

Leadership effectiveness in managing the coopetition paradox

A mixed study on leadership's behavior
and the role of trust

Dalia Spadaccini

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by

Dalia Spadaccini

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To my parents M. and M., for believing and supporting me in every step of my life. Thank you for living with me everything, celebrating my successes and being part of each challenge I encounter. Without you, I would have not been able to be what I am now.

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1. Introduction

Coopetition is an interorganizational relationship that integrates the two notions of “cooperation” and “competition”. Nowadays, this strategy has become crucial to help companies thrive in the market in which they are based, and more and more direct competitors are partnering together to bring a substantial contribution to the sectors in which they operate. This kind of relationship implies the simultaneous pursuit of two contradictory logics difficult to coordinate that could provoke conflicts at different levels: between rivals, within the same firms and at an individual level. Leaders, in this context, detain a fundamental role since they should be able to deal with this paradoxical situation and possess a specific mindset to accept the two strategies of cooperation and competition at the same time. Another fundamental variable in the coopetition setting is trust. The lack of this notion could compromise the success of the overall project.

In the literature, even if a growing number of papers have been developed around the coopetition strategy, there is a concrete lack of clarity regarding how to manage the coopetition paradox, and especially, on the figure of the leaders in dealing with these conflicts. Considering this, the following master thesis aims to contribute to the understanding of how leaders can successfully manage the paradoxical tensions in coopetition. In particular, the objective is to analyze and deepen the most effective leadership style and conflict management approach leaders need to adopt to deal with conflicts at an interfirm and intrafirm level, giving future managers useful insights on the mentality required to make a coopetition project successful. Furthermore, we aim to measure the role of trust and its influence on the choice of the most effective behavior.

This project consists of a combination of two different studies, Study 1 (The qualitative approach) and Study 2 (The Quantitative approach), developed to inform the following research questions. More specifically, Study 1 aims to deepen into the coopetition strategy obtaining empirical observation from the literature review as well as to refine this first research question:

“How can leaders navigate the coopetition paradox increasing the chance to manage tensions at the team level and amongst partners?”

Study 2, on the other hand, has been conducted to test the hypotheses identified from the first study and obtain statistical inferences to generalize our findings. More specifically, it aims to answer these two and specific research questions:

“Which is the most effective leadership style leaders should adopt to manage coopetitive tensions arising at the team level?”

“Which is the most effective conflict management approach leaders should adopt to manage coopetitive tensions arising amongst partners and which is the role of trust in the choice of that behavior?”

This thesis initially proposes a review of the relevant literature to analyze the fundamental topics of this research project: coopetition and its paradox, leadership and its frameworks, and trust. Afterward, after a general and short chapter describing the methodology employed in this inquiry, I have divided the overall project into two different studies. Study 1 comprehends the qualitative analysis. It involves the description of the Norwegian case study “*Detection of insurance fraud*”, seven interviews with leaders and team members of this project, and the development of two hypotheses. Study 2, instead, is focused on the quantitative analysis. Specifically, it comprehends the creation of two survey experiments developed to test the predictions. After the collection of quantitative data, statistical analyses like one-way ANOVAs and linear and multiple regression are performed thanks to the utilization of the software SPSS. Considering this description, the two studies have been conducted following specific objectives. The first inquiry has been pursued with the objective to deepen into the coopetition strategy and find empirical observation of the interested literature in the Norwegian context. Following, a set of hypotheses has been developed considering both previous studies and the hypotheses. Afterward, the second analysis has been conducted to obtain statistical inferences and generalize the findings.

Hence, as the reader can understand, the two studies are strictly link together and Study 2 is built on the first one. Finally, a discussion of the findings together with ethical considerations, limitations, and future implications of this study are exposed. Overall, this master thesis wants to bring a contribution and fill a relevant gap in the coopetition literature, but the main implication can be depicted from a practical point of view. Indeed, this study gives insights to future leaders and managers on the effective approach to adopt in order to mitigate possible tensions arising amongst partners and at the team level following a strategy that would be employed more and more in the next future.

2. Literature review

This section introduces the concept of coopetition and its paradox, leadership styles, conflict management behaviors, and the role of trust. Coopetition is a term that comes out from the corporate partnership literature, and it is acquiring more and more importance amongst researchers.

2.1 Coopetition

Extant literature has studied inter-firm interdependencies according to two streams of research: competition and cooperation. A third paradigm, coopetition, has been originated as the precise combination of these first two models. The term coopetition has made its first appearance thanks to the work of Branderburger and Nalebuff (1996), who defined it in the game theory setting as the simultaneous pursuit of cooperation and competition between two or more companies competing in the global market.

Table 1: Cooperation, Competition, Coopetition definition (Source: Oxford languages)

Strategy	Definition
Cooperation	<i>"The action or process of working together to the same end"</i>
Competition	<i>"The activity or condition of striving to gain or win something by defeating or establishing superiority over others"</i>
Coopetition	<i>"Collaboration between business competitors, in the hope of mutually beneficial results"</i>

According to Bengtsson and Kock (1999), the selection of one of these three models leans on the necessity of companies to find external resources and maintain or acquire a certain position within the market in which they operate. Competition implies a zero-sum game since one company's gain corresponds to another company's loss. In this context, actors possess divergent interests and act exclusively for their returns at the expense of the others. Cooperation implies collaboration, meaning gathering resources, skills, and capabilities to acquire mutual economic advantages in a positive-sum game setting. Both archetypes, however, detain criticism. As Branderburger and Nalebuff (1996) explain, while competition

does not take into consideration the possibility of a win-win condition in a rival market, cooperation does not consider a possible competitive situation that could occur over time. From these critics, coopetition has been originated and it is identified as a game structure where rivals possess partially convergent overlapping interests. Gnyawali et al. (2007) defined coopetition using a metaphor since coopetition is cooperation when pooling together resources to bake a pie, but competition to obtain the biggest slice of the pie. This conflictual situation could bring some risks. For example, coopetition partners could not equally share knowledge amongst themselves or could be more exposed to shocks in the market in which they work; all situations that could create tensions amongst partners.

Nowadays, more and more direct competitors engage in partnership agreements characterized by coopetition. There is proof in many sectors: ICT, healthcare, air transport, food, and the automotive industry (Ritala, 2011). One of the major examples is the case of Samsung and Sony, rivals in the electronic market, who partnered to develop together LCD panels for flat-screen TVs. More recent cases are, instead, Apple and Google working together to create contact-tracing technologies for Covid-19, or Amazon giving rival sellers access to its Marketplace, customers, warehouses and, services (Branderburg and Nalebuff, 2021).

Several reasons prompt companies to pursue the coopetition strategy: to acquire inputs like technology and human resources or to obtain specific outputs like increasing their market share (Luo, 2006); to find new solutions to stay competitive (Le Roy and Guillotreau, 2010); to improve quality and effectiveness of their products in the market; to innovate; to influence a third party; to obtain economies of scope; to influence a third actor and, finally, to impose certain standards within the environment in which they operate. Coopetition can lead to advantages of both competition and collaboration, but its paradoxical nature is extremely difficult to comprehend and manage. As such, this strategy could end in only negative outcomes for all the actors involved (Bengtsson, Raza-Ullah, and Vanyushyn, 2015). However, the main underlying logic, following the studies of different authors, that encourage companies to enter coopetition is the achievement of common benefits and the capture of private ones as well as the acquisition of advantages of both competition (develop new products and markets) and cooperation (development) at the same time (Bengtsson and Kock, 2000; Dagnino and Padula, 2002; Gnyawali, He & Madhavan, 2008).

The main drivers to be engaged in a coopetition relationship, instead, are divided between exogenous and endogenous. The exogenous drivers comprehend all forces coming from

outside the relationship between companies, the environmental sources, which identify changes in the competitive environment which obligate rivals to find alternative solutions to last in their market. The endogenous drivers, on the other hand, include the knowledge profile of the members which is peculiar to every single company.

Coopetition, as stated before, is a recent topic in the literature that has been studied from different perspectives: intra-organizational (Strese et al., 2014; Tsai, 2002), inter-organizational (Bengtsson and Kock, 2001), and individual (Hatcher and Ross, 1991; Smith and Bell, 1992). This distinction has been identified by Dagnino and Padula (2005) through another lens. They identify two forms of coopetition (dyadic and network) at three different levels: macro (referring to clusters of firms or firms in different markets), meso (firms with an established vertical or horizontal relationship in the same industry), and micro (functions and divisions within the same corporation). In addition, coopetition can also be horizontal or vertical (Chain et al, 2019). Vertical coopetition is the type that occurs considering the supply chain world of buyers and sellers, while the horizontal one originates in the market between competitors. Gnyawali, He, and Madhavan (2008) furthermore, identified different types of coopetition according to four variables: business relationships, numbers of actors involved, level of the analysis, and locus of cooperation and competition. Nonetheless, these are only some of the most important classifications of coopetition since different studies have been conducted to classify this strategy taking into consideration other variables.

Table 2: Summary of Coopetition level of analysis

Author	Coopetition level of analysis
<i>Strese et al., 2014; Tsai, 2002</i>	Interorganizational
<i>Bengtsson and Kock, 2001</i>	Intraorganizational
<i>Hatcher and Ross, 1991; Smith and Bell, 1992</i>	Individual
<i>Dagnino and Padula (2005)</i>	Macro Meso Micro
<i>Chain et al, 2019</i>	Vertical Horizontal
Gnyawali, He and Madhavan (2008)	Business relationship Numbers of actors involved Level of the analysis Locus of cooperation and competition

2.2 Coopetition paradox

The term coopetition implies the simultaneous pursuit of two different logics difficult to coordinate: cooperation and competition. It is the experience of these contradictory moments that makes this concept paradoxical and interesting to study (Seepana, Paulraj & Huq, 2020). A paradox is defined as “*contradictory yet interrelated elements that exist simultaneously and persist over time*” and always remain unexpressed until some specific circumstances such as plurality (competitive pressure from companies within the market), change (needs of innovating and developing new capabilities), and scarcity (lack of resources) appear. The literature identifies four kinds of paradoxes: learning, belonging, organizing, and performing. Learning paradoxes involves changes and innovation. The belonging ones originate conflictual situations between individuals, while the performing between competitors since they possess various strategies and objectives. Finally, the organizing paradox involves the

creation of new frameworks and processes to achieve specific objectives and the coopetition paradox belongs to this last category (Smith and Lewis, 2011).

The actors engaged in the coopetition project perform activities to create common value, follow collective interests, and share benefits. At the same time, they try to capture private benefits following the competition structure. This paradoxical connection is called the “*coopetition paradox*” and, according to Raza-Ullah, Bengtsson, and Kock (2012), three main factors originate this phenomenon: industrial, relational, and firm-specific. The first factor is connected to the necessity of the firms to enter in coopetition work relationships with other firms in their market to make quickly innovation or refine existing products due to external forces such as shortening the life cycle of products, sharing R&D costs, and making technological advancements. Relational drivers are, instead, linked to the relationships amongst companies in the market that feel the pressure to coopete for i) similar competitive objectives, ii) maturity of the market, iii) uniformity amongst firms, and iv) minor resource dependence. In this case, companies are forced to coopete since their strategies, goals, and products’ portfolio has become so intersecting that this similarity poses the risk of competitive threat and opportunistic behaviors. Finally, firm-specific factors are associated with a firm’s specific resources, strategy, and perceived vulnerability. Hence, these three variables (industrial, relation and firm-specific) encourage and obligate companies to both collaborate even if they are competitors, and to compete while they are partners.

This paradoxical relationship originates from different tensions at different levels. Tensions are defined as “*contradictory yet interrelated elements experienced by organizational actors*”, while paradoxical tensions are “*cognitively and socially constructed polarities that mask the simultaneity of conflicting truths*”. A higher level of tension is linked to a lower success of the coopetitive relationship (Raza-Ullah, 2018) and can affect negatively the morale of the team/organization. Team members can have at the same time competitive and collaborative objectives: this means that they can deal with tensions both cooperatively and competitively (Zhang and Tjosvold, 2011). If not managed correctly, paradoxical tensions can offset the positive results of the relationships and encourage conflicts (Schad et al, 2016). Nonetheless, tensions cannot be considered following only a pessimistic logic since conflicts can bring new ideas and methods advantages to all the parties involved in the project (Sanz et. al). According to Lewis (2000) and Smith and Berg (1986), tensions are a double-edged sword since they have the potential to spur innovation and performance, but at the same time provoke anxiety, stress, and inefficient resistance. Furthermore, they prevent the stagnation of firms, encourage

innovation, provide a medium through which tensions and consequently solutions are identified, let firms better understand issues and trends that their market experiences, and use network resources and energies to solve common problems (Bradford, Stringfellow & Weitz, 2003).

There are two main possibilities according to which coopetitive tensions can originate: firms-competitors that a certain point understands they need to cooperate, or collaborating firms acknowledge that they need to compete to stay in the market.

Bengtsson et al. (2015) classify tensions according to two dimensions: internal or external. The former type comprehends tensions encountered by the organization's members and within the organization (intraorganizational); the latter, instead, involved all types of conflicts that could arise from the connection with partners (interorganizational) such as establishing boundaries between shared and protected knowledge. Other authors add to these two types, another level of tension experienced at the individual level (interindividual).

An additional interpretation of conflicts comes from Gnyawali et al. (2015), who added the adjective "felt" to tensions and considered them formed by strain (irritation for the paradoxical situation) and conflict (disharmony with the other actors) as well as divided into dualities and contradictions. Dualities are non-partner issues deep-rooted to three areas: i) value creation vs value appropriation (i.e. creating common value and competing to capture more value than partners engaged in the project. A key issue is knowledge sharing); ii) separation vs integration (i.e. two different principles according to which coopetition can be managed. The separation principle implies dealing with the two moments of competition and cooperation in different times and spaces creating a clear division between them (Bengtsson and Kock, 2000). Integration, instead, consists in merging the two logics (Chen, 2008), and in developing trust, long-term commitment, and coopetition mindset (Fernandez, Le Roy & Gnyawali, 2013). However, it should be mentioned that even if the two moments of competition and collaboration are difficult to coincide, the integration approach is considered the most favorable one (Lado et al, 1997); iii) bridging vs bonding, (i.e. working with competitors always maintaining a certain distance and independence). Contradictions, alternatively, are partners' specific issues and mainly derive from divergence in economic interests, divergence in strategies and approaches, and differences in identities.

Another analyzed interpretation of tensions is proposed by Santolaya-Sanz et al (2016) who feel the need to fill the gap of the management of tensions. They grouped coopetition tensions into three levels, following the division done in precedent studies, that identified the possibility of coopetition relationship in three settings: interorganizational, intraorganizational, and interindividual.

The first group is the most difficult to manage since firms involved in coopetition projects need to work together and try to capture as much as possible from their relationships. Different are the types of tensions that can arise. “Roles” of the actors is an important aspect to consider: companies can have different opinions on some topics and need to define clear responsibilities and boundaries. Other possible coopetitive tensions are the risk of transferring knowledge or confidential information and technological imitation. For example, the insurance companies involved in the coopetition project in Norway (fundamental start-base for this research project), to upgrade the detection of car insurance fraud, needed to agree perfectly on what kind of information they could share and whatnot. They did not only take into consideration GDPR (General Data Protection Regulation) issues, a topic that required a great number of discussions but also, they were cautious of not transferring confidential information that could undermine their competitive position in the market (aspect particularly important for the biggest player in this case). Tensions at the interorganizational level could also originate due to differences in strategies and goals amongst partners, or the power and dependence of one party on another one.

Intraorganizational coopetitive tensions are present amongst different business units within the same company and amongst employees who deal with competitors and face difficulties to consider them as allies. Strese et al. (2015, pg. 43) studied thoroughly the first of the mentioned intra-tensions that he named *cross-functional coopetition*, defined as “*the joint occurrence of cooperation and competition between departments within a firm*”.

Finally, tensions could arise also at an individual level, since people could feel contradictory emotions and find it difficult to deal concurrently with the two opposite logics of cooperation and competition. Different researchers on this topic pay great attention to the concept of *emotional ambivalence*, that is “*the simultaneous holding of positive and negative emotions*”.

Table 3: Type of tensions

Authors	Type of tensions
<i>Bengtsson et al. (2015)</i>	Internal External
<i>Gnyawali et al. (2015)</i> <i>Bengtsson and Kock (2000)</i> <i>Chen, 2008</i> <i>Fernandez, Le Roy & Gnyawali, 2013</i> <i>Lado et al, 1997</i>	Dualities (i) value creation vs value appropriation, ii) separation vs integration, iii) bridging vs bonding) Contradictions
<i>Santolaya-Sanz et al (2016)</i>	Interorganizational Intraorganizational Interindividual

2.3 Managing the coopetition paradox

After having discussed the relevant topic of coopetition, coopetition paradox, and tensions, it is notable to mention that in literature there is not an extensive deepening on how to manage the paradox. Poole and Van de Ven (1989) identified four approaches: opposition, spatial separation, temporal separation, and synthesis. The former method indicates a passive behavior where the paradox is accepted but no actions to solve it are taken. Leaders adopting, instead, spatial or temporal separation divides tensions, respectively, in different units within their organizations or different periods. Finally, the synthesis method deals with the contradictory elements of a paradox simultaneously.

Other streams of researcher identified three different ways to manage paradox: i) accepting (Luscher and Lewis, 2008), ii) accommodating (Eisenhardt and Westcott, 1988; Rotherberg, 1979) and iii) differentiating/integrating (Andriopoulous and Lewis, 2009; Smith and Tushman, 2005). While accepting identifies the willingness of people to live with the paradox and deal with its tensions, accommodating aims at finding a meeting point between conflicting forces. The last strategy involves, instead, two complementary plans of actions where people involved in the paradox on one hand aim to highlight and stress the conflictual elements of a

paradox, while on the other hand, they try to find as many as possible synergies and connections. This last approach is the dynamic model developed by Smith (2014). She identified a dynamic decision-making model, which is a mindset that could help leaders manage a paradox situation. More specifically, according to his view, managers should be able to understand the paradox in the long-term finding sustainable solutions, while, in the short term, capturing synergies between the contradictory elements.

Some research, as explained before, follow the integration or the separation principle. Other studies, instead, address the significance and the necessity of building coopetition management capabilities. These provide a strong moderating effect on managing the coopetition conflicts and maintaining them at a modest level. Furthermore, they impact positively on performance. Researchers in their inquiries have identified numerous types of these capabilities. Gnyawali et al (2014) distinguished between analytical and execution capabilities. Analytical capabilities represent the capacity of the firms to analyze cooperative situations and find solutions to possible conflicts at all levels. Executional capabilities, instead, refer to the concrete ability of the company to manage the tensions and the alliance effectively. Raza-Ullah (2018), referring to the concept of emotional ambivalence, divided capabilities for individuals in emotional (i.e., ability to understand and hold conflict emotions) and balancing (i.e., ability to capture the best results and performance from competition demands). Santolaya-Sanz et al (2016) linked the cooperative capabilities to the dynamic capabilities framework and grouped them in coopetition mindset capabilities (sensing/scanning, partner selection, managers entrepreneurial), coopetition ambidexterity capability (managers, interorganizational learning, and value creation/appropriation), and finally, coopetition transformation capability, meaning interaction and adaption amongst allies.

Thus, the literature mainly focuses on the role of coopetition capabilities. Researchers (Bengtsson, Raza-Ullah and Vanyushyn, 2015; Raza-Ullah, 2018; Santolaya-Sanz, Mora-Valentin, and Ortiz de Urbina Criado, 2016; Kim and Shin, 2017; Raza-Ullah and Bengtsson, 2018; Di Guardo and Galvagno, 2007; Strese et al, 2015; Seepana, Paulraj and Huq, 2020) had paid attention mainly to the skills that companies and people involved in the project should possess to manage the paradox, but there is little about the role of the leaders in managing coopetition conflicts and the kind of leadership style they need to adopt to handle them. Existing frameworks on leadership behaviors as well as the different approaches to managing conflicts have been developed in the literature, but they have not been applied (or not extensively been applied) to the coopetition setting. Management leadership, together with the

development of trust, are considered the most important success factors for a victorious coopetition project (Chin et al, 2008). Hence, the role of the leader, his/her behavior, and his/her ability to handle the coopetition paradox and relative tensions is a fundamental aspect to consider in a cooperative environment. This study aims to bring a substantial contribution to this topic by showing the fundamental role of leaders in conflicts and continues employing two leadership frameworks functional to understand the best managerial approach in such a paradoxical situation at the interorganizational and intraorganizational level.

2.4 Leadership and conflicts

The specific relationship between leaders and followers is based on the interchanges that emerge between the two actors. If leaders can create an environment that is perceived as positive by the subordinates, also the outcomes of this connection are likely to be positive (Slabbert, 2003).

Leaders possess a fundamental role in their team. They need to understand the complex and changing world that their subordinates and organization are facing nowadays (Nanjundeswaraswamy & Swamy, 2014). Leadership can be defined as “*the ability to emphasize the pursuit of goals and motivate others to pursue them as well*” and leaders should detain the “*ability to inspire trust, build relationships, encourage followers*” (Smiley, 2018). Another framework identifies leadership not considering a single human, but as a set of capabilities that certain individuals possess and comprehends four abilities: i) *sensemaking*, finding new possibilities; ii) *relating*, establishing great relationships with all stakeholders within and outside the team; iii) *visioning*, developing a captivating perspective and iv) *inventing*, discovering new ways of works and interactions (Ancona, 2005).

In the context of coopetition, the role of the leader in managing conflicts is even more important since managers need to deal with a paradoxical situation and possess, consequently, a specific mindset to accept the two strategies of cooperation and competition at the same time. Leaders need to explore tensions, interrogate their mental models, find new challenging opportunities and solutions and increase their flexibility. Moreover, effective management of paradoxes is linked to career success, exceptional leadership capabilities, high-performing groups, and organizational performance (Smith and Lewis, 2011).

Leaders can deal with a conflictual context in different ways and the choice of their behavior depends on the degree according to which they possess a paradox mindset (Ingram, Keller, and Smith, 2017). Furthermore, a leader's paradoxical behavior can have a positive impact on his followers (Zhang et al, 2015). Some leaders choose one single strategic choice to reduce internal conflicts and confront external legitimacy, while others prefer seeing conflicts as challenging opportunities from which they can acquire new competencies and foster performance and innovation in their team and organization.

Hence, an important aspect to consider is the ability of principals to manage conflicts and tensions within and outside their team (Guttman, 2004) in a conflictual coopetition context. Some studies indicate that there is a positive relationship between leadership and conflict management (Erzen and Armagan, 2015). Conflicts, as stated before, could occur in a huge range of situations, and can be considered good or bad since they bring the opportunity to develop new possibilities and progress. They represent fundamental aspects to consider taking into account the dynamics in a network since they can influence its performance (Bradford, Stringfellow & Weitz, 2003). Conflict management is one of the major aspects when considering the role of leaders. It is a capability that leaders need to possess not only to foster the success of their organization but also to avoid negative feedbacks which could compromise their credibility. Furthermore, leaders can participate in conflicts in three different ways (Oliver, Potras & Chenevert, 2008). First, they could be straight included in the conflicts; in this case, their management style influences the result. Second, they could be involved partially also calling their subordinates; in this case, they have a mediator function. Finally, they influence tensions due to their leadership styles which could have an impact on the outcome and development of the disputes.

As anticipated, tensions in a coopetition context can emerge at three levels: intraorganizational, interorganizational, and individual level. In this study, I will revise the literature on the first two types of tensions using respectively two streams of research related to leadership styles and management of conflicts: the transformational-transactional-laissez-faire theory, developed by Burns (1979) and Bass (1985), and the Thomas-Kilmann Conflict Mode Instrument (1974).

2.4.1 Transformational, transactional, laissez-faire leadership

In the past, it has been difficult to find studies about leadership style and specifically their efficiency and effectiveness in showing certain behavior for team performance (Bono and Judge, 2003). However, thanks to more recent research, nowadays we know that leaders possess various leadership styles which might influence the overall organizations' success and performance (Nanjundeswaraswamy and Swamy, 2014).

In literature, three types of leadership styles are analyzed: transformational, transactional, and laissez-faire leadership.

Transformational leadership is the approach considered to have a positive effect on team performance since it focuses its attention on the development of subordinates as well as their necessities. This type of manager encourages followers to develop new solutions, give support to them, and want to create a common vision that triggers emotions and identification of all the subordinates with the rest of the team/organization (Bass and Avolio, 1990). Bass (1985) identified the following dimensions of transformational leadership behavior. First, a transformational leader should possess *idealized influence*, that is the ability to raise a high level of moral and ethical behavior. Second, he/she should be able to inspire his/her followers (*inspirational motivation*) by adopting a future-oriented behavior based on values and ideals. Third, *intellectual stimulation* identifies the role of the leader in establishing high and challenging standards for his team members and hence, stimulating innovation. Lastly, *individual consideration* is the capability of recognizing opportunities for individual growth and coaching and mentoring them. Podsakoff et al (1990), instead, recognized other six dimensions (some overlapping with the previously mentioned study): i) identifying and articulating a vision, ii) providing an appropriate model, iii) fostering the acceptance of group goals, iv) expecting high performance, v) providing individualized support, vi) and encouraging intellectual stimulation.

Transactional leaders, on the other hand, establish relationships with their followers in the form of "trade": leaders compensate their followers if they achieve specific goals and targets. This kind of approach is task-oriented and is based on the concept of rewarding performance by setting clear goals. Even in this approach, Bass defined some fundamental variables: i) *contingent reward*, exchange of resources between leaders and followers; ii) *management by exception – active*, observing performance and taking corrective actions in case of not

achieving standards, iii) *management by exception – passive*, acting only in case of problematic issues.

Lastly, the third kind of leadership style exists laissez-faire leadership. Even if it is allocated amongst the leadership approach, it cannot be entirely considered a leadership style since this kind of leader avoid their management duties.

As far as the ability of managing conflicts is concerned, there is no extant literature addressing the relationship between the three leadership styles outlined above and this capability. Furthermore, there are no studies where this framework is linked to the management of coopetition tensions.

Burns (1978) has defined that transformational leader creates a shared vision that reduces conflicts. Through their leadership style and intellectual stimulation, these leaders are competent to show the benefits of collaboration and encourage team members to solve jointly mutual problems improving the team performance and discouraging competitive behaviors that have a higher probability to achieve low results. Furthermore, they are more careful about subordinates' needs, behavior that further reduces raised tensions.

Transactional leaders, on the other hand, reduce the emotional conflicts of team members. They have a positive relationship with their followers because of setting specific goals and rewarding good performance.

Lastly, laissez-faire leaders prefer that conflicts will be solved by themselves. This kind of approach can be viewed both in a positive or negative view. The action of not solving conflicts could worsen the conflict itself and, for this reason, Olivier, Poltras, and Chenevert (2009) believe that this leadership approach is not linked to the management of conflicts.

2.4.2 Conflict Mode Instrument – TKI

There are no unique behaviors leaders need to pursue in managing conflicts. Firms should train their representatives to make them understand what the best approach to use in specific situations is, because certain leadership styles are more effective at conflict management. The literature has identified different approaches to dealing with conflicts and of the best is the Thomas-Kilmann Conflict Mode Instrument approach. The *TKI* is a framework (1974) to determine the behavior of individuals in handling tensions. This tool is based on two different variables: assertiveness and cooperativeness. The former identifies the degree according to

which people satisfy their needs; the latter instead identifies the degree according to which people satisfy other parties' interests. Starting from these two variables, the TKI framework is developed, and five conflict-handling modes are originated: i) competing, ii) collaborating, iii) compromising, iv) avoiding and v) accommodating.

Competing is a win-lose approach, and it is behavior focused on power. Individuals fight for their rights and try always to win over others. Managers need to be aware that this kind of style can lead to new conflicts, but it could be advantageous in certain kinds of situations.

Collaborating is the opposite of competing. It is a win-win and long-term approach and expresses the attempt to discuss with the other persons/teams/companies to identify solutions able to satisfy everyone's concerns and originate positive outcomes. Attention is paid to the needs of all parties and the needs of the network. The people in the conflicts are seen as allies who are helpful and need to listen, not as competitors. This approach may originate following different kinds of behaviors: exploring a disagreement and understanding other's points of view, solving situations that could have made necessary a competition approach, or finding a common solution for interpersonal problems (Sample, 2008). It is the kind of style that is more likely to produce positive outcomes beneficial for the entire network of companies involved. Bradford et al (2004) discovered that collaboration is the most effective approach to deal with all kinds of conflicts and it would make great sense to study it also in a cooperative environment. However, it is notable to mention that the negative part of this approach is that it requires lots of energy, time, and resources.

Compromising is in the middle between collaborating and competing. It identifies the discovery of a mutual solution that partially satisfies the issues of all people involved in the tension. It is a situation where no one wins or loses but it is an acceptable result for all and requires less energy than the previously mentioned style.

Avoiding express the abandonment and a passive approach to deal with conflicts. People pursuing this kind of behavior refuse to address the tensions. Conflicts can be enlarged since their solution is postponed or leaders hope that they will be solved automatically.

Lastly, accommodating identifies the satisfaction of others' needs, not considering owns. This type of approach can be seen positively since all the actors are willing to establish an environment in which everyone accepts and respect the other's point of view and make concessions to solve common issues. However, normally, it is seen through a negative lens

because it does not consider everyone's needs in solving the issue and this brings a lower desire to continue the relationship in the future amongst parties.

2.5 Trust

As mentioned previously, trust is considered as one of the critical success factors for a coopetition project (Chin et al, 2008) and it is fundamental for both intraorganizational and interorganizational activities. In the absence of trust, it is more likely that conflicts can arise, and this notion is even more important in coopetition where paradoxical tensions originate at different levels. Hence, leaders have an essential role in this setting: they need to build an environment of trust within their company and with the other companies to find the right balance between trust and tensions.

Trust can be defined as “*a psychological state comprising the intention to accept vulnerability based on positive expectations of the intentions or behaviors of another*” (Chai et al, 2019, p.272). Other researchers explain trust as the willingness of an actor to rely on another one in whom he/she has great faith. Both definitions are greatly useful to understand the idea of trust in a coopetition environment. While the former invokes the notion of *credibility* that one partner has the necessary characteristics, requirements, and resources to be involved in the project; the latter, instead, recalls the benevolence in thinking about the good intentions that the other partner has in achieving the common goal. Noteboom (1996) grouped these two conditions in the word of “*reliance*”.

The notion of trust has not been extensively studied in the coopetition context. Researchers mainly focused their attention on three main topics/outcomes: i) better cross-functional performance, ii) better cross-functional radical innovation and iii) better coordination for the development of knowledge (Lascaux, 2019). Only recently, it has acquired value and is conceived, on one hand, as one of the critical success factors of strategic alliances and coopetition relations, while, on the other hand, as one of the outcomes of the coopetition paradox. The lack of trust compromises the cooperative phase of the coopetition, provoking an absence of information sharing and bad performance.

One of the reasons why a coopetition relationship can fail happens when the competition phase overcomes the ties of collaboration amongst partners. Mutual trust is the only condition necessary to pursue an effective collaboration, a condition even more important considering

the closed competitive-collaborative interaction that firms follow. It is exactly this paradoxical situation that makes the creation of mutual trust arduous (Devetag, 2005).

According to McAllister's work, trust is presented in two different forms: cognitive and affective trust. Cognitive trust is characterized by loyalty and proficiency; instead, the affective one involves empathy, affinity, and self-understanding. The level of trust in companies can vary according to different variables such as power dynamics, national or cultural diversities, and business rivalry between partners (Dass & Muthusamy, 2021). Furthermore, this notion brings different advantages. It reinforces not only interconnections, facilitates decision-making, and cuts off monitoring and coordination costs; but also, reduces governance layers, makes the relationship successful and straightforward and increases equally partners' competitiveness.

Trust is fundamental for inter-organizational activities, but especially for inter-partner relationships that require interdependence, threats, and variability. It can be examined as a solid base for conflict resolution, together with commitment, since it encourages self-disclosure behaviors, knowledge and resource sharing, and common problem-solving. In addition, it helps firms deal with risks and uncertainties related to partners' conduct.

When trust is scarce, it is hugely likely that tensions can arise. Conflicts and trust are the critical success factors to enlarge the success of companies in the global environment, but these two co-existing variables need to be controlled jointly in a framework to foster firms' performance.

According to Raza-Ullah and Kostis (2019), trust is linked to coopetition in three different ways: i) it encourages expectations of positive behaviors from coopetitors encouraging better decision and consequently better performance and obligates partners to bring together resources in activities; ii) it stops judgments and encourages people to rely on competitors and iii) it encourages knowledge sharing considering that competitors will not "steal" fundamental information. Trust lets coopetitive firms constructively address conflicts, avoiding escalations and unnecessary costs.

At this point, the role of the leaders becomes fundamental. The success of a coopetition project, as a matter of fact, highly relies on the ability of the managers to coordinate the social, legal, and managerial aspects of the relationships to augment the comprehensiveness, readiness, and similarity between actors. Leaders need to understand the beneficial role of trust

to mitigate all the conflicts and tensions of the coopetition alliances and create a structure that considers conjointly these two notions. Managers need to find the right balance between conflicts and trust, encouraging emotions to solve tensions and maintaining complementarity amongst actors.

3. Methodology

This short section has been developed to give the reader a better understanding of the general design of this thesis. It points out the purpose of this research project as well as gives a general overview of the two different studies developed.

3.1 The research design: purpose, type of data, and research strategy

This research aimed to explain the most appropriate behavior in terms of leadership style and conflict handling modes leaders, involved in coopetition projects, need to adopt to successfully manage tensions at the interorganizational and intraorganizational level. This project would also provide insights on the notion of trust and its correlation with conflicts arising amongst partners, thus contributing to a deepened description of the phenomenon.

The methodology used in this work consisted of a combination of qualitative and quantitative studies. Hence, this can be defined as mixed method approach. It started from the case study “*Detection of fraud insurance*” of three companies in the Finance innovation cluster in Bergen which were coopeting on the detection of insurance fraud by using machine learning models on a large dataset created thanks to the combination of their data. Consequently, both interviews and surveys have been employed to collect primary data. I used interviews to deep dive into the Norwegian case, find areas of interest to study, create the research questions and develop a set of hypotheses. The survey - experiments, instead, have been applied to collect quantitative data to answer the research questions and test the predictions created. These two types of studies were identified in this research project as “*Study 1*” and “*Study 2*”. Study 1 comprehended the Norwegian case study, the interviews, and the hypotheses development. Study 2, instead, involved the collection of quantitative data. An extensive explanation of each section would be provided in the following chapters.

This inquiry can also be defined as a combined study since it merged different purposes: exploratory and descripto-explanatory. It is exploratory because, at the beginning of the analysis, I asked open questions in the interviews to gain insights into the case study and the coopetition area. It is descripto-explanatory since, after having clearly defined the objective of the analysis, it is directed toward an accurate description of the coopetition strategy and, more precisely, on the role of the leader in managing its paradox.

The methodology employed in this study is a combination of both inductive and deductive approaches in the first part, while in the second part it can be defined as a deductive approach. A deductive strategy starts from the theory review and design a research strategy to test the theory. An inductive approach, instead, has the objective to create new meanings from the data gathered (Saunders, Lewis, and Thornhill, 2019). Indeed, in Study 1, starting from the literature review which has revealed an aspect of coopetition on which little is known, I gathered qualitative data through interviews to develop a set of predictions to be tested and to empirically apply previous research. Afterwards, in Study 2, the two survey experiments have been used to collect quantitative data to test the hypotheses developed and gave statistical meaning to them.

The whole project and the collection of data were built on a solid analysis of the literature, and this could be considered as a cross-sectional study since explored a particular phenomenon in a specific timeframe.

4. Study 1 – The qualitative approach

This chapter comprehends the first study of this research project. As it is possible to identify from the title of the section, this part involves the qualitative approach of this thesis. It is divided into three different sections: case study, interviews, and hypotheses development. The development of the hypotheses has been placed in this section since it greatly depends on the case study and the interviews.

4.1 The case study

This research originates, as mentioned previously, from the case study “*Detection of fraud insurance*” where three Norwegian insurance companies, part of the NCE Finance innovation Cluster in Bergen collaborate to detect fraud insurance. This section focuses on giving the reader a better understanding of the context.

4.1.1 The Norwegian Coopetition project

The NCE Finance Innovation is the Norwegian non-profit Fintech cluster based in the city of Bergen. The objective of this cluster is to encourage collaboration amongst companies to thrive technological innovation in the Norwegian Fintech marketplace. It is formed by more than 80 companies, and it is a member of the Norwegian Centre of Expertise (NCE) cluster program, assisted by the Norwegian Government, Innovation Norway, The Research Council of Norway, and SIVA (The Industrial Development Corporation of Norway).

The cluster focuses on different scopes. It motivates companies not operating in the same sectors to collaborate for the benefit of the overall financial market. Indeed, different are the actors involved in the NCE: corporates, startups, consulting firms, academia, or investors. Moreover, it is part of the Norwegian Cognitive Center that intends to create and share Artificial Intelligence knowledge amongst private and public sectors. Finally, it takes part of the MBA program in collaboration with the Norwegian School of Economics, and it is also a European advisor and incubator for startups.

Triggered by the NCE Finance innovation, three of the major Norwegian insurance companies, initiated a collaboration to detect fraud insurance. According to the 2020 Finans Norge report, the value of insurance fraud in Norway is more than 466NOKm, i.e., more than 47 million euros. The greatest part derived from insurance for sickness and disability, followed by claims for personal non-life and commercial non-life. As this data shows, fraud insurance is a great cause of loss for the Norwegian market which creates churns and costs for both customers and companies.

The “*Detection of Insurance Fraud*” project aimed to solve this issue. It started thanks to the involvement of the NCE cluster which encouraged a collaboration initially with two companies, X and Y. The third one, Z, was included in a second moment.

Company X is the fourth-largest supplier of insurance in Norway with a market share of approximately 13%. Originally from Denmark, it is nowadays based in different countries in the north of Europe. In Norway, it has more than 1300 employees, operates in four main areas (private, commercial, corporate, and Sweden), and generated \$3.61 billion in revenues in 2020 (Bradstreet, 2021)

Company Y is the smallest company in the project and possesses a 5% market share within the top six players of non-life insurance companies (Littlejohns, 2019). Its main working area is general insurance policies. It is owned by 15 local savings banks and its offices are based in more than 200 locations in Norway. It generated \$229.20 million in revenues in 2020 (Bradstreet, 2021).

Finally, Company Z is the second biggest player in Norway with a market share of 15%. It was created two years ago thanks to the merger of two big Norwegian insurance players and its objective is to become the biggest actor in the market considering digital innovation. It generated \$366.92 million in revenues in 2020 (Bradstreet, 2021).

The main goal of the “*Detection of insurance fraud*” project was to create a single data frame the three actors could use to train and improve their machine learning model for the detection of fraud insurance. More specifically, the three companies cooperated giving each other access to their data to achieve economies of scale and lowering costs to get enough information to get sound statistical results and improve their model. However, it is notable to mention that data were not exchanged in the relationship and every company maintained their details at their server. In other words, participants had the opportunity to train the algorithm each actor

developed internally with competitors' information without getting access to raw data. To achieve this, a guardian function was developed to ensure that each framework would not take sensible evidence from the competitor's data frame. The minimum viable product (MPV) was the collection of data from car insurance policies. Legal and consulting companies were involved to fasten the project and solve legal and General Data Protection Regulation (GDPR) issues. Indeed, a fundamental part of the relationship was to clarify and discuss which data include in the common framework without incurring the risks of sharing confidential customer information or breaching competition law (i.e., exchanging business information between parties or bigger players foreclosing smaller ones). The project is still ongoing, and the real outcome and success will be evaluated once completed. The long-term objective will be to diffuse and implement the machine learning system on a national base and involve more and more companies for data gathering.

4.2 The Interviews

This study and the conduction of the interviews have been performed thanks to the support of the Race (Radical Technology-Driven Change in Established firms) program at the NHH (Norwegian School of Economics) university in Bergen. Thanks to them, I was able to directly contact members and leaders involved in the Norwegian Coopetition project to collect primary data for this study. This section provides an overview of the interview process both in terms of data collection and data analysis. Better details would be provided on the following pages.

4.2.1 Data collection

A total of 7 interviews had been conducted. They were carried out during March and April 2021 and directed towards people directly involved in the Norwegian coopetition project (team leaders, team members, third parties like legal and consulting firms, and the CEO of the Fintech Cluster). The use of interviews was coherent with the qualitative and exploratory part of this study since it aims to gather new insights into the coopetition area. The interviews can be divided into different sub-groups (one-to-one, two-to-one, many-to-many, and attended as an observer) according to whether they were performed alone or in collaboration with peers. Indeed, due to the tight schedule of the respondents and the great importance that the coopetition project detains in Norway, some of the interviews were done in collaboration with

other students coming from NHH or other Norwegian institutions. It is notable to clarify that the time available in each interview, even if partnering with other people, was sufficient to ask all the relevant questions for this study. Furthermore, the events where I participated as observers were crucial to obtain more information and to create a better image of the project and the overall coopetition strategy.

Table 4: Respondents' summary

Interviewee number	Role in the coopetition project and type of interview
Interviewee 1	Data scientist (two-to-one)
Interviewee 2	Team leader (observer)
Interviewee 3	Third legal party (one-to-one)
Interviewee 4	Team leader (observer and one-to-one)
Interviewee 5	Third consulting party (many-to-many)
Interviewee 6	CEO Fintech cluster (two-to-one)
Interviewee 7	Team leader (two-to-one)

The interviews followed a semi-structured approach. This means that starting from a list of themes based on literature (coopetition, coopetition paradox, leadership styles, conflict handling behaviors, and trust) and some key questions previously defined, I conducted the interviews in the form of open discussions. This approach was found to be the most suitable to give participants the possibility to freely express their thoughts, experiences, knowledge, and attitudes. It also gave me the possibility to ask for some clarifications in case some answers were not clear.

The interviewees were contacted thanks to the Norwegian supervisors at NHH, who reached out directly to the CEO of the Cluster in Bergen who, subsequently, gave me direct contacts of the interviewees.

The meetings lasted approximately sixty minutes and were held in English. Moreover, they were performed online, through *the Microsoft Team platform*, due to COVID-19 issues and restrictions. They were recorded thanks to the consent of the participants asked at the beginning of the meeting and subsequently transcribed verbatim.

4.2.2 The interview process

As mentioned previously, the interviews were developed following a semi-structured approach to explore the coopetition strategy and to gain insights on the case study of the Norwegian assurance companies detecting fraud. This means that, before conducting the interview, I created an interview guideline (*see appendix 1*) that was followed during the meeting. It comprehended a series of questions refined during the interview process thanks to the discovery of new area of interest. The list of the main themes (coopetition, coopetition paradox, leadership styles, conflict handling behaviors, and trust) remained always constant.

Table 5: Interviews' themes

Themes	Objectives
Introduction	Give informants context of my research project and ask for consent to record the interview.
Background	Understand the background of the informant and their role in the coopetition project.
Coopetition	Obtain insight into the Norwegian coopetition project and the boundaries of collaboration and competition.
Coopetition paradox	Understand if some conflicts rose during the project and how the companies handled them.
Leadership style and conflict management behavior	Understand what leadership styles (transformational or transactional) and conflict management behaviors (competing – collaborating – avoiding – accommodating – compromising) interviewees found the best approach to deal and manage conflicts in coopetition.
Trust	Understand the level of trust in the Norwegian coopetition project and the role it played.
Innovation	Understand if informants consider coopetition as a strategy to achieve innovation.

As far as the interview structure is concerned, each meeting began with the introduction of the project and the presentation of its purposes as well as the request to record the meeting. Then, I asked the informants to give us better details on the coopetition project they were working on and the role they detained. Following, open questions on the key themes mentioned in the table were asked.

4.2.3 Validity and Reliability

Research developed need to be credible, meaning valid and reliable. Issues of validity, defined as the “*appropriateness of the measures used, accuracy of the analysis of the results and generalizability of the findings*”, and reliability, related to “*replication and consistency*” (Thornhill, Saunders & Lewis, 2019), can be perceived throughout the whole study. Here, I will present the most relevant aspects as far as interviews are concerned.

To respond to issues of reliability, I decided to conduct interviews following a semi-structured approach. This method gave me more flexibility in deepening into the phenomenon and the possibility to explore various aspects that emerged during the discussions. However, this approach could provoke some biases at the interviewer, interview, and participation level. The interviewer could influence with his/her behavior participants' responses. The interviewee could not be willing to disclose all relevant information during the meetings, giving to the researcher a partial picture of the topic. Finally, the participation bias depends on the time required for the interview who could make people unwilling to take part in the project. To avoid these issues, at the beginning of each interview, an explanation of the overall project, the reasons underlying, and how the data would be stored, collected, and transcribed have been presented. Moreover, to avoid interviewer and interviewee biases, I conducted the interviews creating an environment where the respondents felt comfortable and could answer openly. However, it is notable to mention that in the meeting there was a relaxed atmosphere, but I always maintained appropriate distances. Furthermore, I defined clear topics and interview guidelines before the beginning of data collection to maintain high transparency and replicability and I transcribed all meetings verbatim to avoid misunderstanding.

I started this research project from a single case study, the coopetition project of the three Norwegian insurance companies to detect fraud. To ensure generalizability, or transferability, meaning the possibility to extend the study to other settings, I conducted interviews with seven people from different roles within the companies. This allowed the collection of data from a representative sample and ensured the high credibility of the research. Moreover, all the questions in the interviews were based on a deep review of the existing literature. This gave me the possibility to show that the findings would have broader significance than the single case study. Furthermore, the quality of the research has also been granted thanks to the continuous feedback from my supervisor.

Finally, the semi-structured interview approach has been also fundamental in overcoming validity/credibility issues since it gave me the possibility to ask clarifying questions, probe meanings, and explore responses from different perspectives.

4.2.4 Data preparation

After the interviews were performed, I had available only raw data. Hence, the interviews were transcribed word-by-word following the recordings held in the *Microsoft Team platform*. They were conducted and transcribed in English. The transcriptions did not consider any forms of verbal communication like the hesitation words “ehm” or “mmm”. This was decided to make the minutes easier to understand and to consequently code. The transcripts followed the structure of the interview’s guidelines developed before the meeting. In other words, each question was related to the respective respondents’ answers. This procedure guaranteed consistency and linearity in the interviews’ structure as well as gave us the possibility to comfortably identify similarities and/or discrepancies amongst respondents’ replies. Furthermore, once the interviews were transcribed, I lately adopted a process of data cleaning, meaning correcting any typing errors. Finally, they were saved in different word-processed files.

4.2.5 Data Analysis

The type of analysis employed in this research project is the Thematic Analysis. It is a flexible approach that starts from the understanding of the qualitative data and aims at developing and testing explanations and theories based on thematic patterns or relationships (Saunders et al, 2019). This method fits greatly with the inductive approach adopted in this part of the research project since the research questions and the hypotheses developed derived directly from these data.

Once the interviews have been transcribed and I was familiar with the minutes, I started coding. The coding consisted in creating linkages and connections between data and variables that identify a specific meaning. This analysis was performed following the objective to group data from the big qualitative data frame of the interviews’ transcriptions and make simpler their understanding. Two different phases of coding were performed: initial and focused coding.

The initial coding involved disaggregating data into conceptual units and assigning them a particular label. This analysis was performed after each interview to continuously refine interview guidelines to make sure to answer proper questions to interviewees and to deepen into specific aspects to capture all the relevant information. This part detained the major objectives to identify the main areas of interest of our research project and to develop the research questions.

The second phase of coding, the focused coding, followed Charmaz's approach and consisted instead of recoding data into a smaller number of more focused codes to develop insights and constructs (Charmaz, 2014). In this phase, only the codes that in the first part have been identified as fundamental for the research project and the research questions has been further analyzed. For example, in the first part of the project, I identified general labels such as "leadership style approach", "environment characterized by high trust", "collaboration between actors", "third party involvement" etc. In the focused coding, instead, I linked each code that we identified as fundamental for our research question to the relevant literature and framework employed in this study. More specifically, I linked data to the leadership style and conflict management behavior frameworks as well as to the notion of trust. In this way, I was able to understand the styles adopted concretely in the Norwegian coopetition settings. The objective of the focused coding was to deeply study the areas of interest of this research project as well as to define the set of hypotheses explained in the following section.

Figure 1: Initial coding example

<p>You can read body language. In the 1st meeting try to get people in the same room and they are enemies. Then their body language is very skeptical, and you can read them. They should be able to understand that they become colleagues!</p> <p>They should switch the mode from competition to collaboration and then back to competition and back to collaboration. This switching become easier and easier.</p>	<p>DALIA SPADACCINI Overlapping of collaboration and competition</p>
<p>9. WHAT IS THE ROLE OF LEADERS IN EACH FIRM TO MAKE PEOPLE SWITCH?</p> <p>Challenging tasks for the leaders to make sure that they support: information sharing – not only value creation mode but also value capture mode to initially contribute to make more value but makes sure that every participant makes a fair share of the value created. "It is important that we need to collaborate to make all of us better but it is also important that we take something".</p>	<p>DALIA SPADACCINI Overlapping of collaboration and competition</p>
<p>KPIs and bonus are not available -> it is very difficult to make KPI and give a particular person a bonus where the project consists of many people. It is very difficult to understand if you fail is your cause or if your success what is the percentage you have contributed.</p> <p>You need to motivate the employee, but you do not have any normal kind of incentives. LEADERS HAVE TO DO SOMETHING NEW!</p>	<p>DALIA SPADACCINI Leaders fundamental role</p>

4.2.6 Data Findings

This section provides a general presentation of the findings identified in the analysis of the interviews' recordings that gave me the possibility to deep dive into the case study as well as to have empirical understanding of theories and previous research.

Company X, Company Y and Company Z decided to enter in the “*Detection of insurance fraud*” coopetition project since fraud was a problem common for all the companies and for the society itself. Indeed, all actors believed that even if they were competitors, they could be able to take advantages of this relationship, especially from an economic point of view. In fact, they could achieve economies of scale thanks to the creation of a large dataset to detect statistical results as well as lower their costs in the creation of this dataframe. Furthermore, values from this relationship could be obtained by both large and small companies. The former could enjoy more the costs perspective, the latter instead could take advantage of knowledge sharing from the biggest actors. However, for the project to be successful and bring innovation in the assurance market, it was fundamental that each company captured some value.

What was interesting to study from the interviews' minutes was how the description of the leaders' role in the coopetition context. Team managers were described as fundamental figures that needed to have technical background as well as business perspectives. They should be able to align different teams towards a common vision, considering the possibility to adjust their company's strategy for the success of the overall project. They should be able, on one hand, to have control over their team, but, at the same time, delegate tasks to them to help their growth and their involvement in the relationship. In case of conflicts, leaders needed to listen to other partners, be clear on their company's position and try to understand the root cause of conflicts in order to solve them. However, the most important characteristics they should possess is the ability to balance value creation and value capture: every company should contribute to the project, but it is also important that there is a fair share of the value created. Finally, they should build trust and motivate their peers.

Furthermore, a high degree of trust was present between the three actors, and this was one of the key factors why they were continuing the partnership as well as they were able to solve some conflicts. Finally, almost all actors were confident on the outcome of the project as well as on the biggest implications this relationship could have outside the assurance and Norwegian settings.

4.3 Hypotheses development

The hypotheses development started from the review of the literature that highlighted the main factors that need to be considered to study the behavior and the role of the leaders in managing the coopetition paradox. Based on the study of Burn (1979) and Bass (1958) on the leadership style and the research of Thomas-Kilmann (1974) on conflict management behavior, linked to inquiries on the role of trust in conflict settings, I developed a set of hypotheses about the effective behavior of leaders in situations of coopetition to manage the paradox and tensions at the interorganizational, and intraorganizational level. I also employed in the definition of the predictions, the seven interviews conducted with leaders and team members directly involved in the case study. They were fundamental since they provided new insights on the coopetition strategy as well as confirmed theories further enhancing the validity of this study.

4.3.1 Intraorganizational level

The first set of hypotheses covers the relationship between the leaders and his/her ability to manage tensions arising within the team involved in the coopetition project. Team members can feel the pressure of collaborating with a competitor and leaders need to be able to motivate them to make the outcomes of the coopetition successful. These hypotheses are based on the work of Burn (1979) and Bass (1985) who developed a framework that differentiates three kinds of leadership styles: i) transformational, ii) transactional and iii) laissez-faire. In this study, the last type is not considered since researchers identified that laissez-faire leaders are unwilling to solve conflicts. *“Leaders need to possess management techniques which rely heavily on motivation. It is important that leaders make team members seeing the value of their work. The team needs to be involved as much as possible to get self-motivation ongoing. Leaders need to help their teams prioritize and be able to understand why they are feeling lost sometimes. We do not need to try to convince anybody”*, says the interviewers.

Moreover, Smith (2014) identified that effective management of ambidexterity and paradoxical situations is linked to the figure of transformational leaders since they possess better decision-making authority and can create an inclusive atmosphere in their teams.

According to these statements extracted from our interviews, the work of Burn and Bass, and the sentence from Smith, it seemed that the transformational leaders' style is the one more inclined to solve conflicts in the intrafirm coopetition environment. However, this linkage has

never been employed in literature, so I found it interesting to apply the leadership style framework into the coopetition context to test the hypothesis originated. Moreover, I assumed that trust was a given condition in this case following theories and interviews which identified this variable as fundamental in the coopetition strategy.

Hypothesis 1:

Leaders who adopt a transformational leadership style increase the likelihood to manage competitive intraorganizational conflicts compared to managers who adopt a transactional approach in an environment characterized by a high degree of trust.

4.3.2 Interorganizational level

The second set of hypotheses covers the relationship between the leaders and his/her ability to manage tensions arising due to interactions with their competitors in the market. According to *The Conflict Mode Instrument* of Thomas-Kilmann, individuals can adopt five types of behaviors in conflict situations: i) competing, ii) collaborating, iii) compromising, iv) avoiding and v) accommodating. He identified that collaborating and compromising are the most recurrent behavior to manage tensions. The study of Tidstrom (2013), instead, who applied this framework to the coopetition setting, identified that avoidance and competition might be considered interchangeable and are the most common strategies used. These findings contrast in part with the outcomes I obtained in the interviews on the Norwegian insurance coopetition case, where compromise and competing were found to be the most common approach utilized. “*If there is some disagreement between the companies, compromise*”, says one of the interviewers. “*You have to be able to align different companies and create a common vision. This might need that you have to adjust your own strategy*”, said a second interviewer. Furthermore, “*Coopetition is useful in our project because it is the competition part that motivates our companies in doing better. Coopetition is not collaboration. Competition is as equally important as collaboration!*”, says a third one, and continuing, “*it is important that we collaborate to make all of us better, but It is also important that we take something*”.

My hypotheses start from these studies and the interviews developed, and link to the notion of trust due to the influence this concept has on the conflict environment in which companies normally operate, which is even more important in the coopetition context. The

accommodating approach was not considered in the development of the hypotheses since previous studies and interviews did not find this behavior useful to manage interorganizational tensions. Competing and avoidance are considered interchangeable concepts following the study of Tidstrom (2013) and collaborating and compromising are the opposing forces. Hence, in this study, we integrated literature and interviews' findings, and we decided to analyze the compromising and competing approach in managing interorganizational conflicts.

Hypothesis 2:

Leaders who adopt a compromising approach increase the likelihood to manage cooperative interorganizational conflicts in an environment characterized by a high degree of trust compared to managers who adopt a competing approach.

4.4 From Study 1 to Study 2

As deeply defined during this chapter, Study 1 comprehended the qualitative part of this master thesis. It starts with the “*Detection of insurance fraud*” case study involving three Norwegian insurance companies cooperating together with the objective to improve the recognition of insurance fraud. Afterward, interviews to people involved in this project were conducted and, consequently, a set of hypotheses were developed based on the findings identified in both the literature review and on the interviews themselves.

The hypotheses connected Study 1 with Study 2. More specifically, I identified two predictions that we found interesting to study from a quantitative point of view in order to obtain statistical inferences. Considering this, we developed two survey experiments, precisely explained in the following chapter, whose scenarios were based on the general context of the Norwegian case study. As it possible to understand, the two studies were deeply linked together: the interviews were built on the theory; the hypotheses were built on interviews and theory; the survey questionnaire were developed considering the theory, the hypotheses (in the questions proposed) and the case study in the development of the scenarios.

5. Study 2 – The quantitative approach

This chapter comprehends the second study of this research project. The Quantitative part is entirely built on the analysis of the two predictions through two survey experiments. In the following paragraphs, the reader would find all the aspects to obtain a proper understanding of the questionnaires: from the data collection to the description of the sample, to the statistical analysis of the data.

5.1 Data collection: The Survey – experiments

A survey - experiment, as the name reveals, is an experiment developed within a survey. There are two different types of survey – experiments. One is used to evaluate anonymously the attitudes and behaviors of the respondents in specific conditions. The second one, instead, aims to detect causal relationships amongst factors. In this study, we employed the first type.

Two scenario-based survey experiments were conducted. The former questionnaire focused on the intraorganizational level of tensions and testing *Hypothesis 1*; the latter, instead, on the interorganizational level and testing *Hypotheses 2*. More specifically, these surveys aimed at investigating, in the first case, what is the most pertinent leadership style between transactional and transformational in controlling conflicts risen at the team level. In the second case, instead, what type of conflict management behavior between compromising and competing is the most appropriate to manage paradoxical tensions deriving from relationships with the other firms in cooperation and if trusts played a key role in the choice of that conduct.

5.1.1 The Sample

The method that best suited this research project was probability sampling, meaning that the chance that each respondent would have been selected from the target population was the same for all the cases. This aspect was ensured thanks to the *randomization* functions in *Qualtrics*, a survey tool I used to develop and send the questionnaires. Thanks to this function, I was able to make sure each respondent of both surveys saw a scenario randomly. In this way, it was possible to detect statistical characteristics of the target population and generalize findings.

Figure 2: Survey 1 – respondents' summary

Scenario Intraorganizational	Respondents
0	57
1	61
2	58
Grand total	176

Figure 3: Survey 2 – respondents' summary

Scenario interorganizational	Respondents
1	51
2	50
3	52
4	48
5	49
6	48
Grand Total	298

The sample of people towards which this study was directed was different in the two questionnaires. Indeed, the first survey was sent to individuals who were part of a team. They could be both leaders and members and, to properly distinguish them in the sample, we asked a specific question in the survey (“Which is your role in your team?” Possible answer: *Leader, Member, Other*). The second survey, instead, was sent only to leaders since the scenario developed required respondents to identify themselves as the manager of a coopetition project. The individuals targeted in both surveys were reached thanks to the platform *Amazon Mechanical Turk* as well as other social networks like *LinkedIn*. I gave to the participants, in the introductory part of the surveys, information on the project and its purpose and I ensured respondents that the answers would have been anonymous. Furthermore, I did not perform any track of individual responses.

The two surveys were answered by a sample of 540 people (208 respondents for the intraorganizational survey and 332 for the interorganizational one). Out of the total number, 66 responses were removed since they were not complete. The remaining 474 people (176 for the intraorganizational survey, 298 for the interorganizational one) were greatly representative of the target population. Below, it is possible to find a comparison of the two samples in terms of *gender, age, geographical area, sector in which they work, company dimensions, team dimensions, and role in the team*. It is notable to mention that the graph “role” is referring only to the intraorganizational survey that was directed to both leaders and members. It was not

necessary to ask this question also in the interorganizational questionnaire since it was directed only to leaders.

Figure 4: Sample Gender - graph

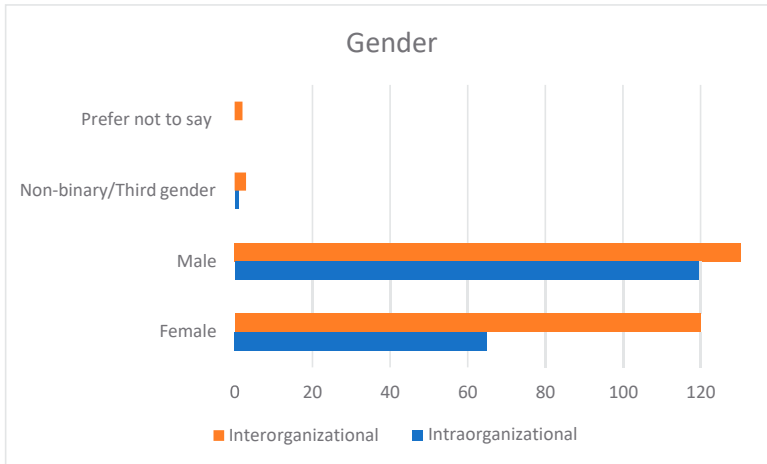


Figure 5: Sample Age – graph

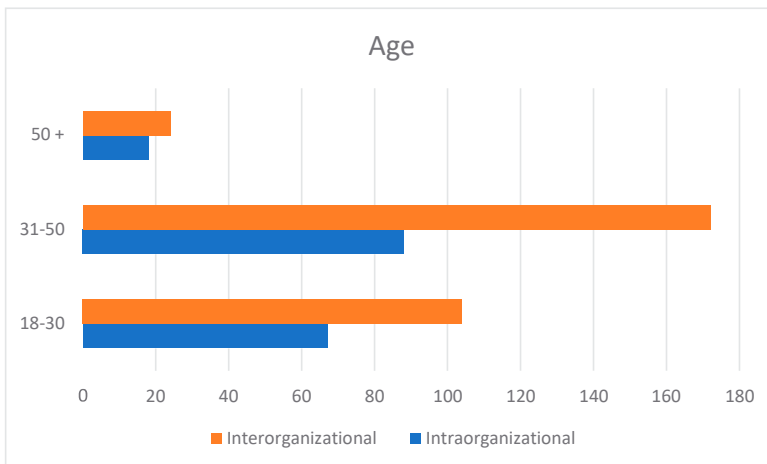


Figure 6: Sample Geographical Area - graph

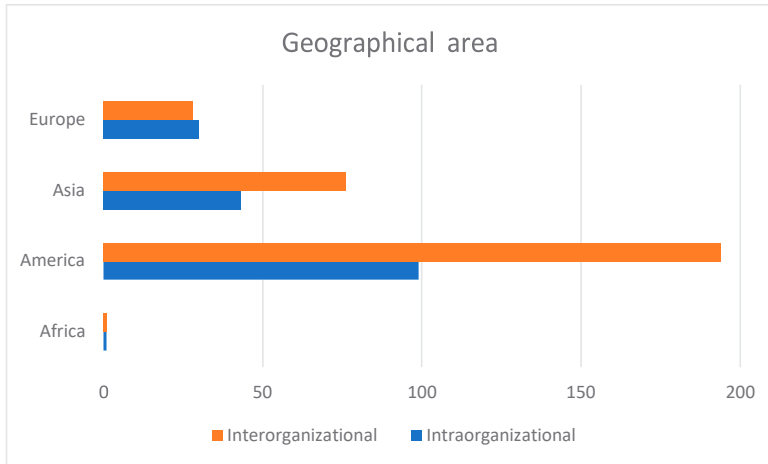


Table 6: Sample Sector

Sector	Intraorganizational	Interorganizational
Other	30	38
Administrative	10	14
Automotive	3	1
Management&Consulting	6	24
Education	14	30
Fashion&Luxury	2	1
Finance	15	30
Food&Beverage	1	1
Science&Healthcare	19	22
Logistics	4	4
Manufacturing	2	20
Marketing	6	17
Retail	8	6
Sales	2	1
Services	2	5
Technology	36	69
Unknown	5	0

Figure 7: Sample Company dimensions – graph

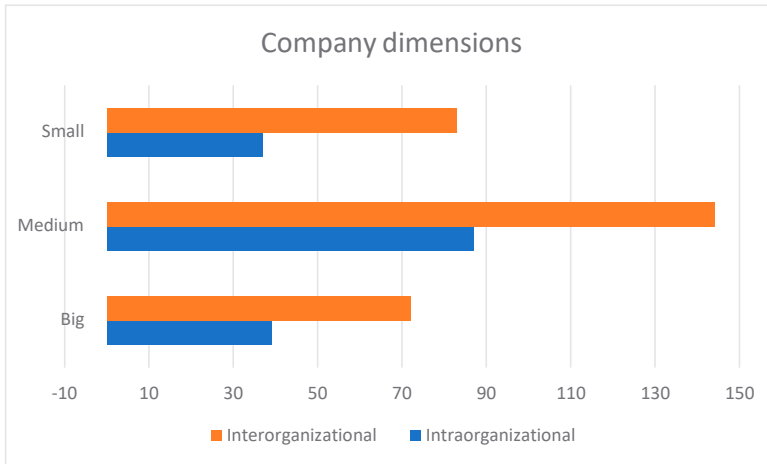


Figure 8: Sample Team dimensions – graph

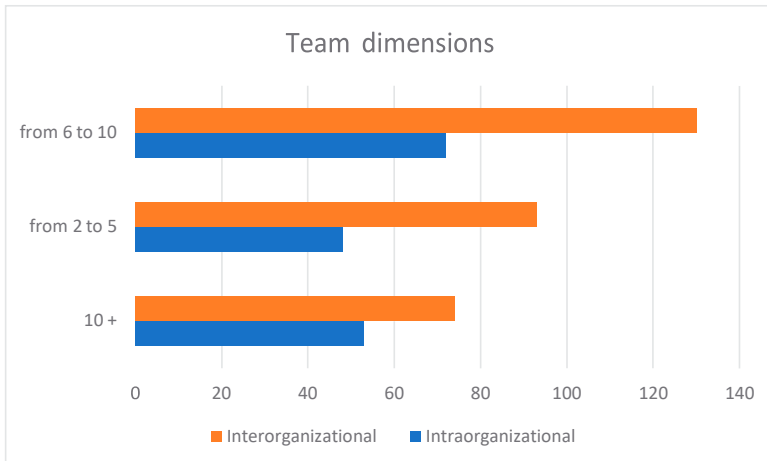
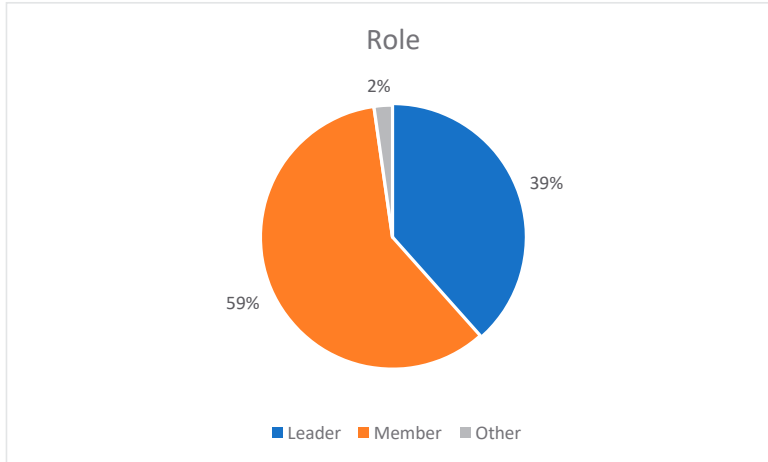


Figure 9: Sample Team role (Survey 1) - graph



5.1.2 The survey experiments structure

At the beginning of the surveys, I presented the general scenario that the participants should read. The two surveys were defined by overall 9 scenarios. The scenarios were developed taking into consideration the setting of the Norwegian case study "*detection of insurance fraud*" but the situations described, and the behavior represented were based on cooperation and leadership literature.

These questionnaires aimed at collecting opinions and attitudes of leaders, managers, and members of teams in controlling conflicts with the purpose to help future colleagues in the management of the cooperation paradox. Each scenario required respondents no more than 5 minutes to be completed and informants could reply to only one of the scenarios to ensure the randomness of the people within the sample.

To limit the problem of non-respondents and achieve a high response rate, a short but exhaustive explanation of the objective of the project was provided at the beginning of the surveys. This strategy was pursued also following the objective to make people better aware of the scope of the research, the contribution they brought with their participation, and the managerial implication this study will have in the future.

5.1.2.1 Survey 1 - *The moderating effect of leadership style and the role of trust*

The first study, as mentioned previously, was a survey - experiment focused on the role of leaders in coopetition projects in managing tensions at the team level and in his/her ability to motivate subordinates.

Participants' preferences for a certain approach were identified thanks to the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (2004). At the beginning of the questionnaire, I presented the scenario of intraorganizational conflicts. As mentioned previously, this scenario was developed considering the general setting of the case study adding notions from literature. During the interviews, I discovered that there had been no tensions at the team level amongst these companies since leaders were able to establish a flat hierarchy where everyone felt completely involved and could freely express thoughts and opinions. Moreover, each team member had a particular role in the project. *"Management techniques rely heavily on motivation, managing people to show their value and that they can obtain something from their work. Trying to get them as much involved as possible and get some self-motivation going"*, says one of the interviewees. *"People could get stressed feeling they have too many priorities. Helping them prioritize and being able to understand why they are feeling lost. Clarify their priorities"*, he continues. As readers can see, tensions at the intraorganizational level in the real project were avoided thanks to the great role of the leader in motivating his peers constantly, presenting them the great advantages they could achieve if the project would be successful.

This questionnaire was directed to individuals who were part of a team and who were asked to identify themselves as team member of the coopetition project. Hence, the respondents could be both leaders and followers. In this way, I could gain insights not only from leaders' points of view but also from team members.

This survey consisted of three different scenarios: i) High trust–No leadership style, ii) High Trust – Transformational leadership style, and iii) High Trust – Transactional leadership style. Hence, the only variable manipulated in this case was the leadership style (Transactional or Transformational), while I considered trust as a given variable. Characteristics of leaders were identified according to the existing theory of leadership styles. In fact, for transformational leaders, the dimensions of idealized influence, inspirational motivation, intellectual stimulation, and individual consideration have been considered to create the actor in the

scenario. On the contrary, as far as the transformational manager is concerned, the concept of contingent reward and management by exception (passive and active) have been reviewed. More specifically, the first leader encouraged his followers to create a common vision, explaining the great implication that this project would have on the organization itself and the single individuals, providing support and involving each team member in the decision-making. The transactional leader instead adopted a different approach establishing a “trade” interaction with his team: he set specific tasks, guidelines, and rewards, as well as corrective actions in case of not complying with the targets established.

After the presentation of the scenario, I posed inquiries on the effectiveness of the leadership style and the likelihood to overcome intraorganizational tensions. I specifically asked, *“How much effective do you believe is this approach in dealing with this conflictual situation your team is experiencing?”* and *“If you were the character of the story feeling controversial tension, how likely is that you would have overcome them?”*. Subsequently, I defined a series of general questions to better identify our respondents within the sample. No tracking of individual responses was performed. The questions focused on these categories: Gender, Age, Geographical area, Marketplace, Company dimension, Team Size, Role, and Past coopetition experiences. Finally, participants were asked to rank a series of statements following a Likert scale from 1 (strongly disagree) to 5 (strongly agree) representing a transactional or a transformational approach. In this way, people revealed their inclination and preference for a certain leadership style. The sentences were based on and selected randomly from the Multifactor Leadership Questionnaire (MLQ).

Figure 10: Scenario 0 – No leadership style

Please, keep this in mind in answering the following questions:

There are three companies (A, B and C) that operate in the Fintech sector and in the same geographical area. They are close competitors. You are part of company A and you are a software engineer. Your company, with actor B and actor C, have started a collaboration to solve one of the main issues in your market: fighting fraud. You are part of the team involved in this project and your leader is Jeff. At the beginning of the partnership, the three companies organize various meetings to align their goals for the project. In the last meeting, you felt that the project was not going in the right direction. Your team and your competitors struggled to find a common ground and you worry that the other companies might steal proprietary information from yours. These concerns are shared with your team members. Your leader Jeff, instead, is confident about the project and its potential for success. He truly trusts the other actors and only considers his point of view. He does not listen to your team's thoughts and do not take action to motivate you and your team.

Figure 11: : Scenario 1 – Transformational leadership style

Please, keep this in mind in answering the following questions:

There are three companies (A, B and C) that operate in the Fintech sector and in the same geographical area. They are close competitors. You are part of company A and you are a software engineer. Your company, with actor B and actor C, have started a collaboration to solve one of the main issues in your market: fighting fraud. You are part of the team involved in this project and your leader is Jeff. At the beginning of the partnership, the three companies organize various meetings to align their goals for the project. In the last meeting, you felt that the project was not going in the right direction. Your team and your competitors struggled to find a common ground and you worry that the other companies might steal proprietary information from yours. These concerns are shared with your team members. Your leader Jeff, instead, is confident about the project and its potential for success and he truly trusts the other actors. He wants to change teams' feelings believing that only the right team mentality can make a project successful. He decides to organize a brainstorming session so each team member can freely express his/her thoughts and concerns. He also says: "In case of project failure, this could be a great opportunity for learning to everyone! We could take advantage of improving our communicational and relational skills as well as acquiring new knowledge and seeing our market from a different point of view thanks to our competitors. I am giving you more responsibility and the possibility to exit from your comfort zone!"

Figure 12: Scenario 2 – Transactional leadership style

Please, keep this in mind in answering the following questions:

There are three companies (A, B and C) that operate in the Fintech sector and in the same geographical area. They are close competitors. You are part of company A and you are a software engineer. Your company, with actor B and actor C, have started a collaboration to solve one of the main issues in your market: fighting fraud. You are part of the team involved in this project and your leader is Jeff. At the beginning of the partnership, the three companies organize various meetings to align their goals for the project. In the last meeting, you felt that the project was not going in the right direction. Your team and your competitors struggled to find a common ground and you worry that the other companies might steal proprietary information from yours. These concerns are shared with your team members. Your leader Jeff, instead, is confident about the project and its potential for success and he truly trusts the other actors. He wants to change teams' feelings believing that only the right team mentality can make a project successful. He is interested in the success of the project and assigns to each team member specific tasks with rewards and penalties. He says to you: "Your goal is the creation of a machine learning dashboard with the other companies. I know this is a challenging task, but I believe you are the right person to do it. If the project will be successful, this will be not only for your satisfaction, but you will also obtain a bonus. I will define clear monthly targets but in case you will not achieve them for two consecutive months, you will be taken off the team!"

5.1.2.2 Survey 2 – The moderating effect of conflict-handling modes and the role of trust

The second study was a survey – experiment focused on the role of leaders in managing tensions arising amongst firms involved in cooperation thanks to a certain conflict-handling mode and the influence of trust in the choice of that behavior. *"Leaders must act in a way that creates trust. Trust is fundamental to have such a collaboration"*, said one of the interviewees. The conflict handling methods were based on the work of Thomas-Kilmann, and in this study, I only considered the compromising and competing approaches.

This survey consisted of six different scenarios: i) High Trust – No approach, ii) High Trust – Compromising iii) Low Trust – No approach, iv) Low trust – Compromising, v) High Trust – Competing, and vi) Low Trust - Competing. Hence, the manipulated variables in the second

questionnaire were two: conflict management behavior and trust. In the compromising case, the leader in the scenario aimed to find an agreement amongst all companies in the project, while in the competing case he was focused on achieving his objective without considering others' expectations.

After the description of the scenario, I posed inquiries on the effectiveness of the conflict management behavior asking, *"How much effective do you believe is this approach in managing the tensions with your competitors?"* and *"How likely is that you, as a leader, would have overcome tensions with the other companies thanks to his behavior?"*. Consequently, I posed general questions as in the previous questionnaire as well as a series of statements that participants needed to rank following a Likert scale from 1 (strongly disagree) to 5 (strongly agree) to identify the most suitable behavior leaders should adopt in interfirm paradoxical situations. The sentences were based and selected randomly from the Thomas-Kilmann Conflict Mode Instrument (TKI).

Figure 13: Scenario 1 – High Trust/No approach

Please, keep this in mind in answering the following questions:

There are three companies (A, B and C) that operate in the Fintech sector and in the same geographical area. They are close competitors. You are part of company A and you are a software engineer. Your company, with actor B and actor C, have started a collaboration to solve one of the main issues in your market: fighting fraud. You are part of the team involved in this project and you are the leader of this team. At the beginning of the partnership, the three companies organized various meetings to align their goals for the project, but they struggled to find a common ground. The three actors truly trust each other, and you feel confident that the other leaders would take decisions beneficial for the entire project and not only their companies. Hence, you decide to not take action and leave it to the other companies to decide how to proceed in the collaboration.

Figure 14: Scenario 2 – High Trust/Compromising

Please, keep this in mind in answering the following questions:

There are three companies (A, B and C) that operate in the Fintech sector and in the same geographical area. They are close competitors. You are part of company A and you are a software engineer. Your company, with actor B and actor C, have started a collaboration to solve one of the main issues in your market: fighting fraud. You are part of the team involved in this project and you are the leader of this team. At the beginning of the partnership, the three companies organized various meetings to align their goals for the project, but they struggled to find a common ground. The three actors truly trust each other, and you feel confident that the other leaders would take decisions beneficial for the entire project and not only their companies. However, you truly believe in the power of discussion and in the idea that the three companies need to find an alignment. During an internal meeting with your team, you present the behavior you want to adopt: 1) create a proposal with your team and 2) present the proposal to the other companies, listen to the ones from your competitors and start a discussion. In your point of view, finding a compromise where all companies are partially but not completely satisfied would be the best solution to overcome tensions and continue the project.

Figure 15: Scenario 3 – Low Trust/No Approach

Please, keep this in mind in answering the following questions:

There are three companies (A, B and C) that operate in the Fintech sector and in the same geographical area. They are close competitors. You are part of company A and you are a software engineer. Your company, with actor B and actor C, have started a collaboration to solve one of the main issues in your market: fighting fraud. You are part of the team involved in this project and you are the leader of this team. At the beginning of the partnership, the three companies organized various meetings to align their goals for the project, but they struggled to find a common ground. The three actors do not trust each other, and you are sure that the other team would take advantage to the detriment of your company. However, you decide to not take action and leave power to other companies in deciding how to proceed in the collaboration. You do not want to participate in the discussion.

Figure 16: Scenario 4 – Low Trust/Compromising

Please, keep this in mind in answering the following questions:

There are three companies (A, B and C) that operate in the Fintech sector and in the same geographical area. They are close competitors. You are part of company A and you are a software engineer. Your company, with actor B and actor C, have started a collaboration to solve one of the main issues in your market: fighting fraud. You are part of the team involved in this project and you are the leader of this team. At the beginning of the partnership, the three companies organized various meetings to align their goals for the project, but they struggled to find a common ground. The three actors do not trust each other, and you are sure that the other team would take advantage to the detriment of your company. However, you truly believe in the power of discussion and in the idea that the three companies need to find an alignment. During an internal meeting with your team, you present the behavior you want to adopt: 1) create a proposal with your team and 2) present the proposal to the other companies, listen to the ones from your competitors and start a discussion. In your point of view, finding a compromise where all companies are partially but not completely satisfied would be the best solution to overcome tensions and continue the project.

Figure 17: Scenario 5 – High Trust/Competing

Please, keep this in mind in answering the following questions:

There are three companies (A, B and C) that operate in the Fintech sector and in the same geographical area. They are close competitors. You are part of company A and you are a software engineer. Your company, with actor B and actor C, have started a collaboration to solve one of the main issues in your market: fighting fraud. You are part of the team involved in this project and you are the leader of this team. At the beginning of the partnerships, the three companies organized various meetings to align their goals for the project, but they struggled to find a common ground. The three actors truly trust each other, and you feel confident that the other leaders would take decisions beneficial for the entire project and not only their companies. You truly believe that taking immediate action is vital for achieving a successful project. Hence, during an internal meeting with your team, you present the behavior you want to adopt: 1) create a proposal with your team and 2) present the proposal to your competitors not accepting theirs. In your point of view, this approach would be the only possibility to be 100% sure that all your company's objectives would be satisfied.

Figure 18: Scenario 6 – Low Trust/Competing

Please, keep this in mind in answering the following questions:

There are three companies (A, B and C) that operate in the Fintech sector and in the same geographical area. They are close competitors. You are part of company A and you are a software engineer. Your company, with actor B and actor C, have started a collaboration to solve one of the main issues in your market: fighting fraud. You are part of the team involved in this project and you are the leader of this team. At the beginning of the partnership, the three companies organized various meetings to align their goals for the project, but they struggled to find a common ground. The three actors do not trust each other, and you are sure that the other team would take advantage to the detriment of your company. You truly believe that taking immediate action is vital for achieving a successful project. Hence, during an internal meeting with your team, you present the behavior you want to adopt: 1) create a proposal with your team and 2) present the proposal to your competitors not accepting theirs. In your point of view, this approach would be the only possibility to be 100% sure that all your company's objectives would be satisfied.

5.1.3 Validity and reliability

Issues of validity and reliability can be perceived in both surveys. The validity and reliability of the data collected in questionnaires depended heavily on the design and the structure of the questionnaire since researchers and participants needed to clearly understand respectively the answers and questions. A survey can be considered valid if the data collected will measure exactly the topics the research is focused on, and reliable if the data are consistent (Thornhill, Saunders & Lewis, 2019).

As far as the internal validity concerns, the variables used in the surveys to measure the leadership style, the conflict management behavior, and the role of trust guaranteed a good level of construct and measurement validity thanks to the fact that they were based on a deep analysis of the literature. Moreover, how the questions had been phrased and presented to the participants ensured a high construct validity. In addition, the objective nature of the questions made the respondents more willing to answer without being influenced by personal and subjective factors. Furthermore, to limit the issue of participants' bias, I developed specific closed questions (check questions) on the leadership styles and conflict management approaches that were positioned and worded differently in the questionnaires. This aimed at ensuring higher construct validity as well as reliability. Finally, as far as criterion-related validity is concerned (i.e., the ability to produce accurate predictions in the study), I performed the statistical analysis, explained later in the project.

Considering reliability, great attention needed to be paid because participants could interpret the questions in their way. Hence, Cronbach's alpha measure was employed. As the tables below show, the Cronbach's Alpha values for both survey experiments are above 0.7, meaning that the questions combined in the scale were internally consistent in their measurement.

Table 7: Cronbach's Alpha measure – Survey 1

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N. of Items
.832	.851	4

Table 8: Cronbach's Alpha measure – Survey 2

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	N. of items
.863	.876	4

Finally, the sampling method aimed at ensuring high representativity since it comprehended people from different ages, geographical areas, genders, industries and roles. This guaranteed to solve further generalizability and validity issues.

5.2 Data Analysis

To analyze quantitative data of our two survey experiments and test our hypotheses, I used the *SPSS statistics software*. This evaluation is deeply described in the paragraphs of the following chapter where, together with the analysis, screenshots of the results have been pasted.

The two hypotheses tested were for the intraorganizational questionnaire:

H1: Leaders who adopt a transformational leadership style increase the likelihood to manage cooperative intraorganizational conflicts compared to managers who adopt a transactional approach in an environment characterized by a high degree of trust,

while for the interorganizational one:

H2: Leaders who adopt a compromising approach increase the likelihood to manage cooperative interorganizational conflicts in an environment characterized by a high degree of trust compared to managers who adopt a competing approach.

5.2.1 Survey 1 - Intraorganizational tensions

5.2.1.1 Descriptive statistics

As a first step, a descriptive statistic was performed to determine the central tendencies of variables. This analysis was not conducted on control variables like *age, gender, area, market, company dimensions, team dimensions, and role in the team*. Mean values, standard deviations, maximum and minimum were considered and depicted in the table below. The two variables of *Transformational* and *Transactional* leadership were defined calculating the average of the different questions identifying these two factors. More specifically, for the Transformational leadership variable, we considered *Inspirational motivation, Idealized influence (attribute), Idealized influence (behaviors), and Intellectual stimulation*, while for the Transactional one we considered a *contingent reward, Management by exception (passive), and Management by exception active*. As the data shows, the values of central tendencies were almost similar, and they vary from 2.97 to 4. The highest values can be found in correspondence of the variables: likelihood to overcome intraorganizational tensions and transformational approach. This gave a first insight of the respondents' preferences and points of view. However, it is notable to mention that the variables were examined at the overall survey level, hence not considering the different scenarios (no leadership approach, transformational leadership, transactional leadership).

As far as standard deviations are concerned, almost all variables presented low values meaning that data were closed to the mean.

Table 9: Descriptive statistics – Survey 1

	Descriptive statistics				
	N	Minimum	Maximum	Mean	Std. deviation
Leadership effectiveness	176	1	5	2.97	1.008
Likelihood to overcome intraorganizational tensions	173	0	5	3.50	1.065
Transformational	176	.917	5	4	.844
Transactional	176	1	5	3.274	.825

5.2.1.2 Correlation analysis

Pearson correlation analysis was conducted to point out the correlation between the different variables of the survey, especially between the leadership style and leaders' ability to

overcome tensions at the team level thanks to the approach adopted. The results are illustrated in the table below. Most values are statistically significant and correlated (the ones highlighted with the asterisks below).

Indeed, as the table shows, the *likelihood to overcome intraorganizational conflicts* was found to be positive and statistically significant with the transformational and transactional leadership style variables, showing how the presence of the leader in a team represents a fundamental aspect to manage conflicts. This relationship is further enforced by the fact that all Pearson correlation values are significant at .010 level and by the positive relationship between *leadership effectiveness* and *likelihood to overcome intraorganizational tensions* with a p-value = .01. On the other hand, it is notable to mention that *leadership effectiveness* is correlated only with the transactional approach. This provides a new point of view in our analysis, and it is partially in contrast with the hypotheses since the transformational leadership style has been identified as the effective approach in managing this type of tension.

It is notable to mention that, also, in this case, the Pearson correlation analysis has been conducted not considering the three different scenarios.

Table 10: Pearson Correlation Analysis – Survey 1

		Correlations			
		Leadership effectiveness	Likelihood to overcome intraorganizational tensions	Transformational	Transactional
Leadership effectiveness	Pearson Correlation	1	.247**	.101	.176*
	Sig. (two-tailed)		.001	.183	.020
	N	176	173	176	176
Likelihood to overcome intraorganizational tensions	Pearson Correlation	.247**	1	.315**	.387**
	Sig. (two-tailed)	.001		.000	.000
	N	173	173	173	173
Transformational	Pearson Correlation	.101	.315**	1	.680**
	Sig. (two-tailed)	.183	.000		.000
	N	176	173	176	176
Transactional	Pearson Correlation	.176*	.387**	.680**	1
	Sig. (two-tailed)	.020	.000	.000	
	N	176	173	176	176

**, Correlation is significant at 0.01 level (two-tailed).

*, Correlation is significant at 0.05 level (two-tailed).

5.2.1.3 One-way ANOVA and Regression analysis

5.2.1.3.1 Effectiveness of the leadership approach

First, it was analyzed whether the presence of a certain leadership style could be a good choice or not for the leader in managing tensions arising at the team level by testing the effectiveness of the leadership approach. As previously mentioned, respondents were shown three different scenarios (No leadership style, Transformational leadership style, Transactional leadership style). To perform this test, a one-way ANOVA test was developed. The independent variable, in this case, was the leadership style, and the dependent variable was the effectiveness of the leadership approach. The three values highlighted in the rows in the table below (0, 1, 2) represent respectively the three scenarios of No leadership, Transformational leadership, and Transactional leadership. The variable of trust was considered as a given variable in this questionnaire and it was included in the description of the scenarios already in the condition of High Trust. Considering the mean values, it was possible to identify that scenario 1 (Transformational leadership) has the highest mean and it differed 0.44 from scenario 0 and 0.31 from scenario 2.

Table 11: Descriptive ANOVA analysis (Effectiveness of leadership approach) – Survey 1

Descriptive								
Leadership effectiveness								
	N	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	57	2.77	1.04	.14	2.50	3.05	1	5
1	61	3.21	.99	.13	2.96	3.47	2	5
2	58	2.90	.97	.13	2.64	3.15	1	5
Totale	176	2.97	1.01	.08	2.82	3.12	1	5

One of the requirements for the ANOVA analysis was that the variances of each group comparison were equal. To test this, I performed the Levene statistics looking for a significance value greater than .05, meaning no statistical significance (i.e., if values were found to be significant this would have suggested a real difference between variances). As the table below highlights, all values were greater than the threshold, meaning that the requirement of homogeneity of variances has been met and the ANOVA test can be considered as robust.

Table 12: Levene Statistics ANOVA analysis (Effectiveness of leadership approach) – Survey 1

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Leadership effectiveness	Based on Mean	.275	2	173	.760
	Based on Median	.391	2	173	.677
	Based on Median and with adjusted df	.391	2	173	.677
	Based on trimmed mean	.288	2	173	.750

The ANOVA results showed that there was a statistical difference between the means of the different leadership styles/scenarios since the value of F is 3.1 and the p-value is .048 (which is less than the .05 alpha level).

Table 13: One-way ANOVA analysis (Effectiveness of leadership approach) – Survey 1

ANOVA					
Leadership effectiveness					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.152	2	3.076	3.100	.048
Withing Groups	171.644	173	.992		
Total	177.795	175			

However, to understand which of the various means is statistically significant, I performed a Tukey HSD (Honest Significant Difference) test which highlighted that the only significant difference between the different variables considered is *No leadership – Transformational style* with a p-value equals to .045.

Table 14: Tukey HSD (Effectiveness of leadership approach) – Survey 1

Multiple Comparisons						
Dependent Variable:: Leadership effectiveness						
HSD di Tukey						
(I) Scenario	(J) Scenario	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower bound	Upper Bound
0	1	-.441*	.183	.045	-.875	-.007
	2	-.125	.186	.781	-.564	.315
1	0	.441*	.183	.045	.007	.875
	2	.317	.183	.196	-.115	.748
2	0	.125	.186	.781	-.315	.564
	1	-.317	.183	.196	-.748	.115

*. The mean difference is significant at the 0.05 level.

To conclude, overall respondents showed a statistically significant preference for the Transformational leadership style (3.21 ± 0.985) compared to the case of No leadership (2.77 ± 1.035) and Transactional leadership (2.90 ± 0.968). However, it is interesting to notice that this difference was significant only considering the transformational approach and the absence of leadership. This highlighted how respondents preferred a certain leadership style in managing cooperative tensions compared to no approach. However, to confirm the hypotheses that the transformational is preferred to the transactional ones, I needed to continue performing my analysis.

5.2.1.3.2 Likelihood to overcome intraorganizational conflicts

The second test conducted to test and confirm the hypotheses was a second one-way ANOVA. In this case, the dependent variable was the *likelihood to overcome intraorganizational conflicts* thanks to the leadership style adopted in the scenario, while the independent variable was the *leadership style*. The variable of Trust was always considered as a given variable.

As the tables below show, it can be noticed that the transformational approach presented always a higher mean (3.55) compared to the other scenarios. Looking at Levene's table, as in the previous analysis, the test can be considered valid since I accepted the null hypotheses that the variances of the groups were similar as the p-value was greater than .05. On the other hand, the last table representing the ANOVA values showed that the difference between the means is not statistically significant ($F = 0.168$ and $p\text{-value} = 0.845$). Hence, it was possible to point out that the respondents did not find relevant differences in the presence of a particular leadership style in overcoming intraorganizational conflicts.

Table 15: One-way ANOVA (likelihood to overcome intraorganizational conflicts) – Survey 1

Descriptive								
Likelihood to overcome intraorganizational tensions								
	N	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	57	3.44	.95	.13	3.19	3.69	1	5
1	58	3.55	1.13	.15	3.26	3.85	0	5
2	58	3.52	1.13	.15	3.22	3.81	0	5
Totale	176	3.50	1.07	.08	3.34	3.66	0	5

Test of Homogeneity of Variances						
		Statistica di Levene	gl1	gl2	Sig.	
Likelihood to overcome intraorganizational tensions	Based on Mean	,469	2	170	,626	
	Based on Median	,148	2	170	,862	
	Based on Median and with adjusted df	,148	2	168,171	,862	
	Based on trimmed Mean	,274	2	170	,761	

ANOVA					
Likelihood to overcome intraorganizational tensions					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.386	2	.193	.168	.845
Withing Groups	194.863	170	1.146		
Total	195.249	172			

5.2.1.3.3 Transactional and transformational leadership style

The last step of my analysis for the first questionnaire was to perform linear regression analyses to understand which leadership style between transformational and transactional should be considered as the most effective to manage cooperative conflicts arising at the team level. Two different linear regressions were performed considering the two different variables separately.

Before performing the regression analyses, I needed to conduct some tests and considerations on the assumptions for the regression analysis to consider the data as valid and reliable. Thanks to the Durbin-Watson analysis I checked that the data included in the model represented independent observation. The values of 1.494 and 1.669 confirmed this assumption. Moreover, I did not find outliers in our data thanks to the utilization of graphs. Finally, scatterplots identified that residuals were normally distributed as well as the linearity and homoscedasticity of the different variables.

The first regression analysis was conducted considering the *Likelihood to overcome intraorganizational conflicts* as the dependent variable (Y) and the *Transformational* approach as the independent variable (X).

In the first table, it was notable to mention the values of $R = 0.315$ and $R^2 = 0.099$. The first variable identifies a high degree of correlation between the two factors considered in the model, while R-squared, indicated how much of the total variation in the dependent variable could be explained by the dependent ones. In this study, the *Transformational* variable did not explain a great percentage of the variation of the Y factor. The second table figured the ANOVA analysis, pointing out that the prediction model represented the dependent variable significantly well since the p-value (last column of the table) is less than 0.01, which was lower than 0.05, the threshold to reject the null hypotheses and consider the regression model statistically significant.

Finally, the regression table identified the coefficient of the linear regression analysis

$$y = 2.087 + 0.394(x)$$

where y was the dependent variable and x was the independent one, as well as confirmed the validity of the analysis performed looking at significant columns (p-value < 0.001).

To conclude, I could state that the transactional leadership style detained a positive influence on the likelihood to overcome intraorganizational conflicts and this confirmed the hypothesis that I aimed to test in the first questionnaire.

Table 16: Linear Regression (Transformational leadership style) – Survey 1

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.315 ^a	.099	.094	1.014

a. Predictor: (Costant), Transformational

b. Dependent Variable: Likelihood to overcome intraorganizational tensions

ANOVA^a

Modello		Sum of Squares	gl	Mean Square	F	Sign.
1	Regression	19.354	1	19.354	18.815	<0.001 ^b
	Residual	175.895	171	1.029		
	Total	195.249	172			

a. Dependent Vatriable: Likelihood to overcome intraorganizational tensions

b. Predictors: (costant), Transformational

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sign.	95% Confidence Interval for B	
		B	Error standard	Beta			Lower Bound	Upper Bound
1	(Costant)	2.087	.335		6.224	<0.001	1.425	2.749
	Transformational	.394	.091	.315	4.338	<0.001	.215	.574

a. Dependent Variable: Likelihood to overcome intraorganizational tensions

To evaluate the transactional approach, instead, I performed a second regression model considering the *likelihood to overcome intraorganizational conflicts* as dependent variables (Y) and the *Transactional leadership style* as the independent variable (X). As in the previous case, also this analysis was statistically significant since the p-value was lower than .001 and $F = 30.116$. The total amount of variation of the independent variable explained by the transactional leadership style was .150 (higher than the previous case) and R possessed a value of 0.387. The outcome of this analysis was

$$Y = 1.874 + 0.497(x)$$

And it showed that also the transactional leadership style had a positive relationship with the dependent value, but the effect was lower than the transactional ones. This was a further confirmation of H_1 .

Table 17: Linear Regression (Transactional leadership style) – Survey 1

Model Summary^b

Modello	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.387 ^a	.150	.145	.985

a. Predictor: (constant), Transactional
 b. Dependent Variable: Likelihood to overcome intraorganizational tensions

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sign.
1	Regression	29.237	1	29.237	30.116	<0.001 ^b
	Residual	166.011	171	.971		
	Total	195.249	172			

a. Variabile dipendente: Likelihood to overcome intraorganizational tensions
 b. Predictor:(constant), Transactional

Coefficients^a

Model		Unstandardized Coefficients	Standardized Coefficients	t	Sign.	95% Confidence Interval for B		
		B	Std. Error	Beta		Lower Bound	Upper Bound	
1	(Constant)	1.874	.306		6.122	<0.001	1.270	2.478
	Transactional	.497	.091	.387	5.488	<0.001	.318	.676

a. Dependent Variable: Likelihood to overcome intraorganizational tensions

However, it is notable to mention that the regression analysis had been performed considering the two variables of *Transformational* and *Transactional* leadership style separately. It showed in both cases a clear positive relationship between the presence of a leadership style and the likelihood to overcome intraorganizational conflicts, but it did not provide information on which of the two independent variables possessed the greatest effect on the Y factor. To understand this fundamental aspect of the study, it was necessary to conduct a multiple regression analysis considering the two-leadership style simultaneously. However, to conduct the regression analysis before, I needed to test for multicollinearity. The values highlighted in the table below indicate VIF = 1.870 for each variable, meaning no correlation.

The analysis performed ended up with this regression:

$$Z = 1.719 + 0.119(x) + 0.414(y)$$

where Z was the likelihood to overcome intraorganizational conflicts, x was the transformational leadership style and y was the transactional leadership style.

The model was identified as statistically significant since I could find $F = 15.542$ and $p\text{-value} < .001$. However, looking at the last table, the *transformational* variable had a $p\text{-value} = .325$,

which is higher than .05. This means that I could exclude this variable from the model since it was not statistically relevant and maintain only the *transactional* approach to explain the dependent variable. This was completely in contrast with my hypothesis stating the transformational approach as the most effective one to overcome conflicts in coopetition settings.

Table 18: Linear Regression (Transactional leadership style) – Survey 1

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.393 ^a	.155	.145	.985

a. Predictors: (constant), Transactional, Transformational

b. Dependent Variable: Likelihood to overcome intraorganizational tensions

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sign.
1	Regression	30.183	2	15.091	15.542	<0.001 ^b
	Residual	165.066	170	.971		
	Total	195.249	172			

a. Variable dipendente: Likelihood to overcome intraorganizational tensions

b. Predictors: (constant), Transformational, Transactional

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sign.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Costante)	1.719	.344		4.999	<0.001	1.041	2.398
	Transformational	.119	.121	.095	.987	.325	-.119	.358
	Transactional	.414	.124	.322	3.340	.001	.169	.659

a. Dependent Variable: Likelihood to overcome intraorganizational tensions

Table 19: Summary of findings – Survey 1

<i>Pearson Correlation</i>	Partial supported
<i>ANOVA 1</i>	Supported
<i>ANOVA 2</i>	Not supported
<i>Linear regression</i>	Supported
<i>Multilinear regression</i>	Not supported

5.2.2 Survey 2 - Interorganizational tensions

5.2.2.1 Descriptive statistics

As in the first questionnaire, also for the second survey relative to the interorganizational conflicts, I began the analysis with descriptive statistics to identify central tendencies and obtain a primary understanding of the data I was going to analyze. Also, in this case, I performed the analysis not taking into consideration the control variables (*age, gender, geographical area, company dimensions, team dimensions, coopetition experience*) neither the six scenarios (*No trust/No approach, No trust/Compromising/ Si trust/No approach, Si trust/Compromising, No trust/Competing, Si trust/Competing*) since I wanted to obtain a general overview before entering into the detailed analysis of the data.

As the table below shows, the variables showed homogeneous values. Indeed, in terms of minimum and maximum, the numbers were equals for each factor. Mean values, instead, were identified as above the medium-term 3 (since the responses were analyzed following a scale from 1 to 5) achieving the maximum at $M = 3.685$ for the *likelihood to overcome interorganizational tension*. It is notable to mention how the two opposite approaches of compromising and competing were similar and they had a small range of .107. This small difference did not give already insights into the respondents' preferences for a certain conflict management approach, making the further analysis even more interesting and fundamental. As far as standard deviation is concerned, the values were low showing proximity to the central tendency.

Table 20: Descriptive Statistics – Survey 2

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std.Deviation
Effectiveness of conflict management approach	298	1.0	5.0	3.161	1.0609
Likelihood to overcome interorganizational tension	298	1.0	5.0	3.685	.9853
Compromising	298	1.0	5.0	3.541	.8507
Competing	298	1.0	5.0	3.434	.8591
N. of valid cases (listwise)	298				

5.2.2.2 Correlation analysis

The second step pursued to test the second hypothesis was the Pearson correlation analysis to identify the correlation between variables. All variables were positively correlated and

statistically significant, explaining that a conflict management approach was fundamental to overcoming tensions arising amongst different companies.

Table 21: Pearson Correlation – Survey 2

		Correlations			
		Effectiveness of conflict management approach	Likelihood to overcome interorganizational tension	Compromising	Competing
Effectiveness of conflict management approach	Correlazione di Pearson	1	.406**	.130*	.182**
	Sign. (two-tailed)		.000	.025	.002
	N	298	298	298	298
Likelihood to overcome interorganizational tension	Correlazione di Pearson	.406**	1	.241**	.389**
	Sign. (two-tailed)	.000		.000	.000
	N	298	298	298	298
Compromising	Correlazione di Pearson	.130*	.241**	1	.709**
	Sign. (two-tailed)	.025	.000		.000
	N	298	298	298	298
Competing	Correlazione di Pearson	.182**	.389**	.709**	1
	Sign. (two-tailed)	.002	.000	.000	
	N	298	298	298	298

**. Correlation is significant at 0.01 level (2-tailed).

*. Correlation is significant at 0.05 level (2-tailed).

5.2.2.3 One-way ANOVA and Regression analysis

5.2.2.3.1 Effectiveness of the conflict management approach

To understand which of the conflict management approaches is the most effective in dealing with conflicts arising amongst companies in coopetition project, I performed two one-way ANOVA as well as linear and multilinear regression analyses. The one-way ANOVA analysis was considered the most suitable approach to identify statistically meaningful differences between means and to understand if respondents considered the approach adopted in the scenario relevant.

First, I performed a one-way ANOVA considering as independent variables the conflict management approach and as a dependent variable the effectiveness of the style adopted by the leader described in the scenario. The variable of Trust was a mediating factor since it influenced the relationship according to which two variables were related. According to our hypothesis, trust influenced the choice of the behavior adopted by the leader in dealing with conflicts with partners in coopetition settings. This factor had been embedded in the different scenarios of the survey. The six different rows from 1 to 6 represent respectively the different scenarios (*No trust/No approach*, *No trust/Compromising*, *Si trust/No approach*, *Si trust/Compromising*, *No trust/Competing*, *Si trust/Competing*). In the table below, it was

possible to identify the descriptive statistic of the different scenarios. It was interesting to highlight that the means of all scenarios varied in a small range of .320. The lowest amount ($M = 3$) was found in the correspondence of the third scenario (Si trust/No approach), while the highest values in the second (No Trust/Compromising) ($M = 3.320$) and fourth scenario (Si trust/Compromising) ($M = 3.313$), showing a higher preference of respondents for the compromising conflict management approach.

Table 22: Descriptive one-way ANOVA (Effectiveness of conflict management approach) – Survey 2

Descriptive								
Effectiveness of conflict management approach								
	N	Mean	Std.Deviation	Std.Error Mean	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	51	3.039	1.232	.173	2.693	3.386	1	5
2	50	3.320	.978	.138	3.042	3.598	2	5
3	52	3.000	1.085	.150	2.698	3.302	1	5
4	48	3.313	.926	.134	3.044	3.581	2	5
5	49	3.143	1.137	.162	2.816	3.469	1	5
6	48	3.167	.975	.141	2.884	3.450	2	5
Totale	298	3.161	1.061	.061	3.040	3.282	1	5

As in the previous study, the Levene statistics needed to be analyzed. Looking at the table below, I could confirm that almost all values are greater than .05, meaning that I could consider the ANOVA analysis as reliable.

Table 23: Levene Statistics one-way ANOVA (Effectiveness of conflict management approach) – Survey 2

Test of Homogeneity of Variances					
		Levene Statistics	gl1	gl2	Sig.
Effectiveness of conflict management approach	Based on Mean	.873	5	292	.500
	Based on Median	.855	5	292	.512
	Based on Median and with adjusted df	.855	5	286	.512
	Based on trimmed Mean	.937	5	292	.457

Continuing in our analysis, looking at the $F = 3.100$ and at the $p\text{-value} = .554$ I understood that the means could not be considered as statistically significant since there was no significant statistical evidence to reject the null hypotheses of the ANOVA analysis ($p\text{-value}$ is higher than 0.05). Hence, the variable of the *effectiveness of the conflict management approach* did

not bring a great contribution to this study and to test the hypothesis since the differences between the six scenarios were pointed out as not relevant.

Table 24: one-way ANOVA (Effectiveness of conflict management approach) - Survey 2

ANOVA					
Effectiveness of conflict management approach					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.488	5	.898	.795	.554
Within Groups	329.781	292	1.129		
Totale	334.268	297			

5.2.2.3.2 Likelihood to overcome interorganizational conflicts

The second step for testing the second hypothesis was the performance of a further one-way ANOVA. In this case, the independent variable was the *conflict management approach*, while the dependent variable was the *likelihood to overcome interorganizational conflicts* with the approach adopted and described in the scenario.

Looking at the descriptive statistics, the means were higher than the previous analysis since the minimum value was set in correspondence of the fourth scenario (Si trust/Compromising, $M = 3.479$), and the highest mean could be found in the fifth scenario (No trust/Competing, $M = 3.959$). This gave interesting insights into the analysis showing how respondents considered efficient the competing approach in an environment with low trust.

However, in this case, as in the previous occasion, we identified a $p\text{-value} = .136$ which was higher than .05 meaning that we cannot point out statistical differences amongst the mean of different scenarios.

Both these analyses performed contrasted with my hypothesis since the study highlighted not great distinctions if leaders adopted no approach, a compromising approach or a competing one as well as if they were operating in an environment characterized by high or low trust. To complete the analysis, however, it was necessary to perform further studies to cover all the relevant variables highlighted in the study.

Table 25: one-way ANOVA (Likelihood to overcome interorganizational conflicts) – Survey 2

Descriptive								
Likelihood to overcome interorganizational tension								
	N	Mean	Std.Deviation	Std.Error Mean	95% Confidence Interval for Mean		Mean	Maximum
					Lower Bound	Upper Bound		
1	51	3.549	1.137	.159	3.229	3.869	1	5
2	50	3.800	.881	.125	3.550	4.050	1	5
3	52	3.577	1.144	.159	3.259	3.895	1	5
4	48	3.479	.875	.126	3.225	3.733	1	5
5	49	3.959	.865	.124	3.711	4.208	2	5
6	48	3.750	.911	.131	3.485	4.015	1	5
Totale	298	3.685	.985	.057	3.572	3.797	1	5

Test of Homogeneity of Variances						
		Levene Statistics	gl1	gl2	Sig.	
Likelihood to overcome interorganizational tension	Based on Mean	4.234	5	292	<0.001	
	Based on Median	2.086	5	292	.067	
	Based on Median and with adjusted df	2.086	5	280	.067	
	Based on trimmed Mean	4.270	5	292	<0.001	

ANOVA					
Likelihood to overcome interorganizational tension					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.132	5	1.626	1.695	.136
Within Groups	280.217	292	.960		
Total	288.349	297			

5.2.2.3.3 Compromising and competing conflict management approach

The last step of the analysis on the second survey experiment was the performance of two linear regression analyses and one multilinear regression analysis. The linear regression analyses involved the consideration of the *compromising* and the *competing* approaches separately as the dependent variables and *the likelihood to overcome interorganizational conflicts* as the independent ones. To determine the two factors of compromising and competing approach, I considered the ten questions asked in the survey on these two behaviors and I calculated the average. As in the previous analyses, I did not consider the variable of trust, since embedded in the different scenarios.

As in the first survey, before performing the regression analysis, I conducted some tests on the assumptions at the base of the linear regression model to consider the data as valid and reliable. The data included in the variable represented independent observations as the Durbin-Watson

model presented in the table below identifies values of 2.151 and 2.200. Furthermore, no significant outliers were identified since respondents could rate questions from a scale of 1 to 5 and regression residuals were normally distributed. Moreover, we built a scatterplot to test the linearity and homoscedasticity of the variables to further confirm the linear regression assumptions.

The first linear regression analysis performed considered the *compromising approach* as the independent variable (x) and *the likelihood to overcome intraorganizational conflicts* as the independent one (y). Below it is highlighted the result of the analysis:

$$Y = 2.695 + 0.279x$$

The value of R was equal to 0.24. R-squared value, instead, could be considered as low ($R^2 = 0.58$) showing that the dependent variable did not explain extensively the variation of the dependent factor. However, as it was possible to point out from the below tables, the regression was found to be statistically relevant with a p-value $< .001$ and $F = 18.283$. Also, the Beta coefficient ($B = .279$) was found to be statistically significant (p-value $< .001$). This result showed that there was a positive significant relationship between the compromising approach and the likelihood to overcome interorganizational conflicts in coopetition settings, and partially confirmed the hypothesis.

Table 26: Linear Regression (Compromising conflict management approach) – Survey 2

Model Summary^b

Modello	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.241 ^a	.058	.055	.958	2.151

a. Predittori: (costante), Compromising

b. Dependent Variable: Likelihood to overcome interorganizational tensions

ANOVA^a

Model		Sum of Squares	gl	Mean Square	F	Sign.
1	Regression	16.774	1	16.774	18.283	<0.001 ^b
	Residual	271.575	296	.917		
	Total	288.349	297			

a. Dependent Variable: Likelihood to overcome interorganizational tension

b. Predictor: (costant), Compromising

Coefficients^a

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sign.	95% Confidence Interval for B	
							Lower Bound	Upper Bound
1	(Costante)	2.695	.238		11.330	<0.001	2.227	3.164
	Compromising	.279	.065	.241	4.276	<0.001	.151	.408

a. Dependent Variable: Likelihood to overcome interorganizational tension

The second linear regression analysis performed considered the *competing approach* as the dependent variable (x) and *the likelihood to overcome interorganizational conflicts* as the independent one (y).

$$Y = 2.153 + 0.446(x)$$

Looking at the first table containing the summary of the model, the value of $R = .389$ and $R\text{-squared} = .151$ were higher than the previous analysis showing that this model represents a better explanation of the variable Y. The F value equaled 52.727 and the relative p-value less than .001 stated that the linear regression model summarized above was statistically significant. This affirmation was further enhanced by the p-value of the Beta coefficient mentioned in the last table (p-value < .001). Hence, the regression showed that there was a positive significant relationship between the competing approach and the likelihood to overcome conflicts arising amongst partners in coepetition.

Table 27: Linear Regression (Competing conflict management approach) – Survey 2

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.389 ^a	.151	.148	.909	2.200

a. Predictor: (costants), Competing

b. Dependent Variable: Likelihood to overcome interorganizational tension

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sign.
1	Regression	43.598	1	43.598	52.727	<0.001 ^b
	Residual	244.751	296	.827		
	Total	288.349	297			

a. Dependent Variable: Likelihood to overcome interorganizational tension

b. Predictor: (costant), Competing

Coefficients ^a								
		Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval for B	
Model		B	Std. Error	Beta	t	Sign.	Lower Bound	Upper Bound
1	(Constant)	2.153	.217		9.906	<0.001	1.725	2.581
	Competing	.446	.061	.389	7.261	<0.001	.325	.567

a. Dependent Variable: Likelihood to overcome interorganizational tension

In both analyses it was possible to detect a positive linear relationship between the dependent and independent variables and the strongest relationship seems to be found in the compromising analysis, even if it explained a less percentage of the variability of the y variable. These studies, however, considered the two variables separately. Hence, to understand the variable with the highest impact on the dependent ones, a multilinear regression analysis needed to be performed as in the first survey experiment.

Before conducting the analysis, we tested the assumptions of the multilinear regression model. Independent observations were found (Durbin-Watson value = 2.206) and, on the other hand, no significant outliers were identified. Residuals were normally distributed, and homoscedasticity was analyzed thanks to a scatterplot. As far as multicollinearity was concerned, the VIF value is equal to 2.011 and indicated no multicollinearity issues.

Below it is mentioned the multilinear regression analysis:

$$Z = 0.239 + 0.88(x) + 0.87(y)$$

Where Z is the likelihood to overcome interorganizational conflicts, x is the compromising approach and y is the competing one.

The Regression was significant ($F = 26.766$ and $p\text{-value} < .001$) and explained a great percentage of the total variation of the dependent variable ($R\text{-squared} = .154$). Considering the previous two linear regressions, however, looking in the last table at the Beta coefficient and their significance, it was possible to notice that the compromising approach detained a $p\text{-value} = .361$, higher than the threshold $\alpha = .05$. This meant that the compromising approach variable could be excluded from the model since it did not have a significant statistical impact on the dependent variable. This finding was in total contrast with our hypotheses, stating the preference of a compromising approach in managing conflicts at the interorganizational level. According to the multilinear regression model, instead, the competing approach with its characteristics and behavior seemed to be the right fit to manage these kinds of tensions.

Table 28: Multiple regression analysis – Survey 2

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.392 ^a	.154	.148	.910	2.206
a. Predictors: (constant), Competing, Compromising					
b. VDependent Variable: Likelihood to overcome interorganizational tension					

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sign.
1	Regression	44.289	2	22.144	26.766	<0.001 ^b
	Residual	244.060	295	.827		
	Total	288.349	297			
a. Dependent Variable: Likelihood to overcome interorganizational tension						
b. Predictors: (constant), Competing, Compromising						

Coefficients ^a										
Model		Unstandardized Coefficients		Standardized Coefficients		95% Confidence Interval for B		Collinearity statistics		
		B	Std. Error	Beta	t	Sign.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	2.244	.239		9.386	<0.001	1.774	2.715		
	Compromising	-.080	.088	-.069	-.914	.361	-.254	.093	.497	2.011
	Competing	.502	.087	.438	5.767	<0.001	.331	.674	.497	2.011
a. Dependent Variable: Likelihood to overcome interorganizational tension										

Table 29: Summary of findings – Survey 2

Pearson Correlation	Partial supported
ANOVA 1	Not Supported
ANOVA 2	Not supported
Linear regression	Supported
Multilinear regression	Not supported

5.3 Summary of findings

In the previous chapter of this thesis, two hypotheses were formulated: one relative to the intraorganizational tensions, one relative to the interorganizational tensions. These were then tested in this chapter and a summary of the different analyses is highlighted in this paragraph.

The Pearson Correlation analysis partially supported both hypotheses. The former was partially confirmed since almost all variables were identified as correlated amongst each other but there were no differences between the transactional or transformational approaches, meaning that it was not possible to find significant differences between the two factors. In the analysis of the second questionnaire, instead, all variables were found to be correlated and no differences were highlighted.

The first one-way ANOVA analyses supported H_1 thanks to the posthoc analysis, while the second rejected the hypothesis due to high p-values. In the second study, instead, both ANOVA analyses were rejected.

The linear regression analyses confirmed in both surveys my predictions showing the higher impact of the transformational leadership style and the compromising conflict management approach on the likelihood to overcome respectively intraorganizational and interorganizational tensions. However, these results were contrasted by the multilinear regression that in both cases identified as the behaviors with the highest impact on the dependent variable the transactional leadership style, and the competing conflict management approach, while the transformational and the compromising variable were not identified as statistically relevant and could be excluded from the model.

The overall results of this analysis disconfirmed my hypotheses. They pointed out no impact of the transformational leadership style and the compromising approach on the probability to manage conflicts in a coopetition context. This was also in contrast with the interviews pursued at the beginning of the project. Furthermore, no significant differences were identified comparing the different scenarios and the variable of trust did not bring significant differences in the type of behavior preferred by the respondents. In the next chapter, a discussion of these findings will be analyzed in detailed.

Table 30: Summary of findings

	H1: Leaders who adopt a transformational leadership style increase the likelihood to manage cooperative intraorganizational conflicts compared to managers who adopt a transactional approach in an environment characterized by a high degree of trust.		H2: Leaders who adopt a compromising approach increase the likelihood to manage cooperative interorganizational conflicts in an environment characterized by a high degree of trust compared to managers who adopt a competing approach.	
Pearson Correlation	Partial supported		Partial supported	
ANOVA 1	Supported		Not supported	
ANOVA 2	Not supported		Not supported	
Linear regression	Supported		Supported	
Multilinear regression	Not supported		Not supported	

6. Discussion

This thesis has been developed following the objective to examine the relationship between the frameworks of leadership style and the conflict management approach to understand what is the most effective behavior leaders should adopt to manage tensions at the team levels and between partners in coopetition projects considering the role of trust in the choice of the approach. The purpose of the study was also to fill a relevant gap in literature since the strategy of coopetition and its paradox is a recent topic and has not been extensively studied. In this chapter, I will focus the attention on the discussion of theoretical and managerial implications linking the results of our analysis and interviews with previous studies. Finally, I will also point out limitations of this research project, ethical aspects as well as potential features that could be discussed in future studies.

6.1 Theoretical and Managerial implications

The theoretical and managerial implications of this work can be summarized in two points:

1. At the intraorganizational level, the positive relationship between the transactional leadership style and the likelihood to overcome conflicts identifies this as the approach that should be adopted in coopetition settings.
2. At the interorganizational level, the positive relationship between the competing conflict management approach and the likelihood to overcome tensions with the partners reveals a particular aspect of the study, somewhat in line with previous considerations found and examined in the literature review chapter. Moreover, I identified the competing approach as the preferred one regardless of the environment characterized by low or high trust amongst the partners of the coopetition project.

According to the review of the literature and the interviews performed, I pointed out the transactional leadership style and its characteristics as the favorite approach to manage tensions arising at the team level and motivate employees in achieving the objectives and goals of coopetition projects. Before arriving at the results of our analysis, however, I performed different steps. I identified in the correlation analysis that all the characteristics of transformational or transactional leadership style were positively correlated with the

likelihood to overcome intraorganizational conflicts. This meant that the presence of a certain approach possessed a fundamental effect in dealing with conflicts in the coopetition strategy. Different interviewers highlighted the importance to maintain the team involved in the project and motivate as much as possible the peers not only for the success of the project itself but also for the growth of the single individual, without focusing on material rewards or punishments that the transactional approach comprehends. This prediction was confirmed at the beginning of the questionnaire analysis, where descriptive statistics were performed, and transformational leadership style detained a higher mean. Furthermore, in the first one-way ANOVA, I also identified that this approach detained the highest mean compared to the other ones, but these values were significant only considering no approach and the transformational leadership style. These results were in line with some works in literature as the one of Burns (1978) who identified that the figure of transformational leaders can reduce conflicts. According to his point of view, transformational managers create a shared vision encouraging collaboration and discouraging competing behaviors. These findings were also confirmed by the work of Smith (2014) which highlighted the importance of transactional leaders and their better decision-making authority.

Our second-way ANOVA, instead, identified means whose difference is not pointed out as statistically significant and no results could be depicted from this analysis. Hence, we decided to perform a linear regression analysis to consider the overall preference of respondents between the transformational and the transactional leadership style, without considering the different scenarios but only using the general questions asked at the end of each survey. Performing the regression analysis, my beliefs were disconfirmed. Indeed, I identified that the transactional leadership style has been preferred compared to the transformational one, giving a first and interesting insight on how respondents prefer this approach. To arrive at this conclusion, I performed some linear regressions to test the hypothesis and see if the two variables had a positive impact on the independent variable. Both leadership styles were positively linked to the likelihood to overcome intraorganizational conflicts. Indeed, the transformational approach was positively correlated with the dependent variable ($B = .394$, $p\text{-value} < .001$), and with the transformational one ($B = .497$, $p\text{-value} < .001$). However, it is notable to mention how, performing the multilinear regression analysis to understand which of the two variables had had the highest impact, only the transactional was identified as significant ($B = .414$, $p\text{-value} = .001$) to explain the dependent variable, while the

transformational approach ($B = .119$, $p\text{-value} = .325$) could be deleted from the model since possessing a $p\text{-value}$ higher than the threshold of $.05$.

This finding was in complete contrast with my hypothesis as well as with the interviews performed at the beginning of our project. Indeed, according to the interviews performed in the first part of this study, the transformational leadership approach was the kind of style adopted by the three Norwegian leaders in managing the coopetition relationship. It could be interesting to point out what could be the different reasons why this kind of approach was effective in the Scandinavian context, but it was not the preferred one in my study. One cause could be the different geographical area as well as the different culture. The interviews were performed in a specific environment characterized by a high degree of trust where individuals feel motivated and do not feel strong levels of tension since they believe in the overall objective of the project beneficial for their industry and the society itself. This approach could not be ideal, as shown by our survey experiment, in other context and market that could be bigger and more competitive.

Another reason could be the flat hierarchy established at the team level in Study 1. Indeed, leaders' interviewees pointed out how they established a flat hierarchy within their teams for everyone to be completely involved and participate in the decision-making process. This team structure could not be present in other organizations where a vertical relationship and impositions from managers could happen. Furthermore, the findings of this study were also in contrast with some research that identified the transformational leadership style as effective in dealing with tensions. We could state that this previous research cannot be applicable in a coopetition context. On the other hand, some streams of literature, like the work of Burns (1978) pointed how the figure of transactional leaders were identified to solve conflicts arising at the team level due to the creation of specific goals and rewards. This aspect confirmed the findings of the statistical analysis. Hence, in a coopetition context, to motivate employees and to manage intraorganizational conflicts arising at different levels, the transactional approach has been found by team members and team leaders the most effective one.

With these outcomes, this study provides useful insights both in literature and managerial perspectives. It informs the literature by providing an analysis of the most effective framework to adopt in an environment that has not been greatly studied in the literature, hence contributing to filling a relevant gap in the literature. However, the greatest impact had been on the practical side since it will inform managers and leaders on the best approach to use to

motivate and retain team members focused on their work and with dealing with competitors, an aspect that can create misunderstanding and confusion at the individual and team level. The establishment of specific goals and rewards/punishments seemed to be the best way to deal with people at the intraorganizational level and this aspect has been pointed out by people who have been presented randomly different scenarios, meaning that they have not been biased towards a specific approach, enhancing the validity of the results found. Coopetition is a strategy that more and more companies nowadays are adopting to stay competitive in the market and to continuously innovate themselves. Hence, thanks to this study, future managers and leaders obtained useful insights on how to deal with conflicts at the team level and it will increase the likelihood to achieve successful coopetition projects, outcomes, and innovations.

The second central contribution of this research project was related to the interorganizational level and to the role of the leaders in managing the relationship with the partners in coopetition projects adopting a specific behavior and the role of trust in the choice of that behavior. As discussed in the theory chapter, five different behaviors could be adopted in dealing with conflicts. However, in this research project only two have been considered, compromising, and competing, thanks to the literature review and the interviews pursued. To confirm my second hypothesis, I performed an analysis starting from the descriptive statistics which pointed out the higher importance of the compromising approach compared to the competing ones. Moreover, all variables were positively correlated and statistically significant, confirming that the leadership presence had a great outcome on the management of the interorganizational tensions. However, this first analysis did not consider the different scenarios presented and the role of trust which was embedded in the description of the scenarios itself. Hence, to make a proper statistical analysis I needed to perform two one-way ANOVAs to compare the different results. What it is interesting to point out from this analysis is that both results of ANOVAs did not detect significant differences between the means of the different scenarios since p-values of both ANOVAs taking the *leadership effectiveness* and *the likelihood to overcome interorganizational conflicts* as dependent variable is respectively equal to .554 and .136, meaning that differences between the means cannot be considered statically relevant proving that the variable of trust does not have a great influence on the choice of the conflict management approach leaders need to adopt. This conflicted with my hypothesis. According to the literature stream and the interviews, trust was fundamental in dealing with conflicts since without it tensions were more likely to arise as well as competitive behaviors between partners. However, this study brought a contribution relied on the understanding that trust did

not influence the choice of the behavior leaders need to adopt in managing conflicts at the intraorganizational level.

As in the previous questionnaire, to test the hypothesis and see what kind of approach was preferred by our respondents I performed regression analyses without considering the different scenarios. In the linear regression analyses, one for the compromising approach and a second one for the competing approach, I identified a positive relationship with the *likelihood to overcome interorganizational conflicts* (Compromising approach: $B = .279$, $p\text{-value} < .001$, Competing approach: $B = .446$, $p\text{-value} < .001$). These results showed and confirmed how the presence of a leader had a big impact on the effectiveness and the management of conflicts. Lastly, I conducted a multilinear regression to point out which of the two variables had the biggest effect on the analysis. As in the previous study, also in this case I did not confirm my hypothesis. The compromising approach had not been found statistically relevant to explain the dependent variable, having a $p\text{-value}$ equal to .361. This showed that a competition mindset was the best approach identified by our respondents in dealing with conflicts arising at the team level. Also in this case, as in the previous questionnaire I disconfirmed my hypotheses and the interviews employed to form them. The Norwegian environment seemed to be a particular context inclined to the collaboration and to the compromise and less inclined to a competition mindset while, considering a global perspective, the opposite situation was identified. It could be interesting to deep dive in future studies to understand the relationship between cultures and the kind of approach adopted in the leadership since, from this study, it is possible to determine the existence of this difference. Furthermore, one of the reasons why the three insurance companies could have adopted a compromising approach in dealing with conflicts, could be the presence of third parties, legal and consulting firms, that helped them in the decision-making process and in finding agreements. In addition, the overall results found in the Survey 2 contrasted with the findings of Thomas and Kilmann (1974) and Oliver (1991) theories, but they agreed with the findings of the works of Tidstrom where competition and avoidance were identified as the strategies most utilized to manage conflicts in a competition context.

However, what this works differed and brought further insights to the cooperation mindset is how the choice of this behavior is connected to the role of trust. The trust which has been considered as one of the main success factors for having a successful cooperation project is not linked to the choice of that behavior. These findings are interesting especially from a practical point of view. Indeed, this thesis suggested that, in cooperation project, a competition approach

should always be adopted to make sure to gain the right advantages in the relationship. As one of the interviewers pointed out, “*we always need to remain in a coopetition mindset*”. Managers need to be aware that this kind of style can lead to new conflicts, but they also need to be aware that, thanks to their debating and negotiating skills, they would be able to reach all the objectives prefixed for their team and company. This approach should be independent of whether the partners trust each other or not. Hence, trust remained a fundamental element of this kind of strategy, but it did not influence, as explained before, the type of behaviors leaders and managers need to adopt. Maintaining appropriate distances and focusing on its own business needs seemed to be the best kind of managerial style to adopt.

6.2 Ethical aspects

Ethical aspects can be pointed out throughout the whole project. This section presents the main points related to our research and how they have been tackled.

The seven managers and team members in the Norwegian coopetition project who have been interviewed agreed to their consent twice: via mail and before the interview for recording purposes. All interviews and surveys' questions were general and not personally related. This choice had been taken to avoid any privacy issues. The survey experiments, instead, were sent to individuals who voluntarily subscribed to the Amazon Mechanical Turk platform, accepting their terms and conditions, and to further fellows who agreed to respond to the questionnaires. In addition, the scenarios were developed considering the general context of the Norwegian coopetition project “*detection of fraud insurance*” without providing specific information on it but it enriched with elements from literature, to guarantee anonymity. At the beginning of both interviews and questionnaires, a clear description of the research design and purpose as well as of how the data would be stored and collected had been presented to ensure transparency to respondents. Moreover, interviewees were ensured that they could withdraw at any time during the meeting as well as the recordings and transcription would be available only to doctors and master thesis' students involved in the RaCE Program. In addition, all the minutes, recordings and survey data have been cancelled once processed. Finally, the NSD has approved the procedures followed by the NHH research Program for handling data.

6.3 Limitations

There are multiple limitations to the scope and applicability of the findings in this thesis. Different methodological limitations were identified: interview biases, sample size and characteristics, self-reported surveys, the methodology of collecting the data, the small number of control variables, and finally, the complexity of the topic itself. Below, a better explanation of each limitation is described.

Firstly, the interviews were conducted with seven leaders and team members involved in the “*detection of insurance fraud*” coopetition project. The time where the interviews were pursued was simultaneous at the project itself, meaning that respondents had their memories fresh and vivid. However, the different questions asked were all referring to previous, even if recent, events and they could have developed reflections on those events.

Secondly, the size and characteristics of the sample need to be redefined. The two survey-questionnaire reached out to a total of 540 people, with a complete response rate of 87% which can be considered as a high value. The sample, however, can be considered small considering the entire population to which this questionnaire could have been sent. This meant that both survey questionnaires could not be an effective representation of the target population. Furthermore, the amount of control variables to identify the target population is limited to six factors. This was pursued in order to create shorter questionnaires and, hence increase the response rate. However, including more factors could have improved the definition and the accuracy of the sample. In addition, the small scale of the sample could be a reason why some SPSS analyses were identified as not statistically relevant, especially considering the one-way ANOVA.

The third limitation of this thesis was the *self-reported* surveys, meaning that the validity of the data found relied on the honesty of the respondents. They could have been biased or could have given false answers to the questions. Finally, the complexity of this topic and the fact that it has not been extensively studied in literature is both a bring contribution as well as a big limitation. The big contribution relied on the fact that this thesis highlights a topic and gives proper insights into one of the areas where the management literature is going recently, and it can be considered a great precursor of future studies and could give many interesting points of discussion for future research. On the other hand, the lack of many analyses,

especially from a quantitative point of view, made this work and the definition of the hypothesis both interesting and challenging.

6.4 Future research

The findings of this study as well as the theoretical and practical discussions pointed out important possible focus for future research. It was fundamental to identify and admit limitations of this study so that future research could address these issues and improve the findings to give better theoretical and practical implications for coopetition strategies.

First, this study, and more specifically the surveys utilized to collect data, could be replicated to a larger sample of people ensuring better distinctions of the sample especially from a geographically perspective. In our study, many respondents came from Asia, America, or Europe, while not a great response rate was identified in Oceania or Africa. It would be interesting for future researchers to identify how the sample of people and the responses for the scenarios could vary considering the different geographical regions as well as the different cultures present.

Secondly, this research project is focused on both intraorganizational and interorganizational tensions without considering the individual ones, another type of tension mentioned in the literature review chapter. A suggestion for future researcher would be to consider the three variables altogether, but also studies could focus precisely on one types of tensions to obtain an exhaustive picture. Furthermore, analyzing the relationship between sectors and certain kind of leadership style and/or conflict management behaviors adopted in coopetition projects would be an inspiration for future studies in order to understand what kind of approaches individuals consider effective in certain industries. In addition, the role of trust was identified only for the tensions arising amongst the partners, but it could be interesting to apply this notion to the other level of tensions arising in coopetition projects. In addition, this research did not consider the role that third parties have in helping coopetition actors dealing with their conflicts. Indeed, in the Norwegian coopetition projects legal and consulting firms helped the three insurance companies dealing with their GDPR and competition issues.

Finally, this master thesis is also mixed methodology since it is a combination of qualitative (interviews) and quantitative approaches (survey experiments). Future research could focus on only one of these dimensions and deep dive on peculiar aspects of the coopetition strategy.

Narrowing in quantitative approaches would bring a great contribution since not many studies have focused their attention on the performance of statistical analyses.

7. Conclusion

Coopetition is a recent strategy that companies are adopting more frequently in the most diverse sectors thanks to the advantages that it brings. The overall goal of this thesis was to bridge a relevant gap in the literature regarding the leadership management of conflictual tensions that could arise in coopetition context as well as the role that trust plays in the choice of this behavior. Although different researchers have previously focused their attention mainly on how to interpret the coopetition paradox as well as the capabilities to possess, no streams of literature were identified on the role of the leaders in this context.

After having identified this gap, I pursued an analysis starting from the real case study of the three Norwegian Insurance competitors partnering together in the detection of insurance fraud. The possibility to interview directly leaders and team members operating in this coopetition project gave us fundamental intuitions to develop our study. Afterward, thanks to the analysis of the quantitative results obtained from the survey experiments, I was able to identify which is the most effective leadership style between the transformational and transactional one, as well as the most effective conflict management approach leaders should embrace to overcome, respectively, tensions at the intraorganizational and interorganizational level. More specifically, at the team level, the transactional approach seemed to be the most appropriate style to motivate and encourage team members to render the coopetition partnership successful. Settings clear targets and rewards and punishment was the key in managing intraorganizational tensions. On the other hand, a competing mindset was a preferred answer in dealing with conflicts amongst partners. Being focused on the objective of your company without considering the possibility of a compromise with your partners was depicted as the favorite approach. In this way, leaders would be sure that their companies' objectives would be completely satisfied. Furthermore, this approach was considered the favorite one regardless of the partners' trust in the coopetition projects.

These findings were in contrast with the first part of my study and, they disconfirmed my hypotheses.

Finally, this research project brought a contribution to the coopetition literature, but the greatest implication could be found on a practical side since future managers and leaders possess insights on the most effective mindset to adopt.

References

- Ancona D. (2005). Leadership in an Age of Uncertainty, *MIT Center for eBusiness*, Volume VI, Number 1
- Bengtsson M., Gnyawali D., He J., Madhavan R. (2016). The competition-cooperation paradox in inter-firm relationships: A conceptual framework, *Industrial Marketing Management* 53, 7-18
- Bengtsson M., Hintu S., Kock S (2003). Relationships of Cooperation and Competition between Competitors, *19th Annual IMP Conference September 4-6, Lugano, Switzerland*
- Bengtsson M., Kock S (2000). “Coopetition” in Business Networks – to Cooperate and Compete Simultaneously, *Industrial Marketing Management* 29, 411- 426
- Bengtsson M., Kock S, Raza-Ullah T. (2014). The coopetition paradox and tension in coopetition at multiple levels, *Industrial Marketing Management* 43, 189-198
- Bengtsson M., Raza-Ullah T., Vanyushyn V. (2016). Coopetition capability: what is it?, *The Routledge Companion to Coopetition Strategies*, Routledge, Abingdon
- Bengtsson M., Raza-Ullah T., Vanyushyn V. (2016). The coopetition paradox and tension: The moderating role of coopetition capability, *Industrial Marketing Management* 53, 19-30
- Bono J., Judge T.A. (2004). Personality and Transformational and Transactional Leadership: A Meta-Analysis, *Journal of Applied Psychology*, vol. 89, No. 5, 901-910
- Brandenburger A.M, Nalebuff B. J. (1996). *Coopetition*, Doubleday, New York, 10 -39
- Chai L., Li J., Tangpong C., Clauss T. (2020). The interplays of coopetition, conflicts, trust, and efficiency process innovation in vertical B2B relationships, *Industrial Marketing Management* 85, 269-280
- Chin K., Chan B.L., Lam P. (2008). Identifying and prioritizing critical success factors for coopetition strategy, *Industrial Management & Data Systems*, Volume 108, Issue 4, 437-454

Dagnino G.B., Padula G. (2002). Coopetition strategy: A new Kind of Interfirm Dynamics for Value Creation. *EURAM – The European Academy of Management, Second Annual Conference “Innovative Research in Management”, Stockholm*

Dagnino G.B., Padula G. (2005). On the nature and drivers of Coopetition. *International Studies in Management and Organization*

Devetag g. (2005). Coordination and Trust as Pre-requisites of Coopetition: Experimental Evidence, *Co-opetition strategy: Theory Experiments and Cases*, Routledge, UK

Di Guardo C.M, Galvagno M. (2004). The Dynamic Capabilities View of Coopetition: The Case of Intel, Apple and Microsoft

EbrahimiFarhangian A. (2014). Leadership Styles and Conflict Management Styles: An Exploratory Study, *Journal of Social Issues & Humanities, Volume 2, Issue 1*

Erzen E., Armagan y. (2015). The Effect of Leadership on Conflict Management, *Springer International Publishing Switzerland*, 225- 237

Fernandez A.S., Le Roy F., Gnyawali (2014). Sources and management of tension in co-opetition case evidence from telecommunications satellites manufacturing in Europe, *Industrial Marketing Management* 43, 222-235

Gnyawali D.R. (2008). Co-Opetition: Promises and Challenges. *21st Century Management: A Reference Handbook*, Charles Wankel (Ed.), Volume 1, 386-398

Guillotreau P., Le Roy F. (2010). Successful strategy for challenges: Competition or coopetition with dominant firms?

Hao B., Feng Y., Ye J. (2017). Building interfirm leadership: A relational identity perspective, *European Management Journal* 35, 651-662

Hamel G., Doz Y. Prahalad C.K. (1989). Collaboration with your Competitors – and Win. *Harvard Business Review*

Ho Park S. (2001). Interfirm Rivalry and Managerial Complexity: A Conceptual Framework of Alliance Failure, *Organization Science*

Hoffmann W., Lavie D., Reuer J. Shipilov A. (2018). The Interplay of Competition and Cooperation, *Strategic Management Journal*

Ingram A., Keller J., Smith. W.K. (2017). Microfoundations of Organizational Paradox: The Problem Is How We Think about the problem, *The Academy of Management Journal*

Kim M., Shin J.G. (2017). The mechanism behind Authentic Leadership's Effect on Coopetition: Focusing on Positive, Psychological Capital as a Mediator and Performance-based Rewards as a Mediating Moderator

Kostis A., Nasholm M.H. (2020). Towards a research agenda on how, when and why trust and distrust matter to coopetition, *Journal of trust research*, vol 10, 66-90, Routledge

Lascaux A. (2020). Coopetition and trust: What we know, where to go next (2020), *Industrial Marketing Management* 84, 2-18

Luo Y. (2007). A coopetition perspective of global competition. *Journal of World Business* 42, 129-144

Mele C. (2011). Conflicts and value co-creation in project networks, *Industrial Marketing Management* 40, 1377-1385

Muthusamy S.K., Dass P. (2021). When "trust" becomes more or less salient for alliance performance? Contextual effects of mutual influence, international scope, and coopetition, *Journal of General Management*, Vol 46(2), 144-155

Nanjundeswaeaswamy T.S, Swamy D.R. (2014). Leadership styles, *advances in management*, vol 7(2)

Olivier D, Poltras J., Chenevert D. (2009). The impact of leadership on workplace conflicts, *International Journal of Conflict Management*, 340 – 354

Oluremi A., Victor C. (2009). The role of transformational and emotional leadership in the relationship between conflict and team outcomes, 22nd Annual Internal Association of Conflict Management Conference, Kyoto, Japan, June 15-18

Pathak M. (2010). Managing Organizational Conflict, *Oeconomics of Knowledge, Volume 2, Issue 4*, 2-12

Rajala A., Tidstrom A. (2016). Coopetition strategy as interrelated praxis and practices on multiple levels, *Industrial Marketing Management* 58, 35-44

Raza-Ullah T. (2020). Experiencing the paradox of coopetition: A moderated mediation framework explaining the paradoxical tension-performance relationship, *Long Range Planning* 53

Raza-Ullah T., Kostis A. (2020). Do trust and distrust in coopetition matter to performance?, *European Management Journal* 28, 367-376

Ritala P. (2012). Coopetition Strategy – When is it Successful? Empirical evidence on Innovation and Market Performance, *British Journal of Management*, Vol. 23, 307-324

Ritala P., Saino L.M (2014). Coopetition for radical innovation: technology, market and business-model perspectives, *Technology Analysis & Strategic Management* 155-169

Saeed T., Almas S., Anis-ul-Haq M., Niazi G. (2014). Leadership styles: relationship with conflict management styles, *International Journal of Conflict Management*, Volume 25, Issue 3, 215-255

Santolaya-Sanz J., Mora-Valentin E.V., Ortiz de Urbina Criado M. (2016). Tension management and capabilities in coopetition. *Revista Espacios*, Vol 38 (N. 14)

Saunders M., Lewis P., Thornhill A (2019). *Research Methods for Business Students* (Eight ed.). Harlow, England: Pearson

Seepana C., Paulraj A. Anisul Huq F. (2020). The architecture of coopetition: Strategic intent, ambidextrous managers, and knowledge sharing. *Industrial Marketing Management* 91, 100-113

Schad J., Lewis M.W., Raisch S., Smith W.K. (2016). Paradox research in management science: looking back to move forward, *Academy of Management annals*, 10(1), 5-64

Shen H., Zhang C. (2019). Managing conflict and trust as coopetition within alliance partnerships in an emerging economy, *South African Journal of Business Management*, Vol 50

Slabbert A.D (2004). Conflict management styles in traditional organizations, *The Social Science Journal* 41, 83-92

Smiley F. (2018). Leadership Guide to conflict and conflict management, *Leadership in Healthcare and Public Health*

Smith. W.K. (2014). Dynamic decision making: a model of senior leaders managing strategic paradoxes, *Academy of Management Journal*, Vol.57, No. 6, 1592 – 1623.

Smith W.K., Lewis M. (2011). Toward a theory of paradox: a dynamic equilibrium model of organizing, *Academy of Management Review*, Vol. 36, No. 2, 381 - 403

Strese S., Meuer M. W., Flatten T., Brettel M. (2016). Organizational antecedents of cross-functional coopetition: The impact of leadership and organizational structure on cross-functional coopetition, *Industrial Marketing Management* 53, 42-55

Tidstrom A. (2014). Managing tension in coopetition, *Industrial Marketing Management* 43, 261-271

Thomas K.W., Kilmann R.H. (2008). Thomas-Kilmann Conflict Mode Instrument, profile and interpretative report

Vaalanf T., Hakansson H. (2003). Exploring interorganizational conflict in complex projects, *Industrial Marketing Management* 32, 127-138

Zhang X., Tjosvold D. (2011). Linking Transformational Leadership and Team Performance: A conflict Management Approach, *Journal of Management Studies*

Sitography

Brandenburger A.M, Nalebuff B. J. (2021). The rules of Co-opetition, *Harvard Business Review*. Retrieved from <https://hbr.org/2021/01/the-rules-of-co-opetition>

Dun&Bradstreet (2021). Fremtind forsikring AS. *D&B Business Directory*. Retrieved from https://www.dnb.com/business-directory/company-profiles.fremtind_forsikring_as.90bc48ecd76b92b6b328893a05c70cf9.html

Dun&Bradstreet (2021). Frende skadeforsikring. *D&B Business Directory*. Retrieved from https://www.dnb.com/business-directory/company-profiles.frende_skadeforsikring_as.9820a2e2db55d29494cf59543df6e25a.html

Dun&Bradstreet (2021). Tryg Forsikring. *D&B Business Directory*. Retrieved from https://www.dnb.com/business-directory/company-profiles.tryg_as.922bf735d564abfadaf504e61622691a.html

Finance Norge. Insurance Fraud in Norway, statistics on cases detected in 2020 (2020). Retried from https://www.finansnorge.no/siteassets/statistikk/livstatistikk/statistikker---livstatistikker/svik/insurance-fraud-in-norway_2021-report.pdf

Littlejohns P. (2019). Six biggest non-life insurance companies in Norway by gross written premium. *NS Insurance*. Retrieved from <https://www.nsinsurance.com/news/insurance-companies-norway/>

NCE Finance Innovation. About (2021) Retrieved from <https://financeinnovation.no/about>

NCE. A thriving fintech ecosystem (2021) Retried from <https://financeinnovation.no>

Tryg. About Tryg Forsikring (2021). Retrieved from <https://www.tryg.no/om-tryg/english/index.html>

Appendix

Appendix 1: Interview questions

Intro:

First of all, thank you for accepting to be interviewed today. I am Dalia Spadaccini, a student of the second year of the MSc in Management at the Bocconi University in Italy and attending the Major in Strategy at NHH.

I would like to ask you for your approval to record the interview. I will guarantee you that all the information will be used for the scope of this project and other possible further studies related to this topic and I will assure confidentiality within the research center RaCE. In case of any misunderstanding in the transcribed material, you will have the chance to edit it if you wish. Is It OK with you?

My research is part of the RaCE program at NHH. The purpose of my study is to analyze the impact of leadership in coopetition and how leaders can successfully manage the coopetition paradox. For a better understanding, I will introduce you to the topic of coopetition. Coopetition is a dynamic process in which actors jointly create value through cooperative interaction, while simultaneously compete to capture part of that value.

Now, let's start with the interview. I would like to conduct this interview more like a conversation than a formal interview and if you would like to add any details to my questions or ask for better specification, feel free to ask.

Background:

1. Tell me about yourself, your company, and your role within the fraud detection project.

Collaboration and competition:

2. How did you collaborate in the project? Did you believe that the parties collaborate in equal amount, or someone has put more resources (tangible or intangible) and effort for the success of the collaboration?

3. Regarding competition, instead, how did it show during the relationship with the different actors? Are the partners able to divide equally the value or did one partner overcome the other?
4. Do you believe that it is possible to make a clear distinction between cooperation and competition in this project?

Leadership and cooperation paradox:

5. How you as a leader can support this separation and handle the two different moments?
6. Did some tensions arise during the cooperation or competition phase? Is it possible to distinguish them or the line is too thin?
7. Can you give me some examples?
8. How did you handle them?
9. As a leader, what kind of approach have you pursued for dealing with your partners?
Can it be more identified with what of this term: Competition, collaboration, avoidance, accommodation or compromise?

Competition: meaning using formal authority or power to solve the conflicts

Collaboration: meaning mutual problem solving. All the parties interact with each other to discuss some issues

Avoidance: meaning avoiding the other parties to prevent any disagreement

Accommodation: meaning putting other interests below the one of the opponents

Compromise: each part of the conflict gives up something

Conflict management behavior. Now, instead, I will continue to tell you some sentence and I give you two different options: A and B. These sentences, instead, are related to the TKI (Thomas-Kilmann conflict mode questionnaire). please, in case you are not confident in giving me an answer, feel free to tell me "I prefer to not respond".

1. A. There are times when I let others take responsibility for solving the problem
B. Rather than negotiate the things on which we disagree, I try to stress those things upon which we both agree
2. A. I try to find a compromise solution.
B. I attempt to deal with all of another's and my concerns

3. A. I try to avoid creating unpleasantness for myself
B. I try to win my position
4. A. I attempt to get all concerns and issues immediately out in the open
B. I might try to soothe the other's feelings and preserve our relationship
5. A. I try not to hurt other's feelings
B. I try to do what is necessary to avoid useless tensions
6. A. I try to find a position that is intermediate between mine and another person's
B. I assert my wishes
7. A. I propose a middle ground
B. I am nearly always concerned with satisfying all my wishes
8. A. I sometimes avoid taking positions that would create controversy
B. If it makes the other person happy, I might let them maintain their views.
10. Instead, did some issues arise in your team due to cooperation with a competitor?
11. how are you able to motivate your employee?
12. Do you believe that certain leadership characteristics are necessary to manage this competition paradox?
13. As a leader, instead, regarding your team what kind of approach have you followed?
More specifically, have you paid attention on the development of the followers as well as their needs, encouraging them to take new perspectives and views? Or have you adopted an approach that can be more defined as a trade between leaders and followers, meaning that followers are compensated for meeting specific goals or performance criteria?

Now, I will give you some sentence related to your leadership style as you perceive it. The sentence will be based on the Multifactor leadership questionnaire. Please, rate each sentence from a scale between 0 and 4, where 0 means "not at all" and 4 "frequently, if not always". If you are not confident in answering to it, please tell me "I prefer to not respond"

1. I provide others with assistance in exchange for their efforts
2. I re-examine critical assumptions to question whether they are appropriate
3. I talk about my most important values and beliefs
4. I wait for things to go wrong before taking action
5. I go beyond self-interest for the good of the group

6. I concentrate my full attention on dealing with mistakes, complaints and failures
7. I articulate a compelling vision of the future
8. I avoid making decisions
9. I help others to develop their strengths

Trust

14. What was the level of trust amongst the different companies?
15. Do you believe that trust has a fundamental role in coopetition projects?

Innovation

16. In terms of innovation, is the project achieving what established initially?
17. How do you believe that the coopetition has led to innovation? Was it detrimental?

Appendix 2: Survey – experiment 1

Logic	Questions
Effectiveness of the transformational approach in dealing with interorganizational conflicts	How much effective do you believe is this approach in dealing with this conflictual situation that your team is experiencing?
Likelihood to overcome tensions thanks to transformational approach	If you were the character of the story facing controversial tensions, how likely is that you would have overcome them?
Gender	What gender do you identify as?
Age	What is your age?
Geographical area	In which geographical area do you work?
Marketplace	Which is the area of the company you work with?
Company dimensions	Are you working for a small, medium or big company?
Team size (small, medium, big)	How many people are in your team?
Role	Which is your role in your team?
Coopetition past experiences	Have you ever collaborated with a competitor?
Transformational - instrumental motivation	I want to find various perspectives when a problem needs to be solved
Transformational - inspirational motivation	I am optimistic about the future
Transformational - idealized influence (attraction)	I want to make others proud of belonging to my team
Transformational - idealized influence (behavior)	I make great clarity on the scope each member has in my team
Transformational - idealized influence (attraction)	I adopt a behavior that aims at building other's trust
Transformational - idealized influence (attraction)	I want to show my leadership power
Transformational - inspirational motivation	I want to create a significant action of the future
Transformational - instrumental motivation	I understand meanings of achieving assignments
Transformational - idealized influence (behavior)	I want an inclusive team with a shared vision
Transformational - contingent reward	I request my team members, with my support, to put great effort in the tasks they are working on
Transformational - management by exception (passive)	I believe that issues can be left over until become significant
Transformational - contingent reward	I am clear on the rewards people will have to achieve a target
Transformational - management by exception (active)	I am strongly convinced that issues do not need to be fixed until they are in difficult situations
Transformational - management by exception (active)	I pay attention and time on dealing with mistakes, complaints and failures
Transformational - management by exception (active)	I consider failures to understand if people meet specific targets
Transformational - contingent reward	I reward much gratification when people reach the goal I suggested

Appendix 3: Survey – experiment 2

Logic	Questions
Effectiveness of the collaborating approach	How much effective do you believe is this approach in managing the tensions with your competitors?
Likelihood to overcome tension thanks to collaborating approach	How likely is that you, as a leader, would have overcome tensions with the other companies thanks to this behavior?
Gender	What gender do you identify as?
Age	What is your age?
Geographical area	In which geographical area do you work?
Marketplace	Which is the area of the company you work with?
Company dimensions	Are you working for a small, medium or big company?
Team size (small - medium - big)	How many people are in your team?
Cooperation past experiences	Have you ever collaborated with a competitor?
compromising	I believe that finding a compromise is the best solution
competing	I am determined to achieving my objectives
compromising	I am willing to accept the other proposals only if people consider mine
competing	I argue for my wishes
compromising	I try to convince the other people in accepting a compromise
competing	I want things done in my way
competing	I explain to other parties my point of view in discussions and its benefits
compromising	In solving conflicts, my goal is to express my opinion, listen to the one of the others and find an agreement
compromising	I want to find a proposal that satisfies partially all parties
competing	I want the other people understand my position

Coopetition is the simultaneous pursuit of two contradictory logics: cooperation and competition. Nowadays, more and more direct competitors are involved in collaboration projects to bring substantial innovation or to consolidate their positions in the markets in which they operate. However, the pursuit of these two conflictual strategies simultaneously, the coopetition paradox, could create tensions at different levels. In this context, leaders detain a fundamental role. They should be able to integrate the paradox and adopt specific behaviors towards their teams and their partners in order to make the coopetition project successful. The current literature has extensively studied the role amongst leadership and conflict management but not much attention has been paid on this relationship in the coopetition context. Hence, this study aims to bring a substantial contribution and fill a relevant literature gap, giving also great managerial implications. It is focused on the leadership style and conflict management behavior that leaders need to adopt in order to manage conflicts between partners and within their own team. It also examines the role of trust and its influence on the choice of the most appropriate approach.

This thesis focuses on the case study of three Norwegian insurance companies partnering to detect car insurance fraud. The project starts with a literature review and, afterward, the two Studies are presented. Study 1 involves the qualitative analysis of this project: the description of the case study, the interviews, and the hypotheses development. Semi-structured interviews were conducted with leaders and team members of the Scandinavian companies. This part has been fundamental to develop a set of predictions to be tested following some statistical analyses. Indeed, the second study of this thesis comprehends two survey experiments analyzed thanks to ANOVAs and regression methods. The findings disconfirmed my hypotheses. The transactional leadership style and the competition conflict management approach have been identified as the most effective behaviors to adopt in dealing with coopetition conflicts. Furthermore, trust does not influence the choice of that behavior, even if a key success factor in coopetition relationship.

This project enriches the literature on the relationship between leadership and coopetition paradox and brings great empirical implications giving insights to future leaders and managers on the best approach to adopt to successfully deal with the coopetition strategy as well as great suggestions for future research.

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