical tensions are distinct from normative or nonparadoxical tensions that have not been created by coopetitive paradoxes (Bengtsson et al., 2016). Hence, how leaders handle tensions persisting in coopetition should be explored.

According to Tidström (2014), competing and avoiding are commonly adopted as effective management tools. Tidström (2014) further proposed that different styles of management tackle with different tensions. Domain-related tensions expand the past literature about types of tensions on the organizational level (Bengtsson & Kock, 2015). Taking a two-continuum perspective, such continuous tension belongs to the high

cooperation but low competition dimensions, which can be effectively addressed by integrating or problem solving as conflict management (Tidström, 2014). Delivery tensions originate from multiple sources, such as differences in companies and buyer–seller relationships, but the competitive style of management used to confront such tensions may lead to opportunistic activities (Oliver, 1991; Tidström, 2014). To confront the tensions derived from differential modes of cooperation, avoidance is effective in balancing sharing and protecting (Tidström, 2014). In another study, Fernandez et al. (2014) investigated the sources of tensions in a different way and described several principles generated by tensions on inter/intraorganizational and interindividual levels. Organizations use separation to interact with other parties, whereas project managers adopt integration in their organizations; these measures are collectively termed the *management of coopetitive tensions* (Fernandez et al., 2014).

Both Fernandez et al. (2014) and Tidström (2014) considered the sources of tensions and acknowledged that coopetition is naturally permeated with tensions because of its contradictory and opposing forces, such as competition versus cooperation. However, managing tensions as an organizational capability could be applied at different levels in an organization. Leaders on the operational and strategic levels may act in opposing or similar ways to handle "paradoxical tension" because the cognitive nature of paradoxical tension implies that personal differences in the appraisal process affect how leaders recognize and understand the same event (Raza-Ullah, 2020; Raza-Ullah et al., 2020). Yet, how managers at the strategic level as well as the operational level manage tensions is under-researched. While some ideas about strategic level leadership may be derived from the above reviewed literature on paradox in radical change in ambidextrous organizations, there is to the authors knowledge limited research on operational leadership. To summarize, a leadership perspective may be constructive in exploring the functions used to confront paradoxical tensions generated by coopetitive paradoxes at different levels in an organization.

2.4 A Functional Leadership Perspective

Functional leadership may help explore the leadership role in coopetition. Fleishman et al. (1991) quoted McGrath (1964, p. 75), stating that "the leader's main job is to do, or get done, whatever is not being adequately handled for group needs." Such a contextual

and functional approach was developed in line with system theory (Fleishman et al., 1991). Mumford (1986) expanded the essence of this definition by emphasizing how the leader achieves goal attainment by interacting with other relevant subsystems that influence the transformation processes occurring in these subsystems; this allows the leader to enhance and maintain organizational adaptation. This point reveals that leadership is a process within a system; organizations are open systems interacting with others to achieve proximal and distal goals (Carter et al., 2020). To explicate the effective function of leadership behaviors in a coopetition context, what constitutes functionally effective leadership depends on where and why leadership processes are enacted and needed, as well as when and among whom leadership processes arise. Here, the focus is explicitly on maintaining and achieving coopetition within firms.

As a special type of interorganizational relationship, coopetition-related paradoxical tension, raised from contradictions and dualities inherent in paradox, also generates tensions and does not always succeed. According to Fang et al. (2011), imbalanced tensions, such as excessive forces of competition or cooperation, break up the close relationships organizations have developed. However, to achieve coopetitive innovation, leaders should balance the positive with the potential "dark side" of coopetitive relationship tensions, including behavioral, emotional, and structural dimensions (Fang et al., 2011). Past research has not concentrated on the role of leadership in interfirm relationships in a coopetition context, yet it has pointed to the importance of managing the negative effect of tensions from a broader relationship perspective. Research has focused on coopetition capabilities of firms, including such emotional capabilities as paradox management, and their moderating role in navigating paradoxical tensions, such as balancing emotional ambivalence to receive predicted performance in coopetition (Bengtsson et al., 2016; Gnyawali et al., 2016; Gnyawali & Park, 2011; Q. N. Huy, 2002; Raza-Ullah, 2020; Raza-Ullah et al., 2020). Moreover, researchers have pointed out that future research needs to examine the role of leadership in relation to these aspects. To summarize:

Functional leadership in a coopetitive context refers to a single person or several persons who play leading roles, engaging in effective leadership behaviors on either a strategic or operational level to manage paradoxes and foster innovations in coopetitive interfirm relationships.

There are several taxonomies that usually include task-performance oriented and relations-oriented behavioral dimensions to explain the effectiveness of problem solving and relationship sustenance (Yukl, 2012). Hence, in the following, I focus on these two dimensions.

2.4.1 Task-Performance-Oriented Functions

According to the definition of functional leadership, effective functions contribute to task performance in innovation processes. Existing literature on leadership behavior taxonomy proposes that effective leadership behaviors lead to goal attainment (Fleishman et al., 1991; Lord, 1977; Yukl, 2012). Task-related functions involve analyzing a group's problems (Lord, 1977). Similarly, Fleishman et al. (1991) classified leadership behaviors from a resource-based perspective. The importance of task accomplishment, resource maintenance, and guiding social behavior are reflected in the three superordinate dimensions of leadership behaviors—information structuring, problem solving, and resource management (Fleishman et al., 1991). The interdependencies among building blocks emphasize that the goals, environment, and condition of the transformation process determine which action is appropriate (Fleishman et al., 1991).

Previous studies acknowledge the importance of goal achievement, whereas the effectiveness of leadership depends on which function is performed under which condition. Moreover, both the changes in viewpoint from internal to external and the functions of executive leadership reflect that the intraorganizational transforming process can happen externally because of the dynamics of the external environment and the differential leadership role performed by strategic leaders, whereas operational leaders have a different role to perform. Notably, it is expected that coopetitive leadership will entail attending to specific context-derived functional leadership behaviors aimed at task performance by both operational and strategic leaders.

2.4.2 Relational-Oriented Functions

As relational leadership has attracted increasing attention, researchers have investigated the function of relationship management to sustain relationships—which should be further explored. Chin et al. (2008) claimed that management commitment, relationship development, and communication management are effective for the success of coopetition. Building trust is critical among these factors. As Lewicki et al. (1998, p. 439) proposed, trust refers to "confident positive expectations regarding another's conduct", but Chin et al. (2008) did not adopt an emotional lens, instead reflecting the perceptual nature of trust.

Note that emotional ambivalence created by the coopetitive paradox may terminate the coopetition relationship. As proposed by Raza-Ullah (2020), higher ambivalence generates paralysis, powerlessness, and loss of perspective; such negative psychological situations make it hard for managers to understand conflicting tasks and make decisions with partners. What is worse, this ambivalence leads to a short-term-oriented mindset and manager concern for own interests, resulting in asymmetry of coopetition relationships between firms (Raza-Ullah, 2020). Ashkanasy et al. (2017) proposed that emotion and its impacts are critical for people's behaviors in organizational change, a similar context due to the presence of paradox.

Using an emotional lens, a few researchers have investigated the role of emotional management, emotional capabilities, and their moderating impacts on the causality between coopetition or paradoxical tension and coopetition performance at the organizational level (Bengtsson et al., 2016; Gnyawali et al., 2016; Gnyawali & Park, 2011; Raza-Ullah, 2020; Raza-Ullah et al., 2020). Q. N. Huy (1999, 2002, 2012) and Sanchez-Burks and Huy (2009) examined the dynamic process of emotional capabilities and intelligence in strategic change processes.. Q. N. Huy (2002) examined how middle managers leverage their own and their employees' emotions to facilitate adaptation and regard behaviors used by leaders to regulate own or others' emotions as emotion-based dynamic capabilities, which may lead to such organizational outcomes as creativity, mobilization, learning, receptivity to change, and retaining key people (Q. N. Huy, 2005).

Emotion regulation, defined as attempts to change own or other people's emotions to align with a desired emotion, either to be hedonic or instrumental (Vuori & Huy, 2020), provides insights into how leaders manage emotions in strategic processes (Ashkanasy et al., 2017; Q. N. Huy, 2005). Emotional regulation is commonly used by leaders to mobilize resources (Q. Huy & Zott, 2018) or facilitate strategic decision making at the senior level (Vuori & Huy, 2020). To avoid the termination of a coopetitive relationship, it appears necessary to include relational-oriented functions, and through an emotional lens, to keep the intensity of emotional ambivalence at the middle level (Bengtsson et al., 2016; Gnyawali et al., 2016; Gnyawali & Park, 2011; Raza-Ullah, 2020; Raza-Ullah et al., 2020). However, the current literature does not to elaborate on the mechanisms of this function.

2.5 Theoretical Framework

I generate a theoretical framework based on the literature discussed above. Coopetition is used as an innovative strategy. However, collaborating with competitors is challenging for companies. The paradox that is persistent in coopetition creates cognitive paradoxical tensions and affective emotional ambivalence. Leaders on the operational versus strategic level may play a moderating role in confronting paradoxical tensions and balancing emotional ambivalence to foster innovation. The leadership, while varying at different levels, involves both task-oriented and relation-oriented functions for coopetition to successfully foster innovation. Research to date has not explored or examined what these functions are or how they are enacted in coopetitive innovation projects, hence this is what I aim to do.
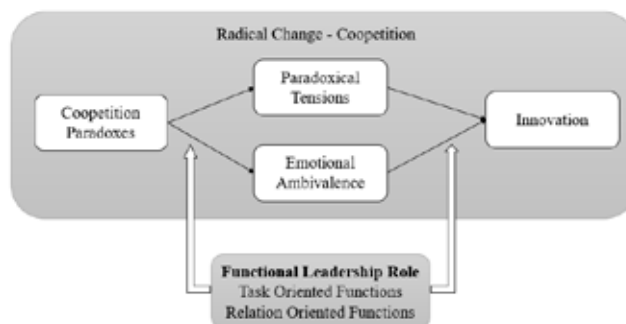

Figure 1. A Theoretical Model of Where and How Functional Leadership Matters in Coopetitive Innovation Relations Between Firms.

3. Methodology

This section describes the methodology I used to answer the research question and carry out the empirical research. I first introduce the research design; I then describe the data collection process and data analysis. Following this, the quality of the collected data is clarified. Finally, I discuss the ethical considerations related to the research study.

3.1 Research Design

According to Saunders et al. (2009), a research design is a plan regarding how the research question will be answered and how the study will be conducted. Considering the scarcity of literature directly relevant to the research question, a qualitative methodology is necessary to explore the essence of the phenomenon (Edmondson & McManus, 2007). When less is known about a certain topic, the more open-ended a research question will be, requiring the data collection to be directed toward developing an understanding of the phenomenon (Edmondson & McManus, 2007). In addition, the case study approach is in accordance with the following research characteristics: (1) answering "how" questions, (2) having little control over the event as it unfolds, and (3) focusing on phenomena within a real-life context (Yin, 2003). I select an inductive study to understand the differences between strategic and operational leaders in terms of how they navigate paradoxical tension in coopetition.

3.1.1 Research Approach

A research philosophy is a system of beliefs and assumptions about the development of knowledge in a particular field (Saunders et al., 2009). It is central to the notion of research design and affects the research quality (Bahari, 2010). The selection of a research approach depends on the "paradigm" guiding the research activity (Bahari, 2010; Tuli, 2010)—specifically, beliefs about the nature of reality and humanity (ontology) and the theory of knowledge that informs the research (epistemology; (Tuli, 2010). In this study, I chose an interpretive, socially construed perspective well fitted to qualitative, explorative designs of social phenomena. In other words, the perspective rejects the positivist assumption, instead contending that reality is subjective, multiple and socially constructed by its participants (Tuli, 2010).

Epistemology relates to the theory of knowledge and what constitutes acceptable knowledge in a certain discipline (Bahari, 2010; Saunders et al., 2009). It answers questions related to what is known, how we know what we know, and what counts as knowledge (Tuli, 2010). In this regard, the epistemological assumption refers to what should be viewed as acceptable knowledge in a discipline, which emphasizes the association between the nature of knowledge and the methods through which the knowledge is acquired (Bahari, 2010). According to Saunders et al. (2009), interpretivism is an epistemology in which it is necessary for the researcher to understand differences between humans in our role as social actors, which implies that the findings are affected by the researcher's perspectives and values. Because researchers as social actors interpret social roles under both the meaning given to the role and their set of meanings (Saunders et al., 2009), from an interpretivist perspective, researchers view the world as constructed, interpreted, and experienced by people when they are interacting with each other or social systems (Tuli, 2010).

Regarding the nature of social entities, ontology clarifies what is admitted to a knowledge system (Bahari, 2010; Saunders et al., 2009). In other words, ontology assumes that there are multiple realities, and researchers should know, for example, what comprises these realities, what entities operate within them, and how they interrelate with each other (Bahari, 2010). In the constructionist paradigm, reality and its meaning are socially constructed so that people can make sense of social realities through perceptions of social processes (Saunders et al., 2009; Tuli, 2010). The ongoing social interaction continuously revises social phenomena (Bahari, 2010). Hence, researchers should interpret the different constructions, such as what people think and feel and how they communicate with each other, and they should attempt to understand the meanings to explain why people have different experiences (Bahari, 2010).

According to Tuli (2010), the relationship between epistemology and induction is elaborated by how researchers can acquire knowledge: In the interpretivist paradigm, the researcher engages in a naturalistic manner in real-world situations and develops personal contact with participants to obtain deeper insight into the context and collect rich data to elicit a discovery process. These characteristics reflect an inductive essence. An inductive approach is used to explore fundamental meanings in real-life settings and is recommended by Edmondson and McManus (2007) and Suddaby (2006). These

authors clarify when researchers should adopt exploratory studies and how to collect and analyze data to support research in a new topic area (Eisenhardt, 1989). The flexibility and adaptability of such an approach in a case study setting enables adjustments based on accessing new and interesting information (Saunders et al., 2009).

Reviewing the current literature, the role of functional leadership in navigating paradoxical tension remains unclear in the association between coopetition and innovation (Bengtsson & Kock, 2014; Bouncken et al., 2015; Devece et al., 2017). Further, existing research has only recognized to a limited extent how leadership functions enacted by strategic versus operational leaders may differ. Overall, this interesting and important phenomenon, addressed through my research question, has only scarcely been examined in existing theories. According to Dilley (2004), it is necessary to conduct qualitative interviews to access the coopetition context and understand the leaders' behaviors by finding out what they feel and think about their leadership functions; this can be done by reconstructing events and examining their descriptions, explanations, and understanding of their roles.

3.1.2 Research Context, Strategy, and Objective

This study is set in a coopetition context with cases that were chosen because they were perceived to be revelatory in relation to the studied phenomenon—namely, insurance companies engaging in coopetition with other insurance firms. Specifically, the research examines three firms in the insurance industry that are participating in coopetition projects to detect insurance fraud within the Finance Innovation cluster. The unique setting and special context make the three cases informative of how the leaders on different levels deal with paradoxical tensions in the process of coopetition to foster innovation. To explore the phenomenon and build theory, I use an inductive study to collect non-numerical data through semistructured interviews, complementing the data with online news and articles about these firms. The theoretical insights in this domain will be helpful in understanding the meanings from a pattern-match perspective, starting from interesting facts and generalizing to a broader theoretical significance (Saunders et al., 2009; Yin, 2003).

3.2 Data Collection

This section explains the data collection context and sources in more detail. I gained access to the research context through my supervisor and the CEO of the Finance Innovation cluster in Bergen. I was given access to carry out interviews with Insurers A, B, and C, engaging in fraud-detection projects, and I was able to reach both strategic and operational leaders in each firm who were pursuing the project. These cases are embedded in the same context, the fraud detection project, and in each case, I included two different respondents—strategic versus operational leaders. I collected most of my interviews as a sole researcher, but some of the interviews were carried out with other researchers to ensure quality, reach informants in all three firms, gain access to suitable informants within a limited time, and build trust with all participants through others' preexisting relationships with them.

3.2.1 Context Setting

Finance Innovation Cluster Context

According to Knewtson and Rosenbaum (2020), Fintech refers to the technology used to provide financial markets with a financial product or financial service, characterized by sophisticated technology related to existing technology in that market. Leading international organizations have also defined Fintech based on the two following conditions: (1) the application of innovative technologies to financial services and (2) the development of new business models, applications, processes, or projects based on innovative technologies (Rupeika-Apoga & Thalassinos, 2020). The first definition concentrates on "bleeding edge" technology with a higher degree of uncertainty, potential for profitability, and relative resource efficiency (Knewtson & Rosenbaum, 2020), whereas the second focuses on how Fintech firms leverage innovative technology to provide financial services (Rupeika-Apoga & Thalassinos, 2020). Fintech firms that primarily use Fintech can be financial companies that are licensed and regulated according to their business models; sometimes, they can also be technology companies providing financial services (Knewtson & Rosenbaum, 2020; Rupeika-Apoga & Thalassinos, 2020).

Clusters commonly refer to the geographical concentrations of groups of firms and supporting institutions (Davis et al., 2009; Herliana, 2015) that are interconnected in a

particular sector (Herliana, 2015). More specifically, an innovation cluster refers to a form of organization that concentrates on the creation of an innovation-promoting network and environment for its members (Basyuk et al., 2016). Its primary goal at a strategic level is to promote the development of enterprises, organizations, and participants to increase their competitiveness and profitability and to achieve innovation (Basyuk et al., 2016). As a Norwegian non-profit financial innovation cluster, the Norwegian Centre of Expertise (NCE) Finance Innovation is part of the NCE cluster program supported by the Norwegian Government, Innovation Norway, the Research Council of Norway, and Industrial Development Corporation of Norway (SIVA). To empower a thriving Norwegian Fintech ecosystem by facilitating technological innovation and collaboration within finance and technology, Finance Innovation combines institutions across finance, technology, and academia to facilitate the rapid growth of Norway's Fintech hub (Innovation, 2021).

The NCE Finance Innovation has a broader definition of Fintech and attracts Fintech solutions and products providers, financial services providers, academy institutions, consultancies, and nonprofit organizations (see Appendix D). Some Fintech companies are technology companies delivering technology solutions, while others are financial institutions that create products. The former group of firms may not present certain physical products, such as mobile applications or websites, but they help customers solve financial problems in a technical way. The latter category of companies serves customers through platforms, applications, and tools enabling the digitalization of financial services. Financial service providers mainly include firms that offer insurance, investment, and bank services in a traditional way. Consultancies only help business customers in domains, including law, technology, finance, and infrastructure. In this case, the firms collectively develop innovative projects by cooperating in the upstream part of their value chains, especially in research and development. Downstream, firms tend to compete to attract customers, including business and individual clients, in insurance, online payment, investment, banking, and other domains ("Empowering Norwegian Fintech," 2021).

Insurance Companies

The companies introduced below are all in the insurance industry, competing in the three following domains: property and casualty insurance carriers; the finance and

insurance sector; and fire, marine, and casualty insurance. Moreover, all these insurance companies operate in Norway. All have engaged in fraud-detection projects and collaborated in pilot tests.

Insurer A, founded in 1728, is the fourth-largest general insurance company in Norway. It provides non-life insurance for private, commercial, and corporate markets, occupying a market share of nearly 13% in total (T. Forsikring, 2021). It is one of 55 companies in the Insurer A corporate family (Bradstreet, 2021c). It is located in Norway, mainly based in Bergen and Oslo, with 1,303 employees, generating $2.93 billion in sales (Bradstreet, 2021c).

Insurer B was developed by four Norwegian banks in the spring of 2007. It is now owned by 15 savings banks and enjoys a fast growth rate (F. Forsikring, 2021). The products encompass retirement pension, employee, and asset insurance for both individuals and companies. And it has 232 employees and generates $221.38 million in sales (Bradstreet, 2021b). Specifically, it claims to be the only insurance firm offering customers discounts. Its agriculture insurance covers buildings, movables, people, and animals (F. Forsikring, 2021). However, its market share is only about 5% in Norway (Littlejohns, 2019).

Insurer C has been owned by two banks since January 1, 2019 (Fremtind, 2021). It claims to create value for both companies and individuals providing non-life and personal insurance services, which enables it to be the largest supplier of insurance sold in banks and the third-largest insurance company in Norway (Fremtind, 2021). It, owning about 15% of the market share among the biggest six insurance firms in Norway (Littlejohns, 2019), has 971 employees at this location and generates $954.96 million in sales (Bradstreet, 2021a).

Coopetition Project for Fraud Detection

According to Insurance Europe, the amount of fraud is around NOK 500 million each year, excluding the dark numbers. Insurance fraud, a major societal problem, hurts both customers and insurance companies. To solve this society-wide problem, third party D initiated this innovation project by asking an open question: "Can the Norwegian financial industry create joint innovative big data solutions?" with the help of Finance

Innovation. The technical base of this project is machine learning, from training to testing datasets, which is supported by big data algorithms. However, smaller insurance firms are unable to gather enough data to cover fraud claims by leveraging machine learning as a tool. In the long run, compared with international insurance firms' data advantages, Norwegian insurers will lose their market share because of the heavy burden of fraud claims if they do not share data.

To manage the challenge of gathering data, initiators were involved and proposed many directions, but they lacked a clearly defined goal, focused direction, and commitment among participants. This forced third parties and finance innovation to narrow the scope. Therefore, when Insurers A and B met before the coronavirus disease of 2019 (Covid-19) pandemic, Insurer C was attracted as one of the participants. The project started with non-life insurers conducting a feasibility study with help from Innovation Norway. The minimum viable product (MVP) focused on the car insurance area to gather data from the insurer A, B and C. Among these participants, insurers share their claim data; third party D is the owner of the technical solution of the fraud detection platform; and third party E, as an outsider, contributes to the legal recommendations; Finance Innovation works as a third party to reconcile conflicts, arrange virtual meetings, and set deadlines to facilitate the progression of the project.

The existing focus is on validating the concept and process whereby competing insurance firms can safely share their claim data by acting MVP. Through this MVP, each insurer trains the algorithms of prediction models by accessing a shared dataset. However, implementing MVP in production and the success of the platform establishment depend on feedback from the legal side, such as third party E and the insurers' legal departments, considering General Data Protection Regulation (GDPR) and competition law. The staged goal is to attract as many firms as possible to acquire large amounts of data, while third party E is leading legal departments to set boundaries and explore the feasibility of the project on the legal side.

The final objective is to set a new standard in the industry to cover all the companies in this domain and possibly expand the platform to other industries. The scalable solution provided by the fraud detection project is expected to enable all Norwegian insurers to predict fraud in a common computer universe but allow each to see only their data. The

precision solution is supported by both legal and technical aspects to solve social problems, whereby both companies and customers are shouldering huge costs due to fraud (Innovation, 2020).

3.2.2 Data Sources

The inductive case study primarily uses qualitative data. However, the triangulation of multiple data enables stronger substantiation of key concepts and findings; thus, archival data and past empirical research are used as complementary data sources (Eisenhardt, 1989). According to Saunders et al. (2009), semistructured interviews are useful in exploratory studies to understand the phenomenon and process. Therefore, semistructured interviews with strategic leaders, such as CEOs and senior executives, and operational leaders, such as project managers, department leaders, and work unit leaders, are conducted to collect primary data. The secondary data sources are used as complementary information and are gathered from company websites, news and articles on media platforms, and past empirical research. The information from multiple sources is combined using recordings of interviews and notes taken simultaneously with interviews.

3.2.3 Theoretical Sampling

Theoretical sampling is a key aspect of inductive and exploratory studies and implies that cases are selected for theoretical reasons, such as acquiring data to fit the emerging theories, rather than for statistical reasons, such as representing a population to make statistical inferences (Charmaz, 2014; Eisenhardt, 1989). In line with grounded theory and analytic induction, I start with initial ideas of where to sample, determine the subsequent sampling selection based on the requirements of theory development, and choose participants according to category development (Saunders et al., 2009). In other words, theoretical sampling is conducted simultaneously with data processing and theory development to extend emergent theory (Eisenhardt, 1989). Theoretical sampling allows me to gather more data focusing on the categories and their properties by seeking and collecting pertinent data to elaborate on and refine categories in my emerging theory (Charmaz, 2014). I attempt to develop properties of categories until no new properties emerge, a practice termed *theoretical saturation* (Charmaz, 2014).

Personal contact is important to reach potential informants for high-quality, semistructured interviews (Saunders et al., 2009). My supervisor, a researcher at the Centre for Applied Research (SNF) at Norwegian School of Economics (NHH), has played a critical role in establishing personal contact with the CEO of the Finance Innovation cluster, who provided me with the names and email addresses of potential informants to meet the requirements of emerging theory and storyline evolution (Saunders et al., 2009). Grounded on such a relationship, the eight semistructured interviews were conducted for a small but carefully chosen sample to understand the topic, given the goal of the research and limitations in time and workload (Saunders et al., 2009).

Company	Participant	Position in Company
Insurer A	Operational Leader 1	Senior Data Scientist
Insurer A	Strategic Leader 1	Lead of Customer & Claim Analyst
Insurer B	Operational Leader 2	Business Analyst
Insurer B	Strategic Leader 2	Lead of BICC
Insurer C	Operational Leader 3	Operational Lead of Project
Insurer C	Strategic Leader 3	Head of Machine Learning and AI
Finance Innovation	Operational Leader 4	Project Manager
Finance Innovation	Strategic Leader 4	CEO

Figure 2. Overview of Participants' Roles in Insurance Companies

Considering my research question, all the informants are engaging in the fraud detection project either from insurance firms or supporting companies, while their positions, responsibilities or roles may vary between the strategic and operational levels (See fig.2). The questions could be used to confirm the validity of the project information by comparing different responses. Because of the effects of the Covid-19 pandemic in Bergen, onsite observation was impossible, and an introductory meeting with the CEO of the finance innovation cluster was held online using the online platforms. This provided a unique opportunity to tape-record all video interviews for the transcription and analysis of the data.

3.2.4 Semistructured Interviews

A research interview refers to a purposeful conversation between the interviewer and the informants (Saunders et al., 2009). In the data collection, semistructured interviews were adopted to support the qualitative study. According to Saunders et al. (2009), semistructured interviews have the following characteristics: (1) a list of themes and some key questions created by researchers given a specific context about the research topic and (2) a varying sequence of listed questions and additional questions, enabling investigators to explore new topics in the flow of conversation when informants can give open-ended answers. Therefore, the initial interview guide (see Appendix B-1) was expanded and made more focused in subsequent interviews (see Appendix B-2/3). Some questions were open-ended, allowing informants to freely share their opinions and attitudes and explain their behaviors from the perspective that they felt was most relevant to the topic. Others were probing questions, aiming to explore significant responses for the research topic or seek an explanation for certain answers, asked in a similar manner to the open questions, but requesting a particular focus or direction (Saunders et al., 2009). Some questions were closed questions, which were used to let informants introduce their roles and functions in the project.

Because of restrictions related to the Covid-19 pandemic, all interviews were conducted online. Online interview, which belongs to the category of electronic interviews, allow all informants to remain in familiar and safe locations (Saunders et al., 2009), such as their home or office, which increases the likelihood that informants will be willing to participate. However, that the Covid-19 pandemic forced almost all interviews online could create a new set of disadvantages. For instance, most informants were working at home, and some chose a virtual background in the interview, which hindered the observation of the real context of how they lead and interact with their subordinates except for their descriptions.

3.2.5 The Semistructured Interview Process

Initially, to reach the top leaders of fraud detection projects in Insurers A, B, and C as soon as possible and build mutual trust, my supervisor and I held a meeting with the CEO of the Finance Innovation cluster to provide background information about the project, introduce my study, and ask for potential informants' email addresses. I

contacted potential informants to introduce my research, ask for permission to interview them, and send them a consent form to schedule the first four interviews.

All the interviews started with an introduction to my research question, the definitions of my conceptual building blocks, and closed questions regarding the roles and functions of informants. The next questions related to three building blocks—paradoxical tension, functional leadership, and innovation—to let the informants share and explain their behaviors, feelings, emotions, functions, and ideas (see Appendix B). The interview guide was adopted in all interviews to explore whether leaders at different levels (strategic vs. operational) would answer the same questions with similar or different answers. During semistructured interviews, informants had flexibility to talk about spontaneously emerging topics, and I also probing questions to ensure that all the answers were understood correctly and without bias. Finally, additional questions were asked to ensure that the informants did not have any other important information or explanations regarding the topic that I should obtain. All the interviews were transcribed as soon as possible to prevent losing the original intention of the conversation.

3.2.6 Secondary Data

A large amount of secondary data was collected to complement the primary data. From company and cluster websites, firm press releases, informants' LinkedIn profiles, and news published on social media platforms, public information was collected to obtain an overview of the coopetition project and to confirm the validity of the information given by informants. All the Norwegian information was translated into English and used later. Notes and memos written during the interviews are included in the analysis (see Appendix C).

3.3 Data Analysis

The interactive essence of data collection and analysis of qualitative research allowed me to recognize themes, patterns, and relationships among data (Saunders et al., 2009). Therefore, iterative and constant comparisons were used in the process of coding, along with recoding and recategorizing. Given the subject of study and the research question, more focused data analysis and coding were conducted to follow up on the initial coding

in this section, enabling a more conceptual and analytical explanatory organization of coded data in the final phase (Charmaz, 2014).

3.3.1 Preparation of Data Analysis

Recordings of the interviews were transcribed in verbatim as a work-in-progress document. I made memos or notes during interviews when observable reactions, such as laughing, halting, hesitation, and apparent body language, were present (Saunders et al., 2009). Within a limited time, the preparation of raw data and transcription while data collection was ongoing served to meet the saturation requirement. Transcription of recordings allows me to familiarize myself with the data of each informant and then each firm as a stand-alone entity, allowing the emergence of unique patterns from each case before the generalization of patterns across cases (Eisenhardt, 1989). Following the approach from Eisenhardt (1989), a within-person and within-case analysis was first conducted. The qualitative data collected from the interviews could then be organized and classified to support further in-depth analysis across cases. In this case, I was particularly interested in the differences across cases between strategic and operational leaders in engaging in coopetition to achieve innovation. Hence, in later stages, this was the basis of the case analysis.

3.3.2 Initial and Focused Coding

According to Saunders et al. (2009), initial first-order coding involves labeling each unit of data in a data item with a code that symbolizes the extract's meaning. A code could be a single word or short phrase, which further determines the size of the unit of data and the objective that makes each piece of data accessible for further analysis. These first-order codes are based on quotations from interviewees, a core trait of inductively derived research.

Second-order category development is helpful for constant comparison when differences and similarities are observed, while the comparison of cases in pairs can generate unanticipated categories (Eisenhardt, 1989). Hence, data sourced from first strategic and then operational leaders from the companies were compared in pairs to derive unique insights from a diverse data analysis lens. The extra interviews that were added to expand the data were also used to develop new codes according to the

evolution of the code list to enable constant comparison for theoretical saturation (Saunders et al., 2009). This resulted in second-order codes.

In the final step, data analysis involved iterating between the first-and second-order coded data, other complementary data, and past empirical work and theory to arrive at a more developed theoretical conceptualization. In particular, the context model of coopetition developed in the theory section was used to explicate the origin of paradoxical tension. It was also used to show when and how functional leadership was taken by either organizational or strategic leaders to navigate the paradoxical tension, and hence, to attempt to foster innovation. This model was partly deductive and organized according to the existing literature.

Overall, possible themes, patterns, and relationships in the data were discovered when coded data were grouped into analytical categories and mapped onto leadership roles, functions, and behaviors (Saunders et al., 2009). This analytic conceptual mapping process is illustrated in the coding tree in the figure(s) below: The functions performed by operational leaders are shown in figure 3; the strategic leaders' functions are shown in figure 4. This coding tree shows how the concepts in the findings section were derived through first-order, second-order, and conceptual (overarching) coding categories in an inductive and iterative manner.

Figure 3. Category Tree – Functional Leadership of Operational Leaders

Figure 4. Category Tree – Functional Leadership of Strategic Leaders

3.4 Data Quality

This section examines the quality of the research approach by appraising the quality of the data and the effectiveness of the methods used. Saunders et al. (2009) and Sinkovics et al. (2009) proposed that reliability, validity, generalizability, and objectivity are fundamental concerns for quantitative researchers in assessing the quality of research, but this may be less salient for qualitative research. Traditionally, validity comprises the following components: (1) construct validity, which examines whether a study measures what the researcher intended to study; (2) internal validity, which refers to whether the causal relationship between variables is precise; and (3) external validity, which appraises whether the findings from the research can be generalized to a broader population (Saunders et al., 2009). Reliability determines whether the results can be replicated by others using the same approach (Saunders et al., 2009). However, these quantitative criteria are not applicable to qualitative inquiry (Denzin & Lincoln, 1994) because they have different purposes (Edmondson & McManus, 2007) and may be grounded in different paradigmatic views (Sinkovics et al., 2009). Examining inductive, interpretive, and explorative case studies should instead involve judging trustworthiness by encompassing quality-related topics, such as credibility, dependability, transferability, and confirmability (Sinkovics et al., 2009). Hence, trustworthiness is established as a measure of data quality assessment by qualitative

researchers, and four analogous terms are used within the naturalistic paradigm to supplant the rationalistic terms mentioned above; these are credibility, transferability, dependability, and confirmability (Guba & Lincoln, 1982; Saunders et al., 2009; Sinkovics et al., 2009).

All the above dimensions are parallel with components of validity and reliability, but they emphasize the special characteristics of exploratory studies. According to Saunders et al. (2009) and Sinkovics et al. (2009), these terms can be mapped as follows: (1) credibility is consistent with internal validity, which enables representations of the participants' socially constructed realities to match what participants intended; (2) transferability replaces external validity and appraises whether description of context provides the reader with an opportunity to evaluate whether the study may be transferred to another setting; (3) dependability is paralleled with reliability and aims to record all the changes to produce a reliable account of the emerging research focus that can be understood and evaluated by others; and (4) confirmability tests whether the data and interpretations are rooted in circumstances and conditions outside the researches thoughts and coherently and logically assembled.

3.4.1 Credibility

According to Sinkovics et al. (2009), credibility concentrates on building a match between the constructed realities of the respondents and the realities represented by the researcher. To conduct the research in a proper way, I follow the suggestions given by Guba and Lincoln (1982) as follows. Firstly, I partly overcome the distortions introduced by my presence by holding online meetings where all the informants could stay somewhere they were familiar with and hence prolonged member engagement at a site. Secondly, I held reflection meetings with other research students after the interviews, while the supervision helped me to reflect on my previous interviews as peer debriefing and to avoid unintended cognitive and emotional influence. Thirdly, referential adequacy of materials could be reached by recording interviews and translating Norwegian materials into English, all of which are used to support the data analysis below. Lastly there are several ways to reach the member checks. I design the interview guides with cross-person confirmed questions. Informants are allowed to honestly express their real feelings and opinions. By replicating some main points, I

would double check from informants' answers that their responses reflected their real meaning. Triangulation is also reached through multiple sources of data. The primary data collected from informants were complemented by secondary data sourcing from public platforms. All the informants coming from different companies within the same coopetition project could provide diverse perspectives and angles on the same events to cross-check the data. Moreover, the themes' development while coding was based on two-stage initial comparisons before carrying out overarching categorizing. Each category was recognized only when there was more than one source of data. Theories regarding my research questions have been discussed in the literature review and are used below to generate a thorough explanation of the phenomenon.

3.4.2 Transferability

The generalization of a qualitative and exploratory study aims to transfer the findings to a broader theoretical significance rather than a population (Saunders et al., 2009). Hence, it depends on the degree to which salient conditions overlap or match (Sinkovics et al., 2009). In this sense, theoretical sampling, a type of purposive sampling, should be considered to maximize the range of information and serve as theory grounding (Guba & Lincoln, 1982). Informants recommended and selected by my supervisor and the CEO of the Finance Innovation cluster are all familiar with fraud-detection projects, although they play different roles in different companies. Their introductions of the project could also complement information regarding the coopetition context from different angles, further allowing me to leverage the context mentioned in the section 3.1.2 to interpret the event tightly grounded in the "background information" of the project. The setting in my research could aid others in assessing transferability, depending on the fitness of the context.

3.4.3 Dependability

To enhance the stability of the findings over time (Sinkovics et al., 2009), a dependability audit should be taken to present the role of the researcher in dealing with process research (Guba & Lincoln, 1982). An audit trail can explicate all the methodological steps and decision points, allowing access to examine how data were treated and analyzed in various phases (Guba & Lincoln, 1982). My research generates a full picture of how I conducted the study; the approach and all the detailed processing

information can be found in the section 3.2 and 3.3, as well as in section 4. This is ensured, for instance, by providing a coding tree for each type of leader in the section 3 and by showing example quotes in both the section 4 and the appendix.

3.4.4 Confirmability

Confirmability means that the onus of objectivity should be placed on the data (Guba & Lincoln, 1982). A confirmability audit ensures that each finding can be traced to original data and that the interpretations are meaningful (Guba & Lincoln, 1982). This aims to prevent all personal inclinations from adversely affecting the research process. Therefore, I have adopted a clear research design and approach, following Saunders et al. (2009) and Eisenhardt (1989). In addition, my supervisor helped me from initiation to completion of the project, with suggestions for each phase in monthly meetings and timely communication via emails. All the methods and processes are presented thoroughly and openly, which can assist researchers in future studies. Finally, the consent form provides the basis of trust between me and the informants to enable them to fully support sharing their perspectives, in line with the research objectives.

3.5 Ethical Considerations

The ethics of research should be considered throughout the research process, especially when accessing data from multiple sources because of the significant impact a sound ethical approach has on research quality (Saunders et al., 2009). The drafted consent form (see Appendix A) was used to explain the objectives of the Radical Technology-Driven Change in Established Firms (RaCE) program, the usage of data, and the emphasis on the anonymity of the individuals' data. The interviews were conducted by me and another student researcher and recorded, each lasting about 60 to 90 minutes. As the consent form clarified, all informants could acquire information about the research (interview) and withdraw from the interviews at any time. They were informed that all data containing private information would be stored, processed, and presented anonymously or replaced with pseudonyms. The interviews are available only to the researchers, master's students, and assistants in this project within the RaCE program. These data-handling and ethical considerations are in line with the requirements of the Norsk Senter for Forskningsdata (NSD), which approved the project's compliance with these points.

4. Results

In this section, I present the main results of my research, with interpretations derived from illustrative quotations. Drawing on and revising the contextual model of coopetition I developed in the theory section, I explain when and where operational and strategic leaders perform their leadership functions according to their role in navigating paradoxical tensions to attempt to successfully foster innovation. Specifically, I present two models regarding strategic and operational functional leadership roles and the point of leadership impact, showing that these leaders engage in different leadership roles, functions and subfunctions.

The results are explicated separately to demonstrate the detailed functions used by leaders on different levels. Further, the functions and subfunctions of each leadership level role are outlined in detail. Finally, I compare the two roles in terms of how they may contribute to sustaining the coopetitive relationship and enable task-performance for innovation. See figure 5 for an overview of operational leaders and figure 7 for an overview of strategic leaders.

4.1 Functions of Operational Leaders

Regarding operational leaders, overall, the findings showed that these leaders along a task-performance dimension contribute to creating value and mobilizing resources based on a "paradox-blurring mindset", and further focus on "mobilizing resources" and "creating values". Further, when attempting to the relational dimension of leadership, the operational leaders engage in "regulating emotions in themselves, others (subordinates) and other parties (in the other participating firms)" by attempting to ignore negative emotions and enhance and utilize the positive emotions experienced as emotional ambivalence related to paradoxical tensions. See figure 5 below for an overview of these findings.

4.1.1 Relational-Oriented Functions

Operational leaders regulate own, subordinates', and other parties' emotions differently. They enhance the positive impact of emotional ambivalence by encouraging positive feelings, whereas they mask own negative emotions and enhance positive feelings in

others. They rely heavily on fostering a positive emotional climate to achieve a trusting relationship and deal with the emotional ambivalence experienced by other parties. The data analysis reveals three such functions and associated subfunctions, which I exemplify with quotations below.
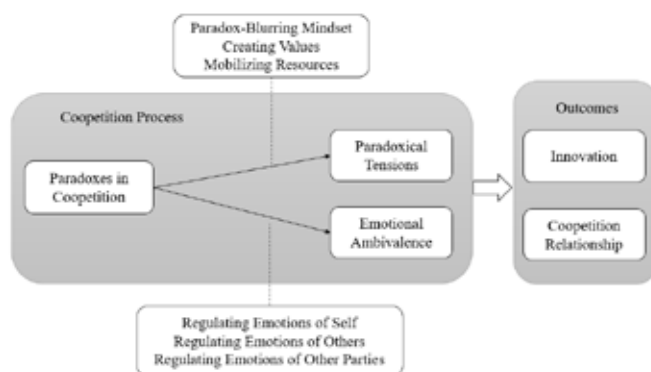

Figure 5. Functional Leadership Role by Operational Leaders

Function 1: Regulating Emotions of the Self

The first function concerns *regulating emotions of the self.* Operational leaders rely on the constructive impact of emotional ambivalence so that they mask negative emotions and self-motivate by framing positive emotions. This function includes two subfunctions.

First, these leaders engage in the subfunction *1) masking negative emotions*. The leaders appear to ignore or deny any negative feelings that may harm the collaboration between insurers. They mask the negative emotions aroused by paradoxes, but they are willing to emphasize the positive aspects of how they manage coopetition relationships. As one operational leader states:

> *Well, [I do not really experience] tension. But I know that people have tried to do similar things in the past but have not succeeded. But we didn't really have any [tension]; the people we talked with were very positive. I'm not sure. I'm not sure if we kind of felt that much tension in the project, really.*

This quote illustrates that the notion of tension is not perceived, and if it is, it is certainly not shared, although the same leaders on several occasions acknowledge that

coopetition involves cooperating and competing at the same time, which is inherently a paradox that creates tension.

The second subfunction leaders engage in is **_2) framing through positive emotion_**. Operational leaders frame the emotional ambivalence aroused by paradoxes as positive emotions. This allows them to maintain enthusiasm in coopetition relationships and continuously endeavor to devote time to this project. As one leader states:

> *And I'm, I have, of course, models running in production today, I would like to improve. And I have quite a clear picture of what I think would improve them. And that's basically getting more data, not only more observations, but maybe learning about new explanatory variables by seeing that other companies asked for them.*

This quote illustrates that the technical background and responsibility for technical solutions drive operational leaders to focus on problem-solving challenges and frame emotional ambivalence as positive emotions. Motivations in relation to the technical side appeared to be one of the main reasons for sustaining relationships in a collaboration mode:

> *For me, the motivation is—I think it's mostly technical. Learning, getting to really work a lot with fraud detection. So, for me, it's the technical knowledge–based motivation mostly.*

This quote again serves to illustrate that any potential negative ambivalence is ignored and that the focus is on the technical work and challenges, which as associated with positive feelings.

Function 2: Regulating the Emotions of Others

The second function is to *regulate emotions of others*. Operational leaders first allow subordinates to fully expose their personal emotions through multiple channels. Then, they increase and strengthen the positive impacts derived from the negative side of emotional ambivalence. This function composes two subfunctions.

The first subfunction is *1) exposing emotions in others*. Employees' personal feelings can be transferred to collective emotions shared by all subordinates when they are exposed to paradoxes in coopetition. Communication channels for technical experts are developed to encourage technical employees to expose, exchange and address emotional ambivalence within a safe space:

> So, one of the most important things that we have done is we have set a weekly status meeting with the technical people. So, there's a broad kind of comfortableness to that group.

As the "comfortableness" in these meetings illustrates, any conflicting issues and concerns can be brought up here, facilities by the operational leader.

The second subfunction of this function is *2) enhancing positive emotions in others*. It is used to decrease employees' negative emotions and encourage the positive impacts of emotional ambivalence. As this leader exemplifies:

> [There were] some quite nice articles in the newspapers last year, as well, I think that is also driving the spirit. You see that? Yeah, people are actually watching what we are doing. And there is some external interest for this. So, I think that's also helping on the motivation.

This quote illustrates that when external attentions were perceived by operational leaders, they utilized public attentions to enhance and motivate their subordinates to increase and strengthen their positive feelings.

Function 3: Regulating the Emotions of Other Parties

Regulating the emotions of other parties is the last function for relationship sustenance. Operational leaders exchange ambivalent emotions with participants from other parties to set boundaries. They build trust with other parties to create a constructive climate for collaboration from an emotional perspective. Two subfunctions are included in this function.

The first subfunction is *1) exchanging ambivalent emotions*. Even if operational leaders are cooperation dominated, boundaries are needed during the interaction

process with other parties. Communication is critical to exchange concerns and opinions about the emotional ambivalence of each party. As one operational leader says:

> *Yeah, good communication. I think communication is the key here […] but then again, communication is the key to take stuff. So, I think, yeah, openness on having the best intentions.*

This quote illustrates that communication is crucial for leaders to exchange different aims openly, which helps them to understand the intentions of others on the same issue.

The second subfunction is **_2) building trust by creating an emotionally cooperative climate_**. Operational leaders build trust with other parties to create an emotional climate for collaboration. A buffer zone is created by third parties, which allows insurers that are direct competitors with each other to put competition aside and shift to cooperation mode.

> *We all trust that [Third party D] is doing a good job and then not favoring one company before another. So, I think that's the key to trust with each other. And we trust that [Third party D] is also a neutral part in this.*

This quote illustrates that the credibility of third party is essential to build trust among parties and ensure the fairness of collaboration among competitors.

4.1.2 Task-Performance-Oriented Functions

Operational leaders retain a paradox-blurring mindset to create values with participants to transcend paradox. They make nonparadoxical decisions in this process because they prefer to avoid facing paradoxes. They also leverage resources to overcome paradoxical tensions. Closely collaborating with participants allows them to acquire external resources as paradox involvement. The data analysis result in three functions and associated subfunctions in relation to relationship maintenance, which I exemplify with quotations below.

Function 1: A Paradox-Blurring Mindset

The function lying as the basis of task-performance oriented functions is retaining *a paradox-blurring mindset*. By holding a paradox-blurring mindset, operational leaders

remain aware of paradoxes but understand their nature superficially, which makes them avoid facing paradoxes. There are three subfunctions illustrating how leaders blurring paradox in their mind.

The first subfunction engaged by operational leader is *1) awareness of paradox*. They are aware of the inherent competition among participants, the impact it has on task performance, and why the joint initiative is useful. As one operational leader explains:

> *Maybe it can be a competitive advantage compared with other firms that are not a part of the project. This is because we are now sharing and benefitting from having access to much more data than we would have otherwise. So, that can be compared with some companies; we can have a competitive advantage.*

This quote reveals that operational leader sometimes align the paradoxes with the competitive advantages of the companies compared with companies outside the project, from a technical perspective.

The second subfunction is *2) understanding paradox*. Their understanding of paradox fails to recall the uncertainties in relation to competition and exploitation, but instead, makes them concentrate on the benefits brought by exploration and collaboration. As one of them explicates:

> *Yeah, it focused on the profitability of each company. Because reducing fraud, which is all the same, it's a cost for each company [...]. Then getting, hopefully getting a big benefit from cooperation. Cooperating on this probably outweighs any possible competitional losses.*

In this quote, operational leader put most attention on exploring potential benefits from collaboration mode instead of what might be exploited from competition. Their evaluation of cooperation shows that the cooperation outweigh competition.

The last subfunction is *3) avoiding paradox*. They manage paradoxes by avoiding acknowledging the negative side of paradoxes. As one of operational leaders explained, fraud in claims is a societal problem. It might be used as a reason to evade the competition aspect in paradoxes:

> *I don't see it as that much of a competition. It's not directly focused on things [...]. But when it comes to fraud, you're not competing or not that much on finding the fraud. It's in no company's interest that other companies have a lot of fraud [...]. So, even though I said at the start that there's no direct competition on this issue, there is, of course, some competition.*

This quote implies that operational leaders are responsible for the technical solutions of coopetition projects, a domain that emphasizes collaboration rather than competition. The complementarities derived from technical interdependencies motivate operational leaders to focus on the cooperation mode and aim to achieve common benefits by viewing competitors as partners.

Function 2: Creating Values in Paradoxes

The second function is *creating values in paradoxes*. Coopetition paradoxes induce paradoxical tensions, which prevent operational leaders from creating values with partners. Operational leaders transcend paradoxical tensions to enable task performance and timeliness. They make operational decisions in a nonparadoxical way and protect the firm's nonparadoxical interests. Three subfunction explicate this function and are shown below.

Advancing versus slow moving is one of the paradoxical tensions led by coopetition paradoxes. Operational leaders perform sequential behaviors in ***1) transcending paradoxical tensions***. They explain the tasks to subordinates to help them understand and prioritize the tasks. They also chase the progression of tasks and solve problems about the technical side. As one operational leader reveals:

> *So, having or getting an understanding of what needs to be—what I need to say or focus on right now—from the rest of the team, it's important. So, getting them to understand that I can do both at the same time. It's very useful. And I think they're getting that understanding. And then that also means that they know that I have to prioritize.*

This quote presents the whole process of how to move the project forward by understanding the problem, explaining the tasks to subordinates, and prioritizing subtasks.

Operational leaders are ***2) regarding operational decisions as non-paradoxical***. Because operational decision making facilitates the transcending of paradoxical tensions. As one operational leader states:

> *One example is [...] recently, we had to decide on how we wanted, [...] and what we needed, to get [...] the statistical data back. So, that's a pure operational decision. So, yeah, I took the decision there after a brief discussion with some other colleagues.*

This quote outline how operational leader make a non-paradoxical decision by setting clear goals, listing requirements, and discussing the optimal way of achieving the goals with subordinates.

Operational leaders are ***3) protecting the non-paradoxical interests of firms*** by encouraging learning from doing to ensure that their firm acquires new insights, information, and knowledge. As an operational leader explains:

> *There has been some knowledge gained. That's the value of [...] experience. Also, yeah, just collaborating, I think. Yeah. There's quite a bit of value in just doing this collaboration, having the legal discussions, and so on.*

This quote indicates that they focus on what they have explored in paradox and what they have obtained from innovation contributions but implies that they seem to disregard resource exploitation and losses in operational continuity.

Function 3: Mobilizing Resources to Navigate Paradoxical Tensions

Exploitation versus exploration is another form of paradoxical tension. Hence, the last function for task-performance is *mobilizing resources to navigate paradoxical tensions*. This function allows operational leaders to enable their teams and strategic leaders to be involved in coopetition paradoxes.

The first subfunction is ***1) paradox involvement of internal resources***. Operational leaders interact with strategic leaders by letting them understand why and what resources are required to achieve the predicted task performance:

> *It is important to have a good open discussion with the […] let's call them stakeholders, about what is needed to reach the goal. They have an understanding of what needs to be done.*

As this quote indicated, operational leader is responsible for interact and communicate with strategic leaders by reporting what resources is needed and explaining why.

Strategic leaders have higher authority and broader business networks than operational leaders do. Hence, operational leaders utilize strategic leaders' business relationships to proceed with the project:

> *If the leader of a bank or insurance company, for example, is close to us, then *** can maybe send an email to the top of the company, and then there will be some pressure from the top to bottom, right? I think having a close relationship with those two [CEOs] has been pretty decisive in, first of all, starting the project, and maybe also in them feeling kind of more committed to us in some ways.*

The second subfunction is ***2) paradox involvement of external resources***. Leveraging external resources allows operational leaders to allocate their workloads and achieve complementarity. Because the workload advances internal projects for operational continuity and supports external projects for fraud detection innovation is high. As one operational leader explains:

> *We have more project management resources from a consultant company called "Other Party D" […]. And I think they have improved this resource situation and the project quite a bit.*

As this quote implied, when a project manager lacks a technical background, it is necessary to ask for external help because the resources available for each operational leader are limited. Moreover, personal limitations require operational leaders to ask for external support on technical aspects to complement their personal capabilities.

4.1.3 Summary

The functions and subfunctions of operational leadership in the coopetitive interfirm relationship is summarized in the figure below (fig. 6), showing the relationship between the coopetitive context and the operational leadership functions.

Operational Leaders' Roles	
Relationship Oriented Functions	Subfunctions
Regulating Emotions of Self	- Masking negative emotions - Framing through positive emotions
Regulating Emotions of Others	- Exposing emotions in others - Enhancing positive emotions in others
Regulating Other Parties' Emotions	- Exchanging ambivalent emotions - Building trust by creating emotionally cooperative climate
Task-Performance Oriented Functions	Subfunctions
Paradox Blurring Mindset	- Being aware of paradox - Understanding paradox - Avoiding paradox
Creating Values in Paradoxes	- Transcending paradoxical tensions - Regarding operational decisions as non-paradoxical - Protecting non-paradoxical interests of firms
Mobilizing Resources to Navigate Paradoxical Tensions	- Paradox involvement of internal resources - Paradox involvement of external resources

Figure 6. Functional Leadership of Operational Leaders

4.2 Functions of Strategic Leaders

The results regarding strategic leaders revealed that they engage in two sets of functions, one along a task performance dimension and one along a relational dimension. Along the task-performance dimension, strategic leaders approach the coopetitive paradox and tension that arises from it; they attempt to "capture value" and "mobilize resources" by creating a "transparadoxical mindset". Along the relational dimension, strategic leaders regulate emotions in themselves, others and partner by acknowledging emotional ambivalence and decreasing the potential harmful effect on relationships led by such ambivalence.
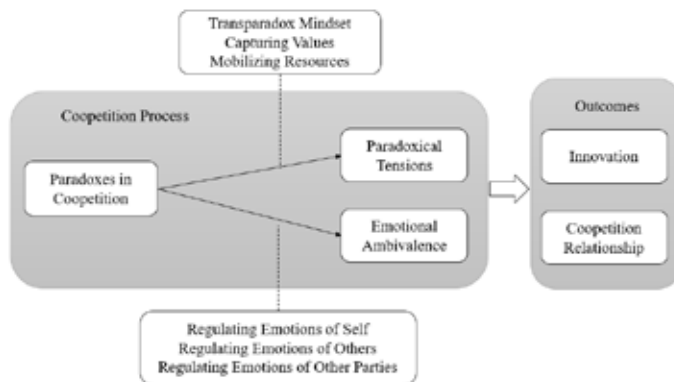
Figure 7. Functional Leadership Role – Strategic Leaders

4.2.1 Relational-Oriented Functions

Strategic leaders acknowledge the existence of emotional ambivalence. They attempt to neutralize the extreme and unrealistic emotions of subordinates. Furthermore, they reconcile the contradictory concerns and emotions of other parties by combining icebreaking, trust building, and position understanding as crisis management. The functions and related subfunctions are exemplified and explained below.

Function 1: Regulating Emotions of the Self

To *regulate emotions for self*, strategic leaders acknowledge their emotional ambivalence based on an in-depth understanding of emotional effects. However, as representatives of their firms, they frame emotional ambivalence through positive emotions to stay confident and determined in front of society and the public.

Strategic leaders ***1) acknowledge emotional ambivalence*** and its impacts. However, the aim is to reduce the emotional impacts induced by emotional ambivalence and concentrate on acts to retain the coopetition relationship. As one senior executive shown:

I think I would probably describe myself as [having] very sort of rational, sort of mathematical kind of thinking. So I'm very, sort of, it's like playing chess: If you have a bad position, you try to figure out how to make your position better, you know, sort of throw the pieces in the area I have worked with.

In this quote, strategic leader uses an example of playing chess to describe how they continue working when they are experiencing conflicting emotions. The leader put emotions aside and shift the attention to improve the performance of task.

This is because both positive and negative emotions can be harmful if they are not managed appropriately. For instance, overindulging in emotions or second-guessing the emotions of others can terminate the coopetition relationship, as one strategic leader states:

I think, for me, I always try to stay very focused on the issues that we're working with, not so much on the people or sort of trying to second-guess other people's intentions or things like that. Trying to focus on the issues at hand. And how to deal with that.

As shown in this quote, strategic leader does not be immersed in experienced emotions but focus on how to achieve a better performance on tasks in hand.

The second subfunction is ***2) framing through positive emotions***. Before the public, strategic leaders need to present a positive front. They practice being confident in public relations and being determined in front of other parties:

I need to convince myself and be sure that things are solved soundly. Then, if journalists ask me about this project, I can be 100% open. That's the, you know, the test for whether you think it's okay to participate? And you have, you can answer all the questions [...] with confidence and with—not any guarantees, but with the security or the level of confidence that is needed in order to [...] look the journalist in the eyes.

Function 2: Regulating the Emotions of Others

The second function is *regulating the emotions of others*. Strategic leaders start by encouraging subordinates to express their emotions and acknowledging the validity of both positive and negative emotions. Then, they neutralize extreme emotions and emotions derived from unrealistic predictions.

The first subfunction is ***1) attending to emotions in others***. Strategic leaders reach the collective emotions of subordinates by helping subordinates to raise their voices and encouraging the expression of real attitudes instead of masking negative emotions. As one strategic leader states:

> *It's a lot about listening to people, getting them to voice their fears, getting them to voice their risk. Yeah, that's a lot of what I'm doing; that's more or less what I'm doing every day, right, talking to people and then [manager from third party] for information and their feelings.*

Alternatively, another quote shows that:

> *But what's interesting is that you can [...] kind of gauge it by reading body language. And then they are, their body language is very skeptical, like this [cross your arms on your chest].*

Again, this quote indicates that strategic leaders find that emotional ambivalence on the collective level includes negative emotions with high intensity and strength. But they accept them with an open mind and acknowledge the rationality of passive attitudes.

The second subfunction is ***2) neutralizing emotions in others***, regardless of their positive or negative essence. They realize that high strength and intensity of emotional ambivalence impose harmful effects on projects because paradoxical tensions may lead to failure, while negative emotions can break the coopetition relationship:

> *And there is one employee in my team [who] is very eager to [add] to this project. Because I basically, I've tried to, you know, reduce his expectations a little because you never know—at some point, things can be blocked.*

In this quote, strategic leader reduces the negative impact in potential aroused from unrealistic expectation. Such an extreme emotion, such as high eagerness in the quote, may lead to stagnation of the project.

Function 3: Regulating the Emotions of Other Parties

To *regulate the emotions of other parties*, strategic leaders fully understand the ambivalent concerns expressed by other parties and then reconcile the harmful issues through conflict management.

The first subfunction is ***1) understanding ambivalent concerns of other parties***. Strategic leaders represent their companies and have contact with other parties. Conflicts among different parties can terminate the relationship so that strategic leaders understand the conflicts by listening to others and identifying the problems. As a strategic leader describes:

> *Sometimes, the debates actually reveal that there are misunderstandings. Sometimes, we really have a different interpretation. And you know, just to be sure that, okay, you are standing there, I'm standing there. And that's our positions. Then it's okay to have transparency in those issues as well.*

In this quote, strategic leader is trying to eliminate misunderstandings among parties. A consistent interpretation of an event can explicate the position of each party and increase the company's bargaining power as well.

Strategic leaders are ***2) reconciling the emotional ambivalence of other parties*** by forecasting and resolving. As the quote below revealed:

> *First of all, try to, to predict them and avoid them before they happen. And then, if and when it happens, as you say, try to resolve them and be the neutral party. It's always more difficult for someone who's actually part of the conflict to initiate and resolve it.*

This quote indicates that third party is critical in conflict elimination because it is standing outside and retains a neutral role. Therefore, strategic leader may utilize these third parties to exchange opinions with their competitors.

Building trust facilitates the exchange of views between conflicting parties as well. Realizing the importance of maintaining trust, people will regulate their actions to avoid breaking coopetition relationships. As the quote exemplified:

> *I think a key is sort of having an open discussion. The most important thing is building trust. And you build trust both through your own actions and through the actions of others.*

These quotes reveal that strategic leaders use crisis management to reduce emotional ambivalence experienced by other parties. They predict the conflicts, utilize third parties, and build trust through regulating their own action first. These combination behaviors are all critical in emotion regulation.

4.2.2 Task-Performance-Oriented Functions

Strategic leaders retain a transparadox mindset persistently to ensure task performance of multiple departments internally. They capture values from the coopetition paradox by transcending the paradox, making paradoxical decisions through a strategic lens, and protecting the paradoxical interests of firms. They interact with operational leaders through resource mobilization, which enables them to prepare and align resources to manage paradoxes with adaptability. Functions in relation to task-performance are explicated by several subfunctions below.

Function 1: A Transparadox Mindset

A transparadox mindset is the basis of other functions. Strategic leaders are aware of paradox in coopetition; they deeply and comprehensively understand its essences and uncertainties in terms of the potential negative side of coopetitive relationships. However, they embrace coopetition paradoxes based on such in-depth understanding and use them to navigate their positions.

The first subfunction is ***1) awareness of paradox***. Strategic leaders acknowledge the co-existence of competition versus cooperation in paradoxes and comprehend the benefits and uncertainties in relation to paradoxes, as shown in quote below:

But in this case [competing and cooperating at the same time], I think we've had a good understanding of where we're competing, and where we cooperate, cooperating and sort of the value of cooperating within this space.

This quote reveals that strategic leader notice that they are collaborating and competition with other insurers at the same time by creating and capturing values in this project.

The second subfunction is ***2) understanding paradox***. Strategic leaders are competition focused and long-term oriented in their understanding of paradox. As one of strategic leaders describe:

So business potential. So, we have covered the first phase of the project now, which kind of is a proof of concept. Can we actually do this? And then in that particular scope, one of the risks or challenges is not being able to assess the business opportunity or the business case. So also, both assessing the upside of potential, the business potential to gain, but also the cost. It's a fair question.

This quote exemplifies how strategic leader is sensitive to the fairness of coopetition, business potential, and competitive advantages in relation to paradoxes.

The last subfunction is ***3) embracing paradox***. The quote below serves as a vivid description of how strategic leaders are aware of, understand, and embrace the contradictory interrelated forces in coopetition and how they see it as a chance to improve their performance:

Okay, so if you show up at the training camp for the Olympics, and you decide to put in more effort than the others, that means that you also capture the value of the additional effort, because you become even better. Although you may say it's kind of unfair, it's also from a competition perspective. It's actually a driving motivation to reach a little further than the others. Yeah, so actually, we turned that into a kind of motivation more than a competition.

Function 2: Capturing Values in Paradoxes

According to the respondent interviews, strategic leaders capture value in paradoxes by transcending paradoxical tensions, making decisions from a strategic perspective, and protecting the paradoxical interests of their firms.

Strategic leaders act in sequence from overviewing and empowering to problem solving and ***1) transcending the paradoxical tension*** of slow moving versus advancing. Having an overview of the project helps them allocate the tasks precisely to multiple departments. Empowering subordinates by giving them a large amount of autonomy encourages subordinates to solve detailed and complex problems on technical and legal aspects with a feeling of involvement. Problem solving allows strategic leaders to help employees understand goals clearly and precisely. The quote below exemplifies how they empower subordinates:

> *A lot of it is that the management in that kind of situation, does not mean that you as a leader need to act or do something. It means you as a leader need to involve everyone and try to get everyone to work together to find a good solution. So it's about motivation and enablement. Sort of getting the right people on board, maybe getting all of the right resources.*

This quote illustrates that strategic leader does not interfere how operational leaders do. They involve the right people, empower them with autonomy, and support them with resources to ensure that subordinates are motivated for task performance.

The next subfunction is ***2) regarding strategic decisions as paradoxical***. Sometimes, they should make internal and external participants understand why they should do a certain job in a specific context. As a strategic leader state:

> *And then, of course, there are some decisions to be taken and there is some advice to be given for discussions. For example, when you work with this kind of problem, and there is no right or wrong there—there is a kind of, we haven't done this [collaborating with competitors in fraud detection innovation] before.*

This quote shows that strategic leader makes strategic and goal-focused decisions to guide the direction of the project especially when their team have not dealt with certain task within a coopetition context before.

Ultimately, strategic leaders are ***3) protect the paradoxical interests of the companies***. In some cases, slacking can be used by strategic leaders as a tool to control the progression of a project and protect firm interest. Leaders notice that the initial phase is a collaboration-focused stage, while in the next phase, a business potential exploration phase, insurers and third parties concentrate on finding methods to distribute benefits and values:

> *And, and that might be one reason why things are lagging a bit. Because we are—all of the companies are in a comfortable state at the moment. Right. And if we go into the innovation phase, then we don't know what will happen.*

Function 3: Mobilizing Resources to Navigate Paradoxical Tensions

Strategic leaders *mobilize resources to navigate paradoxical tensions* and support subordinates. They prepare the resources required by operational leaders and align the resources precisely. Being adaptable is critical to maintaining flexibility in navigating paradoxical tensions. Because without resources, they cannot tackle with innovation contribution versus operational continuity simultaneously. Similarly, advancing project and avoid slow-moving situation at the same time also challenge strategic leaders persistently.

The first subfunction to navigate paradoxical tensions mentioned above is ***1) preparing to manage paradoxical tensions***. Time is limited and resource preparation is time consuming, but strategic leaders are willing to support and back up their subordinates. From an operational leaders' perspective:

> *And they are prepared to add additional resources if I feel that I need that, in terms of people, because time is fixed.*

In this quote, operational leader acknowledges that in given time, strategic leaders' role is making well preparation of resources needed by operational leaders. Additional

resources imply that these resources may be sourced from multiple departments where operational leaders cannot reach without the support from strategic leader.

Moreover, operational leaders cannot view the full picture of the project, which may lead to a mismatch between resources and people. What is worse, they lack the capabilities to match tangible and intangible resources needed in a limited time so that strategic leaders are ***2) aligning resources to manage paradoxical tensions*** as complementarity:

> So who am I to talk to if this is what I'm wondering about? So to talk to the right people to get the best out of every individual in the project. So if a leader knows the capabilities of his people, he can make put the right people to solve the right problems.

Like the strategic leader states in the above quote, it is critical to match resources timely. Human capital is also an important type of resources to address problems in paradoxical tension management.

Strategic leaders are flexible enough to align and involve resources promptly to meet fast-changing needs because the requirements of resource exploitation are changeable. Here, ***3) retaining adaptability to manage paradoxical tensions*** is the last subfunction. As one of strategic leaders explains:

> So, that means getting the right resources at the right time within my organization. I also need resources from IT [information technology] to help us with some and yeah, so basically, the other resources are that we've been using our data warehouse developers, data scientists, and DevOps people from IT, who have been working on the Amazon cloud solutions.

The answer from strategic leader indicates that it is critical to align resources precisely and shift between exploring and exploiting resources to tackle with problems.

4.2.3 Summary

The abovementioned functions support both task-performance and relationship sustenance and are summarized in the figure below (fig. 8) to show how functions synergize in coopetition.

Strategic Leaders' Roles	
Relationship Oriented Functions	Subfunctions
Regulating Emotions of Self	- Acknowledging emotional ambivalence - Framing through positive emotions
Regulating Emotions of Others	- Attending to emotions in others - Neutralizing emotions in others
Regulating Other Parties' Emotions	- Understanding ambivalent concerns of other parties - Reconciling emotional ambivalence of other parties
Task-Performance Oriented Functions	Subfunction
Transparadox Mindset	- Being aware of paradox - Understanding paradox - Embracing paradox
Capturing Values in Paradoxes	- Transcending paradoxical tensions - Regarding strategic decisions as paradoxical - Protecting paradoxical interests of firms
Mobilizing Resources to Navigate Paradoxical Tensions	- Preparing to manage paradoxical tensions - Aligning resources to manage paradoxical tensions - Retaining adaptability to manage paradoxical tensions

Figure 8. Functional Leadership of Strategic Leaders

4.3 Summary: Comparison of Functional Leadership

Overall, the findings reveal that strategic and operational leaders navigate persistent paradoxical tensions and emotional ambivalence simultaneously to attempt to achieve successful innovation in significantly different ways. They contribute to task performance and coopetitive interfirm relationships to foster innovation at the same time. However, leaders perform differently in the coopetition process to facilitate innovation. The comparison and explanation of these differences between strategic and

operational leadership functions are elaborated on in the following subsection (see Appendix H).

4.3.1 Relational-Oriented Functions

Leaders regulate own, others', and other parties' emotions by keeping the intensity and strength of emotional ambivalence at a middle level of intensity and valence. Different positions, responsibilities, and personal capabilities (mindsets) influence how strategic leaders and operational leaders perform differently.

Operational leaders are cooperation dominated and paradox avoidant, which is reflected by their paradox-blurring mindset. By masking negative emotions, they concentrate only on positive impacts led by the emotional ambivalence they experience. They seem to believe that only positive emotions are favorable for preventing terminating coopetition relationships, whereas negative emotions are all unfavorable. Opposingly, strategic leaders embrace paradox based on an in-depth understanding by accepting the reasonability of both positive and negative emotions. They appear to realize that if the emotions cannot be kept at the middle level, positive feelings—such as unrealistic expectations—can lead to disastrous results, for example, termination of relationships.

They frame emotional ambivalence as positive emotions with opposing aims. Showing a positive image in front of the public is beneficial for firms in coopetition, so that practicing being confident and determined is adopted by strategic leaders in the public relations domain. Partly, confidence is necessary for them to interact with representatives from other parties. Operational leaders, in contrast, commonly possess a technical background as technical experts. Their attention to their technical improvement makes them rely on constructive effects brought about by emotional ambivalence.

Leaders manage the emotional ambivalence of subordinates differently. Operational leaders rely heavily on conferences and existing communication channels, where subordinates expose their personal emotions. These traditional channels are well developed but not specifically used to expose emotions; rather, they are mostly utilized to exchange information internally. In contrast, strategic leaders proactively encourage

employees to raise their voices; they act as listeners, and they observe employees' body language. They do not rely on existing channels to attend to subordinates' emotional ambivalence, but instead, leverage multiple methods created together. This is probably because they realize that it is difficult for technical specialists to share their emotions with others, and it is necessary to explore nontraditional ways of capturing their conflicting emotions. They neutralize the extreme emotions aroused by unrealistic predictions and enable subordinates to face reality instead of living in their imaginations. In contrast to these strategic leaders, operational leaders fail to understand the potential risks generated by positive emotions. They enhance positive emotions unilaterally rather than considering the bilateral impacts.

Leaders regulate the emotional ambivalence of other parties in different ways. Operational leaders are unwilling to acknowledge conflicts, and they build trust to create an emotional climate for cooperation. They fail to accept and reconcile the conflicts aroused among parties. In contrast, strategic leaders understand the positions and interests of other parties and then reconcile conflicts by combining multiple methods in crisis management. These sequential behaviors reveal that they acknowledge that conflicts are persistent in the emotional states of other parties and that they are responsible for dealing with them as firms' representatives. In short, leaders' differential understanding of emotional ambivalence determines their functions performed to regulate the emotions and manage conflicts in the relationship-sustenance process.

4.3.2 Task-Performance-Oriented Functions

To reach milestones and achieve successful innovation, leaders play leadership roles differently to navigate persistent paradoxical tensions. Both operational and strategic leaders are aware and understand the relationship between paradoxes and the tensions that arise from them, but how they treat and evaluate paradox in their minds is diametrically opposed. Operational leaders put the negative side of paradox aside and deliberately ignore the contradictory but interrelated forces of coopetition. Their awareness of paradox and avoidance attitude indicate that their understanding of paradox is superficial because their assessment is cooperation dominated, benefits focused, and competition avoidant. In this way, they hold a paradox-blurring mindset

when they seem to overcome paradoxical tensions. In contrast, strategic leaders realize that competition, business potential, and value appropriation are as important as collaboration, technical success, and value co-creation. The vivid example of the Olympic Games explains how they retain a transparadox mindset to enable task performance of multiple departments in their firms. The differences between mindsets affect how they act to manage paradoxical tensions to achieve innovation success.

Operational leaders create value by transcending paradoxical tensions and making nonparadoxical operational decisions. The detailed decisions mostly relate to technical success and operational continuity instead of legal issues and business potential, through which they support technical collaboration by co-creating value with other parties. In contrast, strategic leaders contribute to technical success and legal feasibility together. They transcend paradoxical tensions by making paradoxical strategic decisions through which they enable firms to capture values from the business potential of the project. Standing on a higher level, strategic leaders' see the whole project by evaluating legal feasibility, technical success, and business potential collectively. Afterwards, they empower subordinates and provide them with autonomy in technical respects. Operational leaders explore common benefits in collaboration to protect firms' nonparadoxical interests. Encouraging learning from doing, they contribute solely to technical success and leave the legal responsibility to the legal department. However, strategic leaders protect the paradoxical interests of firms by keeping business secrets. Maintaining slack in project advancing, they control the rhythm and speed of innovation contribution to confirm value appropriation.

Leaders mobilize resources with different aims to balance innovation contribution and operational continuity. Operational leaders acquire external resources to achieve complementarity through technical collaboration with other parties. They leverage the business networks of strategic leaders, as an internal resource, to accelerate progression. Strategic leaders empower operational leaders via resource mobilization, but they act as a flexible enabler of operational leaders by preparing, aligning, and matching resources from multiple departments in their firms. They do not interfere with how operational leaders leverage resources in the operational process.

In sum, leaders mobilize resources and deal with values to overcome paradoxical tensions for innovation success. The differential functions leaders use is grounded in a dramatically opposing mindset. Their attitudes toward paradoxes determine how they behave to enable task performance. (See fig. 9)
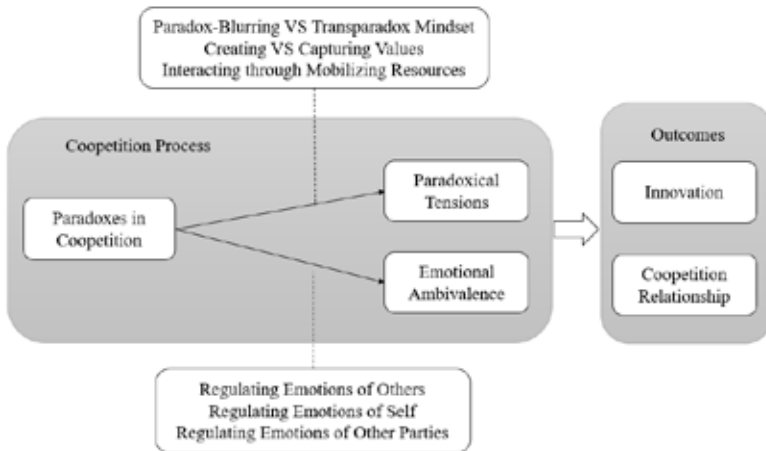

Figure 9. Comparison of Leaders' Functions

5. Discussion

In this section, I present a discussion of compelling results, contributions, theoretical and practical implications, as well as limitations and strengths. The purpose of this master's thesis is to explore the different functions of leaders on operational and strategic levels in coopetition to foster innovation. The coopetitive innovation project for fraud discovery in the insurance industry and leaders from participating institutions is the empirical context. Above, I conducted an empirical analysis regarding how operational versus strategic leaders navigate paradoxical tensions in coopetition relationships arranged to foster innovation. I outlined the results that support or expand the existing literature, while the most compelling results that provide new insights or contradict current literature are shown as well. In the following, the main results regarding "how operational versus strategic leaders navigate paradoxical tensions in coopetition to foster innovation" are discussed and highlighted.

5.1 Compelling Results and Contributions

The most compelling result of my research is that leaders navigate paradoxical tensions and balance emotional ambivalence in different ways in coopetition by enabling task performance and sustaining the coopetition relationship and that to this end, leaders in different positions have different roles. While there are some similarities between these leaders, the functional leadership role performed by operational leaders is significantly different from that of strategic leaders.

Operational leaders and strategic leaders differ in that operational leaders navigate paradoxical tensions by retaining a paradox-blurring mindset. Even if they are aware of the paradoxes, their understanding is superficial. They focus on the benefits, advantages, and positive impacts led by paradoxes to evade the paradoxes themselves. They manage paradoxical tensions by focusing on value co-creation with competitors. But strategic leaders are distinct from leaders on an operational level. They have two-sided views regarding paradoxes, and thus, retain a transparadox mindset to capture values. Furthermore, mobilizing resources is not only an important function to leverage paradoxical tensions but also a critical way to interact with operational leaders. As mentioned above, operational leaders emphasize value creation which require them to leverage resources to support technical tasks. However, they are unable to see the full

project and match resources flexibly within a limited time. Therefore, strategic leaders act to prepare and align resources that adapt to fast-changing requirements.

Another important difference between strategic leaders and operational leaders is how they regulate emotions to avoid termination of the coopetition relationship. Operational leaders regulate opposing emotions of the self, others, and other parties, but they rely on the positive effects created by emotional ambivalence. Regulating the emotional ambivalence of others suggests that they treat positive and negative emotions partially. They enhance the positive impact aroused by failures or negative events. This implies that they fail to accept the validity of negative emotions, and hence, reject those negative feelings, although they are as reasonable as positive emotions and might deliver positive effects. Finally, they maintain a constructive emotional climate by building trust to enhance cooperation among other parties instead of proactively reconciling conflicts. They seem to ignore that negative emotions objectively exist and cannot be avoided.

Different from operational leaders, strategic leaders distinguish business networks from private relationships. Even if they are familiar with others, all of them remain vigilant to protect business secrets. Positive expression in front of the public does not influence how they manage the coopetition relationship. They acknowledge emotional ambivalence and neutralize extreme emotions experienced by subordinates. They help prevent unrealistic imagination or expectations about the project on the part of employees from interfering in their work. All these actions are based on an in-depth understanding that both positive and negative emotions are valid and reasonable, but if they cannot regulate these emotions well, the project will be hindered by emotional effects because positive emotions can be harmful if they deviate from reality.

Strategic leaders also act differently to regulate the emotions of other parties. Even if building trust is helpful for icebreaking, other functions are critical in relationship maintenance as well. It is impossible that participants with own interests will always avoid friction; what is important is how to deal with friction when it arises through bargaining. The dynamics in conflict resolution are reflected in how to reach agreements and protect firm interests simultaneously. Clearly, strategic leaders have tactics in this respect because they understand the positions of their competitors. They

are clear about when and how to expound on the position of their firms when they have probed others' bottom line.

Overall, both leader roles are responsible for maintaining task performance and coopetition relationships. Operational leaders ensure that their teams fulfill the requirements decided by all participants on time, whereas strategic leaders enable all departments to meet the standards of tasks. Operational leaders focus on sequential and small technical tasks in their daily work, whereas strategic leaders guide the direction of the whole project. They view the coopetitive relationships as the basis of innovation, so the validity of coopetitive interfirm relationships enables innovation success. Strategic leaders are representatives of firms, and the importance of bargaining with competitors to protect the interests of a company outweighs building trust for collaboration. Operational leaders are people in charge of technical solutions, which allows them to disregard competition, and instead, concentrate on collaboration with enemies. For them, trust establishment is key to retaining relationships. Together, the different leadership roles are crucial to sustaining the coopetitive relationship without losing sight of the balancing act of achieving one's own interest and achieving joint innovation.

5.2 Theoretical Implications

There are some theoretical implications of this research. First, using a functional and contextual leadership approach (Fleishman et al., 1999), I provided a relational lens instead of a structural and judicial perspective to provide insights into theory development regarding how leaders manage paradoxes in a coopetitive innovation strategy. Leaders are struggling with innovation contribution versus operational continuity and advancing versus slow moving, and this struggle has a cognitive nature. The present results expand the past literature regarding tension management (Fernandez et al., 2014; Tidström, 2014) by explicating what composes the opposing but interrelating forces. Specifically, emotional ambivalence is not only generated from paradoxes but is also affective in essence. This result differs from past literature that views emotional ambivalence as a part of coopetitive tensions (Raza-Ullah et al., 2014) because people experience both positive and negative orientations toward events through an emotional process (Ashforth et al., 2014). Further, I proposed that

relational-oriented functions are distinct from task-performance functions. Leaders regulate emotions only serve for relationship maintenance instead of enabling coopetitive performance (Raza-Ullah, 2020; Raza-Ullah et al., 2020), mobilizing resources (Q. Huy & Zott, 2018), or decision making (Vuori & Huy, 2020).

Past literature taking a cognitive perspective examined the leaders' functions for task accomplishment. For instance, Lord (1977) proposed problem-solving functions based on information leveraging, and Fleishman et al. (1991) categorized plan implementation functions using a resource-based lens. However, I have claimed that functions relate to resource mobilization support and expand the existing literature. I touched on the mechanism of how leaders achieve task performance through mobilizing resources, which has rarely been examined in the past. Leaders use resources acquired from multiple sources to transcend paradoxical tensions. However, this function has two implications for strategic leaders—supporting operational leaders through interactions and transcending higher level paradoxical tensions.

Functions regarding problem solving (Lord, 1977; Yukl, 2012) and information leveraging (Fleishman et al., 1991) are encompassed in my subcategory of transcending paradoxical tensions but aiming to capture or create values. Moreover, I proposed that leaders pursuing coopetition retain either a paradox-blurring mindset or a transparadox mindset for task performance. These results confirm the cognitive essence of task-performance-oriented functions. Furthermore, I explained the mechanisms of sustaining relationships with other parties through an emotional lens and consider functions like those mentioned by Yukl (2012). In contrast to Yukl (2012) findings, this study showed that change-oriented functions are shared by operational leaders to create values and by strategic leaders to capture values.

Overall, functions related to task performance and relationship sustenance play a moderating role in coopetition for innovation facilitation. Past literature in relation to coopetition capabilities or organizational capabilities has confirmed coopetition's moderating effects (Bengtsson et al., 2016; Crick, 2019; Gnyawali et al., 2016; Gnyawali & Park, 2011; Raza-Ullah, 2020; Raza-Ullah et al., 2020). However, existing literature fails to touch on the relational lens and who applies these capabilities to achieve organizational performance aspects, such as fostering innovation. What is more,

the current research does not compare the effectiveness of task-oriented and relation-oriented functions adopted by leaders pursuing coopetition. In contrast to the current literature, I differentiated leaders' functions on operational and strategic levels and simultaneously adopt a task-performance and relational lens.

Further, the research contributes to the understanding of paradoxes and tensions in organizational research. The sources of paradoxes and paradoxical tensions differ from those aroused by ambidexterity or paradoxical strategies applied to achieve sustainability in the innovation stream. The paradoxes appear to objectively exist in the interfirm relationship, as prior research claimed (Bengtsson et al., 2010; Bengtsson & Kock, 2014, 2015; Bengtsson et al., 2016; Gnyawali et al., 2016; Lewis, 2000; Raza-Ullah et al., 2014; Smith & Lewis, 2011). Beyond competition versus cooperation, exploration versus exploitation has also been shown as a paradox as well. In ambidexterity literature, exploration versus exploitation is closely related to inconsistent architectures inside an organization, and top management teams integrate paradoxical strategies to obtain sustainability following an innovation stream (Smith, 2014; Smith & Lewis, 2011; Smith & Tushman, 2005; Tushman et al., 2010). During this process, the top management team contributes to the dynamic decision-making process regarding architecture designs and strategy application (Smith, 2014; Smith & Tushman, 2005). Teams mostly face internal trade-offs, such as allocating limited resources to departments with opposing goals (Edmondson et al., 2003; Eisenhardt & Zbaracki, 1992).

However, I stated that operational leaders manage and struggle with exploring versus exploiting, but they do so in different ways. They make nonparadoxical decisions to transcend paradoxical tensions personally instead of enabling team effectiveness at the top level. Exploration is explained by the respondents as critical for value appropriation among competitors in the final phase of the project, whereas exploitation is described as important as both a prerequisite for exploration and a desired endpoint because it is essential for value co-creation in collaboration with competitors.

5.3 Practical Implications

There are two key practical implications of my master's thesis. The first is helping operational leaders who are leading a team to create value in coopetition. Leaders working at the operational level, such as project managers, contribute to the operational process of the project. They are responsible for the task performance of a team by making small but detailed decisions. They utilize the coopetition relationship to collaborate closely with partners. However, they lack the authority to make strategic decisions and cannot flexibly allocate resources sourced from multiple departments. Importantly, evading competition can harm firm interests. Therefore, the findings regarding the functional leadership role of operational leaders elaborate on how they perform leading roles in teams efficiently, as well as how they bargain with strategic leaders to acquire resources and utilize positive emotional impacts to reach the predicted task performance.

The second practical implication is that my research provides input regarding how strategic-level leaders may lead coopetition projects and control their progression to ensure the value appropriation of their firms. Such leaders may find it impossible to go into detail and deal with operational issues, but they need to control the direction of the project by making strategic decisions. They represent their firms and bargain with competitors to capture value. The way they contribute to task performance is mostly through interacting with operational managers. Hence, the model regarding the functional leadership role for strategic leaders helps them understand and implement how to provide backup operational leaders, enable value capturing, and handle coopetition relationships in the process of innovation facilitation.

5.4 Strengths and Limitations

This thesis contributes to research regarding the relationship between coopetition and innovation as a strategy, taking a leadership perspective. In this nascent field of research, my study can be regarded as a starting point. Because my research explores the different functions performed by leaders on different levels and compares these functions in coopetitive relationships, it is comparative in essence. The leadership functions found appear to support the achievement of coopetitive innovation in the insurance industry in Norway. For researchers who want to explore the phenomenon of innovation through

coopetition in other industries, the compelling findings of my study can provide a new lens.

A strength of this study is that while the empirical findings appear to be supported by past research, they also expand the current literature while allowing new theory development. The building blocks in the contextual model support the definitions of coopetition, paradoxes, and paradoxical tension, while I emphasize the special role of leaders in navigating cognitive paradoxical tensions as emotional ambivalence and the importance of coexisting but conflicting emotions. This contextual model also begins to explore the causality between coopetition and innovation, where my data indicate that innovation may be facilitated by a coopetition strategy. Further, the functional leadership roles explicate the differential functions performed by operational and strategic leaders when they aim to be responsible for innovation and maintain coopetition simultaneously. Current research fails to compare the differential functions taken by leaders on different levels, but my study bridges this gap. Choosing a case study is another strength of my research. The qualitative method provides an in-depth understanding of the phenomenon in relation to the research question. In a theoretical sampling process, there is enough flexibility to adjust the interview guide and selection of informants when new discoveries emerge. There is a potential to transfer findings and practical implications to other settings because of the thorough description of the context and the detailed account of how the data were analyzed. The practical implications of my findings are also likely to be transferable to real-life settings.

In addition to the strengths, this study has some possible limitations. For instance, the study is limited by the scope and time available for writing a master's thesis. In addition, limited time and resources restricted the total number of semistructured interviews and informants. Particularly, the study included only seven informants, and full saturation may not have been achieved; some oversampling may have been useful to ensure this. Future studies should include more respondents to ensure such an effect. In addition, real-time observations could have been useful. However, because of the Covid-19 pandemic, it was impossible to observe the fraud-detection coopetition project and context in Bergen, Norway, at the time of data collection. This may have influenced both the description and explanation of how paradoxical tensions, particularly those experienced as emotional ambivalence, occur in real life. Even if qualitative methods

are useful, caution must be taken regarding whether those findings are difficult to generalize when it comes to causality across populations because qualitative studies do not use statistical inference as a methodology.

5.5 Future Research

There are several possible avenues for future research. The first is to explore the mechanisms of interaction between leaders on different levels more closely in in-depth research. While the leadership function of "mobilizing resources to navigate paradoxical tensions" plays a role in linking leaders on different levels, it seems that other channels may align leaders with different positions. For instance, informal communication can be a possible approach. Therefore, one direction for future research could be *to examine the mechanisms by which operational leaders interact with strategic leaders to foster innovation in coopetition.*

Another direction for further exploration is to examine and *differentiate how leadership is directed toward influencing sustaining the coopetitive relationship and achieving innovation, as well as how this is done in different industries.* My research showed that coopetition is used as an innovation strategy by insurance companies in Norway. These companies lack the capabilities and resources to develop an infrastructure and investigate fraud claims independently; here, leaders engaging in coopetition play leadership roles in maintaining coopetition relationships for innovation facilitation. However, in another industry, the macroenvironment may be dramatically different. Hence, leaders in other industries may engage in coopetition for other reasons. In other words, the functions used to sustain relationships and obtain innovation can differ. This remains unexplored. Thus, comparing the functions used with different intentions can be a fruitful avenue for further research.

6. Conclusion

To explore how operational versus strategic leaders navigate paradoxical tensions in coopetition to foster innovation, I conducted a qualitative case study. I found that leaders experience persistent paradoxical tensions and emotional ambivalence, but they perform different functions at the operational versus strategic levels to pursue task performance and retain relationships at the same time. These functions can be used by either strategic managers or project managers to apply innovation strategy within a coopetitive interfirm relationship in practice. Taking both cognitive and affective perspectives, my study provides new insights for future research about the mechanisms of interaction between operational and strategic leaders in coopetition to foster innovation. The functional leadership perspective is constructive for future research, as well as for differentiating the leadership used to retain relationships and facilitate innovation.

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Appendix

Appendix A - Consent Form

<div align="center">Consent Form for Informant</div>

Radical technology-driven change in established firms (RaCE) is a joint program between NHH and SNF. As a part of RaCE project, I invite you to participate in an interview lasting 45 minutes online.

The interview will be recorded via Teams and then transcribed. Notes will be taken. Participation as an informant is voluntary and you are able to withdraw at any time. All private information will be removed to enable ethical processing of data. Only informants and researchers including Sizhu Chen and Synnove Nesse, have access to materials to conduct the research. The confidentiality agreement has been signed by Sizhu Chen. Notice: If a follow-up study needs to be carried out, you would receive new invitation to participate.

By signing the consent form, you consent to participate in the research. If you have any questions, please contact me by the address below.

Kind regards,

Sizhu Chen
Sizhu.Chen@student.nhh.no
RaCE Program for Students, SNF
Department of Strategy and Management, NHH
https://www.nhh.no/en/research-centres/digital-innovation-for-growth/research/race/

Consent form:
"I have read consent form and agree to participate in this study."

Signature: Date:

Appendix B – Interview Guides

Interview Guide 1

My research aims to answer the question - How do leaders navigate the paradoxical tensions in coopetition to foster innovation? Coopetition means juxtaposition of competition and cooperation in value creation and appropriation. Coopetition create paradox, a contradictory yet interrelated elements that exist simultaneously and persist over time. People engaging in coopetition may experience paradoxical tension. Functional leadership refers to single or several persons, who play leading role, take effective leadership behaviors on either strategic or operational level to foster innovations, under co-opetitive interfirm context permeated with paradoxical tensions. Innovation includes incremental/radical, and sustainable/disruptive innovation.

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1. What is your name and your role in the project?
2. Coopetition:
   (1) Please introduce your project in terms of coopetition.
   (2) What is the timeline from initiation to completion?
3. Paradoxical Tension:
   (1) Have you ever encountered any challenges from the project or relationship?
   (2) Is there any confliction between your role as a board member and a senior executive?
   (3) Please describe your feelings associated with such challenges.
   (4) Why do you sustain positive/negative feelings at the same time? How do you deal with your own emotions?
   (5) What are the impacts of these emotions on the project and relationship between firms?
   (6) How does your colleagues, collaborators or partners' feel about coopetition, especially the simultaneity of competition? How do you deal with your team members' emotions?
   (7) What are the impacts of their emotions of the project and coopetition?
   (8) What is the role and functions of senior executive or TMT leaders in this project?

(9) How do TMT leaders' feel about coopetition, especially the competition in coopetition? How do TMT leaders manage paradoxical tension between firms in this project, especially regarding the competition part?

4. Functional Leadership

(1) How do you assess your role as a leader in this project?

(2) What capabilities are useful to sustain coopetition relationship?

(3) What capabilities are helpful to enable progression of project?

(4) How do you deal with paradoxical tension to sustain relationship?

(5) How do you deal with paradoxical tension to progress the project?

(6) Whether the abilities required at different phases of coopetition are different? Can you explain it?

(10) Whether any informal leader has contributed to leadership in daily work or operational process?

(11 How do you assess the function of trust in terms of achieve the goal of this project and sustain the coopetition relationship?

(12 From your perspective, how could successfully build trust with your team members and firms?

(13 What are the factors that may harm the trust building?

5. Innovation

(1) Please introduce your project in terms of innovation.

(2) What factors are important to contribute the success of innovation?

(3) What qualities or capabilities are significant for leaders to successfully foster innovation in coopetition?

6. Open Questions

Interview Guide 2

1. What is your name and your role in the cluster and the fraud detection project?

2. Coopetition:

(1) Please introduce the fraud detection project in terms of coopetition.

(2) What is the timeline of the project from initiation to completion?

(3) What is specialty of this project?

(4) Why does firms decided to join in this project?

(5) What is the role of the cluster in this project?

3. Paradoxical Tension:

(1) Is there any challenges or potential risks in the project?

(2) Is there any conflict between the firms?

(3) How do you assess the quality of the coopetition relationship between firms?

(4) How do you assess the competition between the firms engaging in this project?

(5) What is the role of the cluster in reconciling the tension?

(6) I read some news about this project, whether the public interests will affect the project and coopetition relationship between the firms?

(7) Could you talk more about the agreements between firms and its impact?

(8) How do you think about "time" for the project?

4. Functional Leadership:

(1) How do Finance Innovation maintain the coopetition relationship?

(2) How do Finance Innovation ensure the progression of the project?

(3) How do firms handle the tensions?

(4) What factors contribute to the success of project?

(5) What factors contribute to the maintenance of coopetition relationship?

(6) What about the trust between the firms?

5. Innovation

(1) From your perspective, how do you assess the project in terms of innovation?

6. Open Questions

Who is the top leader of this project in each firm?

Interview Guide 3

1. Coopetition:

    (1) How did you obtain a good understanding of coopetition?

    (2) How do you think about the "trade-off" within the project as a leader?

    (3) How do you think about the fairness in the project (equal role of firm)?

    (4) How did you interact with third-party?

    (5) How do you assess the neutral role of these third-party in dealing with conflictions or delivering solutions?

    (6) Can you explain more about the "constructive meetings" in problem solving regarding people's body language or facial expression?

    (7) Regarding competition side, even all firms reduce the cost, Frende is impossible to capture more value? Because you mentioned that Frende is building strategic competency and learning from this project.

    (8) Can you explain more about separation and integration regarding competition?

2. Paradoxical Tension:

    (1) This is not full-time project for each employee, whether allocating time between projects create tension?

    (2) As you said, both positive and negative emotions are surrounding goal achievement, whether your team obtain a shared perception of goal achievement?

    (3) What did you do to enable your team members have common perception?

    (4) How did you handle these emotions to reach the goal?

    (5) How did you help your employees to decrease their confusion and to be rational or adaptable?

    (6) Can you talk more about how does your superior interact with you to handle your negative emotion and solve problems?

3. Functional Leadership

    (1) Can you talk more about how you leverage the resource to support the project?

    (2) Can you talk more about "learn from doing" since you mentioned that people learn from teammates, and this is an ongoing project?

    (3) How did you keep balance between sharing knowledge, information and data, while avoid misusing data?

(4) How do you think about the relationship between legal agreements and trust building?

(5) How did you motivate your teammates as an enabler? What about the management tools such as KPI or bonus?

(6) From your perspective, how can you help your firm capture value in this project? What about the CEO since he is also a board member of FI?

(7) About the objective and subjective feelings, do you imply that to be rational, you emphasize on the objective feeling to see what does people do while ignore the subjective feeling regarding what kind of people he/she is?

Appendix C – Secondary Data

Public information sourced from webpage of cluster:

https://financeinnovation.no/news/stories/insurance-fraud-project-enters-development-phase

https://financeinnovation.no/innovation-projects/detection-of-insurance-fraud

https://financeinnovation.no/innovation-projects

News release sources from Internet:

https://m.finanswatch.no/article/12518284

https://m.finanswatch.no/article/12518133

https://finanswatch.no/nyheter/forsikring/article12518910.ece?utm_campaign=Finan
Watch%20Lunsj&utm_content=2020-10-
29&utm_medium=email&utm_source=finanswatch_no

https://e24.no/shared/privatoekonomi/i/JJodw7/tre-forsikringskjemper-satser-paa-
kunstig-intelligens-for-aa-avsloere-
juksere?pwsig=b650f2353738ea2535c9d3d1ba0eacb7d42f9c8478bab61aa8dab31c5b
6120fa_1604385349_QXRsZQ==

https://nordrenett.no/forsikringsselskap-samarbeider-mot
forsikringssvindel/Type/NTB/19.1.57055

Homepage of insurance companies:

https://www.webstep.no/2020/12/07/ny-teknologi-oppdager-forsikringssvindel/

https://www.frende.no/om-oss/

https://www.tryg.no/bedrift/index.html

Social media platforms:

https://www.facebook.com/financeinnovation

Appendix D – Finance Innovation Members

Fintech Solution Provider	Accountflow/ Ambita/ Aptic/ Digital Revisor/ Guilty/ Highcharts/ Iver/ +NEW/ Nordic QuantLab/ Quantfol.io/ Skyttel/ Signicat/ Strise/ Systor vest/ TietoEvry/ T-rank/ Travis/ Zdata/ ZenFinans
Fintech Product Provider	Apparat/ Axeptia/ Bulder Bank/ Bueno/ Diggecard/ Goscore/ Horde/ Insaver/ Kron/ Kravia/ Lifeplanner/ Nets/ Powerzeek/ Quantik/ Roomr/ Sbanken/ Stacc/ TicketCo/ Tink/ Tjommi/ Uni micro/ Vipps/
Financial Services Provider	DNB/ Balder Betaling/ Dealflow/ EGD Capital/ DSS/ / Eyesclear/ Fana Sparebank/ Farvatn/ Finanstipset/ Frende Forsikring/ Norne Securities/ Oslo Philanthropic Exchange/ Sparebanken sogn og Fjordane/ Sparebanken Vest/ Sparebank1SR-bank/ Tripod/ Tryg
Consultancy	Avo Consulting/ Deloitte/ KPMG/ PwC/ Umoe Consulting / Capgemini/ Cicero Consulting/ Experis/ Falck Advisory/ Itera/ Knowit/ Visto/ Webstep/
Academy Institution	BI/ NHH/ HVL/ UiB/ Noroff
Non-Profit Organization	Gi Gaven Videre/

Appendix E – Operational Leaders' Functions

Relational-Oriented Functions	Subfunctions and Quote Examples
Regulating Emotions of Self	1) <u>Masking Negative Emotions</u> "We don't see that it is [tension]. Yeah, the trade-off is hopefully good. We're not giving away anything too sensitive in terms of competition." "I don't know. Tense is maybe not strong word, but I don't know. It's not but it's not like. From my observation, it's not in tension between the companies actually."
	2) <u>Framing through positive emotions</u> "And you can see the results and things like that. And I know that all the initial work with the feature engineering, data engineering and all these things that will result in something that motivates me very much that is to see the results of the machine learning model. […] I think that the whole course of this is also very motivating. So you feel that you're working on something that you have a really good reason to work on. So I think that's also one of the motivating parts."
Regulating the Emotions of Others	1) <u>Exposing emotions in others</u> "So I think the main thing is exposure. […] giving them the opportunity to always ask a question or having a platform chase question." "Yeah, that's a it's a like almost like a social media for programmers. […] And you can type in messages, and then all parts of that challenge will we'll see that so that you can also communicate, almost like on teams like your right to direct messages to a person. […] So yeah, so we have very effective ways of communicating."
	2) <u>Enhancing positive emotions in others</u> "we didn't get entry into the regulatory sandbox […] so that was a disappointment. But then underlining that we are actually doing a lot of stuff where we build this architecture […] So kind of keeping in them in the loop with positive messages and a feeling that stuff is happening even though it's happening slower than they would have."
Regulating the Emotions of Other Parties	1) <u>Exchanging ambivalent emotions</u> "I think we had quite open dialogue together actually trying to kind of identify what was OK or not OK, and also share any kind of the considerations where we're doing." "I think just openness, untangling what you think and what you want to do, and just this discuss any issues that must arise on the way."

	2) <u>Building trust by creating emotionally cooperative climate</u>
	"having a neutral space in the middle, a neutral actor, who's not in it for economic incentive, who has interest of actually getting the project of the ground and having the interest of their members in the middle, who is also backed by a state through Innovation Norge. […] I think that leads some credibility and some neutral nice to the project." "[Third party E] is more on the outside of it but it gives credibility for us that we have gone through [Third party E] before we put out something for them to consider. So [Third party E] has a pretty good brand in terms of legal knowledge. So I think that leads a bit of credibility to us. It gives a bit of professional sheen or filter."
Task-Performance Oriented Functions	Subfunctions and Quote Examples
A Paradox-Blurring Mindset	1) <u>Being Aware of Paradox</u> "I doubt that companies would have been able to… like one of the insurance companies have had this idea, I think that would be a lot more obstacles with them asking the other companies to join in because then it would be seen as if Insurer A, then it would be seen as Insurer A's solution, right?" "And the idea was, once we get enough critical mass, the other companies would have to join, because we will kind of outgrow them in terms of market share and volume."
	2) <u>Understanding Paradox</u> "But one other potential effect of this is that maybe other insurance companies will also join us because they see that yeah, these three can collaborate and get all of these three companies will get access to a lot of data on fraud, which we don't have. So if another company then joins in, then it will benefit all of us, and also the big companies." "But we have both or the company lawyers have been looking into that. And we are also in dialogue with a ***, which is the Norwegian instance of which controls, everything is in accordance to the rules. So I think those kind of challenges will be overcome. So that's, I think that's good. But except for that, I think that the participants from each company are quite positive to this."
	3) <u>Avoiding Paradox</u> "But I can't imagine that, from our side that we will think that we lose any competition power on this." "I don't see it as that much of a competition. […] It's not directly focused on things […] But when it comes

	to fraud, you're not competing or that much on finding the fraud. It's in no company's interest that other companies have a lot of fraud […] So this even though I said in the start that there's not directly competition on this issue, there is, of course, some competition." "And I think, especially on fraud, which is a common problem for all insurance companies, if we are improving our fraud models, all of a sudden, that won't, I don't think that will change the competition between the companies."
Creating Values in Paradoxes	1) <u>Transcending paradoxical tensions</u> "Then the other thing is giving regular updates with and maybe underlining things that are happening behind the scenes. So I recently sent out a status email." "So I think just by having the stamina, solve the whole problem if as long as you you're into it, and you do your part and you use your time the discussion, some things will, will solve itself and that's what happens." 2) <u>Seeing Operational Decisions as Non-paradoxical</u> "Yes, that's decision for instance. First, coming up with the suggestion. Thinking, Okay, these points, we need this, this, this, this, and then discuss the discussing with my colleagues. Does this seem reasonable or not? Am I missing something? Not getting feedback from that. And then making a decision based on that […]." 3) <u>Protecting non-paradoxical interests of firm</u> "So I'm quite convinced that we have learned a lot on the legal side now. […] And how to formulate; and what is needed and so on that that would smooth sort of a restart of or starting again. I think this we know now, a lot of what needs to be in place without being specific." "I think there is an element of learning for all of the companies involved in this so. But maybe for us being the smallest company and that's even more important. For us it's one of the key reasons for being in a project like this is that even if it fails, it won't have been for nothing because we gain knowledge and insight into how to build this kind of solution through usable in other areas of the business."
Mobilizing Resources to Navigate Paradoxical Tensions	1) <u>Paradox involvement of internal resources</u> "So we have some knowledge transfer meetings internally, where we tell about the progress and the project." 2) <u>Paradox involvement of external resources</u>

	"So I have a very close collaboration with *** from [Third party D]. So he is the project lead there and I'm the project lead here so that's been really good. […] He can keep an eye on what's happening on the technical side, on the risk assessments they have and stuffs and then we can go to [Third party E] together and ask some specific questions that we need to answer on. It's kind of like you have two pillars instead of one to carry the load, right?" "It's been very valuable for me as a cluster person who's not on the technical side to have a technical part on [Third party D]. So they take care of the actual technical work and having them as a sparring partner so that's very important. If it had only been us as a cluster, for first of all because we don't have any data scientists."

Appendix F – Strategic Leaders' Functions

Relational-Oriented Functions	Subfunctions and Quote Examples
Regulating Emotions of the Self	1) <u>Acknowledging emotional ambivalence</u> "I think it's sort of a professional relationship. We talk to each other and sort of, yeah, we can have discussions on, yeah, on topics that are of interest, I think."
	2) <u>Framing through positive emotions</u> "You know just to practice saying "I was strong", makes it much easier to do it when it is required. So just you know practice." "So I've always been confident on where I have the other companies. So what they think and what they what they mean. And I also think that they have gotten a pretty clear view of sort of my opinions and company's strategy in this work."
Regulating the Emotions of Others	1) <u>Attending to emotions in others</u> "That they are voicing, right? So give them a clear voice in sort of meetings and discussions. It's often hard, you know, for an engineer that sits with a with a bad feeling and to voice it on a meeting with 20 different people and so sometimes I voiced issues for them and also, you know, sort of make them introduction their problem and then they could elaborate […]"
	2) <u>Neutralizing Emotions in others</u> "[…] but also to make the rest of the rest of the corporation aware of those risks. […] and then, you know, on the sort of far side of things, talk to them and say this is going to be fine. Be patient. We will get there."
Regulating the Emotions of Other Parties	1) <u>Understanding ambivalent concerns of other parties</u> "Oh, it's basically I think, how do you try to understand the other parts' arguments. You try to listen first. And then see these arguments, you know, confirmed that with the, what we call it, the structures, the law structures. […] I basically listen." "Because sometimes you take a position and you have a kind of blurred view about that position yourself. […] Now I understand your position and I kind of taken a decision that. I think you really have to investigate the other's position and ask. […] I'm trying to understand the other person's position and kind of feelings but by ask."
	2) <u>Reconciling emotional ambivalence with other parties</u> "But it's also the sort of meeting people, talking to them having a cup of coffee or a beer or something and sort of getting to know each other a bit, sort of that sort of just to take down the barriers."
Task-Performance Oriented Functions	Subfunctions and Quote Examples
A Transparadox Mindset	1) <u>Being Aware of paradox</u> "I think it's happening in the same time. We're competing against each other all the time."

	"Yeah, I see a lot of challenges this, you know, the, the, the one thing is the legal challenges. This is quite high, actually. Because there is, you know, there is the, the conflict between, you know, compete and share."
	2) Understanding Paradox "And there's also an interesting case here between small and large companies. The larger companies, they provide a lot more data, obviously. So the net effect of this cooperation is smaller on our models than it is on smaller companies that, you know, *** So there's obviously that the upside for this project is the large upside is Insurer B's." "I think we are looking at this from two different angles. One is the sort of direct value that a project like this can have in order to have better solutions for detecting fraud. The other is from a pure learning perspective […] Yeah, we're doing we're building competency that we think of as strategic for the future. So that's the other important aspect."
	3) Embracing Paradox "So I think everyone will understand, at least after a while, that if no one cheers anything, there's no there's no collaboration, there is no, there is no bigger cake to kind of, to kind of divide […] However, I think everyone also needs to, kind of not just value creation mode, but also value capture mode. […] I think that's very important for them to kind of keep building the cake and making it bigger."
Capturing Values in Paradoxes	**1) Transcending paradoxical tensions** "And so be more on top of it and see the larger picture instead of digging into the details, because that's, you have domain experts on all the different disciplines. But the leader should be above that and see the larger picture on who should dig into the different problems." "Well, then you just basically have to disentangle the problem into smaller and smaller pieces. Confront each piece, for example, with yeah with the law and everything."
	2) Regarding strategic decisions as paradoxical "And then you will you also need to sort of put the decisions that you do in context of why. So you have to have a tactical or strategic reason for sort of "why are we doing this? Why are we not doing this? Why are we letting this go? Why are we pushing for this?" Especially internally because they are no all management are sort of looking at the bush. When is this project going to be done, right? So there is a there is a wireless taking so long, right? What problems is this?"
	3) Protecting paradoxical interests of firms "So, and obviously, within the insurance industry, in Bergen, lots of people who know each other, even if they work at different companies, they might have worked together in the past or things like that. So even if we're sort of very sort of there's quite tough competition when it comes to selling insurance products. And we're all sort of trying to keep our,

	our tariffs, secret and our sort of pricing, pricing algorithms and things like that." "And, and that might be one reason why things are lagging a bit. Because we are all of the companies are in a comfortable state at the moment. Right. And if we go into the innovation phase, then we don't know what can happen." "I'm sort of waiting on, on sort of the bit more like technical things in order to get into productions. And then we will get we will be able to see what did it actually so that then we can sort of confirm or confirm our hypothesis. And then you know, you can build, use cases or sort of, you know, try to, to push to try to move in in or at least, you know, orient yourself and find a good direction to move forward."
Mobilizing Resources to Navigate Paradoxical Tensions	1) <u>Preparing to manage paradoxical tensions</u> "But of course, my leader is very supportive for this project on if there is anything I would need, he would be happy to support us." "Yeah, we have semi regular status meetings where we discuss with *** and some other also from business side. Discuss the progress, discuss time and resources that we should arrive basically. I should dedicate to this."
	2) <u>Aligning resources to manage paradoxical tensions</u> "And then I have supported them also been tightly involved in actually making resources available and setting the team together." "Before I think that's just assign the right task to the right people and make the right people talk to each other to solve the tasks."
	3) <u>Retaining adaptability to manage paradoxical tensions</u> "So other qualities would be sort of being proactive, able to sort of quickly adapt, because things change very quickly. […] you're talking to the data scientists, because we're working on building a model, but then requirement comes up, or we should deploy this model to Amazon Web Services. And then you need to set up an account and sort of get some infrastructure in place. And you need to quickly sort of be able to get some IT resources that can help you from somewhere else in the organization. So without sort of having very long decision, sort of lights for things like that."

Appendix G – Comparison of Functional Leadership Roles

Operational Leads Functions		Strategic Leads Functions	
Relational-Oriented Functions			
Regulating Emotions of the Self	- Masking negative emotions - Framing through positive emotions	Regulating Emotions of the Self	- Acknowledging emotional ambivalence - Framing through positive emotions
Regulating the Emotions of Others	- Exposing emotions in others - Enhancing positive emotions in others	Regulating the Emotions of Others	- Attending to emotions in others - Neutralizing emotions in others
Regulating the Emotions of Other Parties	- Exchanging ambivalent emotions - Building trust by creating emotionally cooperative climate	Regulating the Emotions of Other Parties	- Understanding ambivalent concerns of other parties - Reconciling emotional ambivalence of other parties
Task-Performance-Oriented Functions			
A Paradox-Blurring Mindset	- Awareness of paradox - Understanding paradox - Avoiding paradox	A Transparadox Mindset	- Awareness of paradox - Understanding paradox - Embracing paradox
Creating Values in Paradoxes	- Transcending paradoxical tensions - Regarding operational decisions as non-paradoxical - Protecting non-paradoxical interests of firms	Capturing Values in Paradoxes	- Transcending paradoxical tensions - Regarding strategic decisions as paradoxical - Protecting paradoxical interests of firms
Mobilizing Resources to Navigate Paradoxical Tensions	- Paradox involvement of internal resources - Paradox involvement of external resources	Mobilizing Resources to Navigate Paradoxical Tensions	- Preparing to manage paradoxical tensions - Aligning resources to manage paradoxical tensions - Retaining adaptability to manage paradoxical tensions

Leadership plays an important role in a coopetitive innovation strategy. However, the coopetitive interfirm relationship is paradoxical as it involves competing and cooperating simultaneously, where leaders are expected to navigate the paradoxical tensions for success. The current literature has examined this relationship but has not focused on the role of leadership. Particularly, to date, limited research has compared the functions performed by leaders at different levels in an organization. By examining how strategic versus operational leaders navigate paradoxical tensions in coopetitive relations, this thesis begins to bridge this gap. To explore this I use an explorative, case-based qualitative study in the insurance industry involving three companies pursuing a fraud detection project within the Finance Innovation Cluster. Using semistructured interviews, I examine operational and strategic leadership functions using grounded theory and thematic mapping strategies. The findings show that both strategic and operational leaders navigate paradoxical tensions and the emotional ambivalence arising from it, as experienced by the leaders, their subordinates, and in their coopetitive relationships. However, there is a difference in how leaders act to manage this. While strategic leaders tend to be aware of paradoxes by working to neutralize the emotional ambivalence of coopetition, operational leaders rely on enhancing the positive emotions present in emotional ambivalence. Further, strategic leaders are devoted to capturing value, using a transparadox mindset, whereas operational leaders attempt to create value using a paradox-blurring mindset. The findings contribute to the understanding of leadership roles, as well as how leaders at different levels navigate and balance paradoxical tensions in coopetitive interfirm relationships different ways to attempt to succeed in fostering innovation.

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