The controversy roles of the third-party in coopetition: Stimulating collaboration or competition?

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Abstract: This research investigated the role of third party in coopetition strategies. Previous studies have considered that the third party can initiate coopetition and can also stimulate collaboration between coopetitors. In this study, we question this vision by answering the following questions: (a) Is the third party initiating coopetition or suffering from coopetition? (b) Is the third party stimulating collaboration and/or competition between coopetitors? To provide insights on these questions, we investigated two exemplar cases of coopetition in the European telecommunication satellites manufacturing sector. We show that public institutions and private clients can play the role of third party. When the third party is a public institution, it will initiate coopetition and stimulate collaboration between coopetitors. On the contrary, when the third party is a private client, it will suffer from coopetition and stimulate competition between coopetitors. The role of the third party will thus depend on the match between its interests and coopetitors' interests. If third party's interests fit with coopetitors' ones, the third party will stimulate collaboration. If not, the third party will stimulate competition.

Keywords: coopetition, third party, tensions, management of coopetition, case study, space industry

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INTRODUCTION

Globalisation and the technology race encourage firms to adopt coopetition strategies, i.e., simultaneous collaboration and competition (Brandenburger and Nalebuff, 1996; Bengtsson and Kock, 2000; Gnyawali and Park, 2011; Yami et al., 2010). Coopetition strategies may be a direct relationship between firms or may involve a third-party such as a client, an institution, a union, the government, etc (Bengtsson & Kock, 2000; Freel, 2003; Rindfleisch & Moorman, 2003; Eriksson et al., 2008; Depeyre & Dumez, 2010; Castaldo et al., 2010). A common vision appeared in the literature about the roles played by the third party. First, the third party is considered as a powerful initiator of a coopetition strategy (Depeyre & Dumez, 2010; Castaldo et al., 2010). Second, the third party is entrusted to manage collaboration to ensure the success of a coopetitive strategy (Bengtsson & Kock, 2000; Rindfleisch & Moorman, 2003).

These past studies belong to a deliberate approach of coopetition in which the third party desires to implement a coopetition strategy. However, coopetition is not always a deliberate strategy. It can be an emergent process undesired by the actors (Mariani, 2007; Czakon, 2010; Pellegrin *et al.*, 2013). When coopetition is an emergent strategy, the role played by the third party can be questioned. First, we can wonder if the third party could initiate coopetition or could suffer from it. Second, if coopetition is not desired by the third party, we can wonder how this third party would behave during the management of coopetition. Thus, our research aims to answer the following questions: (a) Is the third party initiating coopetition or suffering from coopetition? (b) Is the third party stimulating collaboration and/or competition between coopetitors?

In order to provide insights, two in-depth case studies have been conducted within the European Space Industry, investigation coopetition strategies between TAS (Thales Alenia Space – Thales group) and Astrium (EADS group). We focused our attention on two common innovation projects, Alphabus and Yahsat.

Our findings highlight two third parties: public institutions and private clients. Institutions are initiators of coopetition strategies and stimulators of collaboration. They initiate coopetition and support companies, financially and technically, to develop their common

innovation program. They also help stimulate collaboration in coopetition. On the contrary, private clients show strong resistance to coopetition at the early stages of the process. They represent a critical source of tensions during the implementation of the strategy. Instead of managing collaboration in coopetition, they encourage competition.

Our findings provide interesting insights on the roles played by the third-party in coopetition. They partially question previous studies (Bengtsson & Kock, 2000; Rindfleisch & Moorman, 2003; Depeyre & Dumez, 2010; Castaldo et al., 2010) by highlighting the controversy role of the third-party. The third-party can be an initiator of coopetition and a stimulator of the management of the collaboration as an actor suffering from coopetition and stimulating competition in coopetition. These findings are new insights and contribute to coopetition theory.

1. THEORETICAL BACKGROUND

1.1. COOPETITION: A PARADOXICAL STRATEGY

Bengtsson and Kock defined coopetition as a "*dyadic and paradoxical relationship that emerges when two firms cooperate in some activities, and at the same time compete with each other in other activities*" (Bengtsson and Kock, 2000, p. 412). Based on a similar approach, we seek to broaden this definition and define coopetition as a relationship between two economic actors that simultaneously combines two contrary dimensions, i.e., collaboration and competition. The focus on both the paradoxical and the dual dimensions of coopetition highlights the real nature of the concept.

Coopetition creates instability and tensions within the firm (Gnyawali and Park, 2011; Fernandez *et al.*, 2014). A primary source of tension is the risk of knowledge spoliation by the partner (Baumard, 2010). If one firm accesses more new competencies than its partner does, it will reinforce the firm's competitiveness at the expense of the partner (Hamel, 1991; Le Roy *et al.*, *forthcoming*). In traditional alliances, the risk of opportunism can be moderated by the alliance horizon (Das, 2006). In coopetition, the risk of opportunism is increased by competition occurring simultaneously with the need to collaborate. The question is thus how to manage coopetitive tensions to preserve collaboration and to ensure the success of the relationship (Fernandez *et al.*, 2014). The management of coopetition becomes a critical link between the adoption of coopetition and firm performance. Because coopetition refers to a paradoxical situation, we need evidence from the literature about the management of paradoxes.

1.2. PARADOXES IN ORGANISATION THEORY

The management of paradoxical tensions is a pervasive research question in organisational theory (Lewis, 2000; Smith and Lewis, 2011). In this field, how to efficiently manage paradoxical tensions is frequently debated. Two contradictory approaches to managing paradoxical tensions structure this debate. The first approach recommends paradox resolution through splitting opposite forces (Poole and Van de Ven, 1989). The second approach argues that splitting creates vicious cycles. Therefore, scholars in this second approach recommend accepting the paradox at both the individual and the organisational levels. Once the paradox is accepted, a resolution strategy should be implemented.

Most previous scholars defended a resolution approach to the paradox through splitting and choosing one dimension of the tension (Poole and Van de Ven, 1989). At the individual level, the preference for cognitive and behavioural consistency, emotional anxiety and defensiveness appear to be strong factors that support separating opposite dimensions of the paradox (Smith and Lewis, 2011). At the organisational level, organisational dynamics that embed inertia in routines (Eisenhardt and Martin, 2000) or in processes (Gilbert, 2005) represent strong factors that support separating opposite dimensions of the paradox. Thus, individual and organisational forces for consistency encourage individuals and organisations to focus their attention on a single choice.

This solution appears to be an efficient way to solve and manage the paradox. However, for Lewis (2000), this focus on a single dimension can drive short-term success but can also lead to unintended consequences such as missed opportunities. This method for managing paradoxical tensions enables vicious cycles because of individual and organisational factors (Smith and Lewis, 2011). Therefore, other approaches should be considered to turn the management of paradoxical tensions into a positive source of virtuous cycles.

A strategy based on a combination of acceptance and resolution is recommended to positively benefit from the management of tensions (Smith and Lewis, 2011, p. 389). Acceptance consists of embracing paradoxical tensions via a strategy of "working through" (Smith and Lewis, 2011). Individual factors such as cognitive and behavioural complexity (Smith and Tushman, 2005) or emotional equanimity (Sundaramurthy and Lewis, 2003) stimulate the acceptance of paradoxes and enhance virtuous cycles (Luscher and Lewis, 2008). As explained by Smith and Lewis (2011, p. 391), "*by recognizing that they could never choose between competing tensions, because either option intensified needs for its opposite, they began to adopt paradoxical thinking and opened discussions to consider*

both/and possibilities." Individuals become able to recognise and accept paradoxes. At the organisational level, the development of organisational dynamic capabilities (Teece *et al.*, 1997) also enhances virtuous cycles (Smith and Lewis, 2011).

Combined with acceptance, a strategy of resolution should also be implemented. This strategy consists of "*confronting paradoxical tensions via iterating responses of splitting and integration*" (Smith and Lewis, 2011, p. 389). These scholars do not oppose splitting and integration strategies, but combine them in strategy of resolution. Combined with acceptance at both the organisational and the individual levels, the strategy of resolution enables companies to benefit from the management of paradoxical tensions and to improve their sustainability (Smith and Lewis, 2011).

1.3. MANAGEMENT OF COOPETITION

The literature review highlights two main but opposed principles to manage coopetitive tensions consistently with principles to manage paradoxes. The integration principle is consistent with the acceptance of paradoxes (Murnighan and Conlon, 1991; Lewis, 2000; Luscher and Lewis, 2008; Smith and Lewis, 2011). The acceptance would allow individuals to understand their roles and to behave correspondingly. The integration principle consists in managing simultaneously the competition and the collaboration without avoiding the paradox and the tensions. The integration principle relies on individuals' ability to internalize the paradox and behave correspondingly. Individuals are supposed to be able to integrate the duality in their daily activities and thus to integrate the management of competition. Thus, the challenge for managers is to simultaneously manage collaboration and competition to optimise the benefits of coopetition (Luo, 2007). Instead of reducing competition or collaboration, firms would rather maintain them in a balance (Clarke-Hill *et al.*, 2003). Relevant managerial tools are then required to reach this balance and to preserve it (Chen *et al.*, 2007; Chen, 2008). Following this principle, partners can for example design a specific organization, patterns and rules (Pellegrin et al., 2013; Fernandez et al., 2014).

For other scholars, individuals are unable to act paradoxically, collaborating while competing. Thus, they recommend a separation principle consistent with the paradox solving approach through splitting (Bengtsson and Kock, 2000; Herzog, 2010). They explained that "*individuals can not cooperate and compete with each other simultaneous, and therefore the two logics of interactions need to be separated*" (Bengtsson and Kock, 2000, p. 423). Thus, the management of collaboration and the management of competition should be split to manage coopetitive tensions (Bengtsson and Kock, 2000; Herzog, 2010). The separation can

be functional, temporal or spatial. Partners can cooperate on one dimension of the value chain (i.e., R&D) while competing on another dimension (i.e., marketing activities).

However, scholars note the limitations of this principle (Das and Teng, 2000; Oshri and Weber, 2006; Chen, 2008). The separation principle appears to be inefficient because it creates new internal tensions within the organisation and integration issues for individuals. In the example cited above, a conflict can arise between both departments. The separation principle stimulated the internal inter-individual competition. Thus, it becomes very important to look for other solutions to manage coopetition. Another option for partners to separate the management of collaboration and the management of competition consists in entrusting a third party to manage one dimension: the collaboration (Bengtsson and Kock, 2000). Part of the management of coopetition is thus externalized. By doing so, partners avoid the paradox and reducing their management to a single dimension: the competition. An external member can catalyze the needs of actors to collaborate (Baumard, 2010). This external member contributes to the improvement of the partners' strategies. The involvement of a third-party in a dyadic relationship prevents a firm from its partner's opportunistic behavior.

1.4. THE ROLES OF THIRD PARTY IN COOPETITION

1.4.1. The third-party, an initiator of coopetition strategies

Some scholars focused their attention on the role of the third-party as initiators of coopetition (Freel, 2003; Eriksson et al., 2008; Depeyre and Dumez, 2010; Castaldo et al., 2010). They have shown how the third-party acts to encourage companies to adopt coopetition strategies. Without the influence of the third-party, collaboration would not exist between competitors.

For example, public institutions can facilitate the development of coopetition strategies of coopetition in innovation networks (Freel, 2003). The concept of architectural competencies (Jacobides and Billinger, 2006) seems relevant to understand the behavior of the third-party. Clients or institutions holding specific architectural competencies are thus able to influence the market structures that encourage collaboration, competition or a combination of both (Jacobides, 2006). Following this perspective, in a market, some actors are able to encourage or prevent coopetition strategies. For example, public institutions can facilitate the development of coopetition strategies of coopetition in innovation networks (Freel, 2003). Clients, in the Swedish construction sector, can also behave as third actors in order to facilitate collaboration between competitors (Eriksson et al., 2008).

The architectural approach has been empirically tested in a coopetition context. In the U.S. defense industry, the client plays an "architect" role when deciding to entrust one supplier or two competitors to manufacture a system (Depeyre and Dumez, 2010). When two competitor suppliers lack of resources or capacities, the client can encourage collaboration between both of them. In this situation, coopetition appears as the best option to exploit synergies and complementarities between both actors. The client's action complies its own strategic objective. The client stimulates collaboration between its competitor suppliers while expecting to maintain a high level of direct competition in a long-term perspective between them. The client is waiting for the development of a learning process between its suppliers. The collaboration would enable partners to learn from each other and to develop the missing capabilities.

The third-party can encourage competitors to collaborate. But its role can go further than a simple driver of coopetition. The third-party can be involved in the implementation and the management of coopetition.

1.4.2. The third-party, a stimulator of collaboration in coopetition

The role of the third-party in the management of coopetition strategies has been empirically investigated (Bengtsson & Kock, 2000; Rindfleisch & Moorman, 2003; Madhavan et al., 2004; Castaldo et al., 2010). The third-party is acting like a broker in a strategic network, helping partners to manage coopetition (Madhavan et al., 2004).

For Bengtsson & Kock (2000), according to the separation principle, the third-party can be entrusted to manage one dimension of coopetition *i.e.* the collaboration. In their study, the association of Swedish brewers is playing the role of third-party. It helps the partners to coordinate the resource pooling and to solve the conflicts between competitors. The association of Swedish brewers appears as a key actor of the management of coopetitive tensions. In a more vertical approach, Rindfleisch and Moorman (2003) show that the control by a third-party can reduce the perverse effect of coopetition on the market orientation of the partners.

In their study, Castaldo et al. (2010) analyze three strategic cooperative projects between clients and suppliers with the intervention of the third-party. Vertical coopetition, in distribution channels is more easily said than done. In the three cases, a supplier of professional services, ACNielsen, plays the role of third-party. The third-party mediation helps to tighten relationships between suppliers and retailers. He could manage the tension between collaboration and competition within and across the multiple relationship levels

involved. The third-party was trusted by both partners, linked and separated from the benefit of the project. Thus, he was legitimate to "control the level of osmosis between the supplier and the retailers" (Castaldo et al., 2010, p. 156). Evidence was provided on the critical role of the third-party in the success of the coopetition.

The conception of the third actor is similar to the Smith's invisible hand. It appears as an actor without any strategic interest, any business model. However, this vision seems a bit too naïve. The involvement of a third-party in the management of coopetition awards him a privileged position. He can acquire a lot of knowledge about the market and about the industry. He can learn from the partners some know-how. He will also develop distinctive managerial competencies. The involvement in the management of a coopetition strategy represents an important strategic opportunity for the third-party. The third-party can deliberately try to be involved in the management of coopetition to satisfy its own strategic objective (Madhavan et al., 2004). More precisely, the third-party can decide to facilitate the tensions between partners or, on the contrary, to create new tensions between them.

1.4.3. Research questions

The literature review presented above leads to two conclusions. First, third parties can initiate coopetition strategies; second, third parties can stimulate collaboration in coopetition (see table 1).

Table 1. Third parties and coopetition

Reference	Research type	Type of third party	Role in coopetition
Bengtsson and Kock (2000)	Empirical	Association	Initiator of coopetition strategies Stimulator of collaboration in coopetition
Freel (2003)	Empirical	Public institution	Initiator of coopetition strategies
Eriksson et al. (2008)	Empirical	Client	Initiator of coopetition strategies
Rindfleisch and Moorman (2003)	Empirical	Government agency	Stimulator of collaboration in coopetition
Depeyre and Dumez (2010)	Empirical	Client	Initiator of coopetition strategies
Castaldo et al. (2010)	Empirical	Supplier of professional services	Stimulator of collaboration in coopetition

These conclusions can be questioned.

Question 1: is the third party always an initiator of coopetition?

Considering the third party as the initiator of coopetition aims at considering coopetition as a deliberate strategy. In this approach, coopetition exists because the third party desires it based on a rational decision-making process (Czakon, 2010). But coopetition is not always resulting from a deliberate strategy. Coopetition can result from an emergent process

undesired by the actors (Mariani, 2007; Pellegrin *et al.*, 2013). Competitors can be constraint to collaborate because of exogenous pressures. In the same way, the third-party could be involved in coopetition without having desired this coopetition. The coopetition context could be emergent and even be considered as a constraint, something that the third-party is suffering from. Our first research question is thus as follow: is the third party initiating coopetition or suffering from coopetition?

Question 2: is the third party always a stimulator of collaboration in coopetition?

Scholars pointed out the importance of the role of third parties in the management of coopetitive tensions (Bengtsson and Kock, 2000; Rindfleisch and Moorman, 2003; Castaldo et al., 2010). But, in this context, the third party initiated coopetition. In Bengtsson and Kock (2000), the association encouraged competing brewers to collaborate and facilitated the management of collaboration. In Rindfleisch and Moorman (2003), a government agency initiated coopetition and facilitated the management of collaboration. And in Castaldo et al. (2010), the supplier of professional services was contracted and paid for initiating coopetition and stimulating collaboration between coopetitors. If coopetition is suffered from the third party, would it adopt the same role of stimulator of collaboration between coopetitors? Our second question is thus, are third parties stimulating collaboration and/or competition between coopetitors?

2. METHOD

2.1. RESEARCH DESIGN

Case-based exploratory methods seem very appropriate to understand a phenomenon that is poorly understood (Eisenhardt, 1989). Because in-depth study explores and details a multi-faceted, they are the best way to analyze paradoxical phenomenon such as coopetition (Bengtsson et al., 2010). Accordingly, we conducted in-depth study of two exemplar cases of coopetition in order to develop insights about the phenomenon and tensions arising from it (Yin, 2003). While, the first case is considered as an exemplar case of coopetition initiated by a third party, the second one appeared as an exemplar case of coopetition suffered from the third party.

2.2. EMPIRICAL FRAMEWORK

2.2.1. The European manufacturing sector of telecommunications satellites

Because the propensity for coopetition is higher in high-tech industries (Gnyawali et al., 2006), we conducted an in-depth case study within the European space industry, focusing on the manufacturing sector of telecommunications satellites for two reasons. First, with more

than 57% turnover1, it represents the most important sector in the space industry. Second, it is the most competitive sector in the industry. Five manufacturers, three American (Boeing Space Systems, Lockheed Martin, Space Systems Loral) and two European (Astrium and TAS) compete on the worldwide market to respond to the bids of space agencies in institutional markets and the bids of private telecom operators in both local and export markets. The European space industry is structured around two leaders: Astrium and TAS. Beyond the competition, their collaboration is helped by the co-location of their subsidiaries in the Toulouse area (South of France). As highlighted by Bakker et al. (2012), the success of the space industry relies on creative projects. Our attention focuses on an innovation programme called Yahsat that is jointly developed by TAS and Astrium following a coopetition strategy.

2.2.2. The cases

This paper explores coopetition strategies developed by Astrium (EADS) and Thales Alenia Space (TAS) in the manufacturing of telecommunications satellites industry. We focus our attention on two common projects, Alphabus and Yahsat. Alphabus is considered as an exemplar case of coopetition initiated by a third party. Yahsat appeared as an exemplar case of coopetition suffered from the third party.

Alphabus: a case of coopetition initiated by a third party

In early 2000, a new top-of-the-range market segment appeared in the telecommunications market for massive satellites. The current European ranges of products i.e. Eurostar (Astrium) and Spacebus (TAS) were too limited to compete in this market segment. American manufacturers such Boeing Space had already developed new products to lead the new market segment, leaving Europeans manufacturers in a follower position. Missing market opportunities, Astrium and TAS decided to develop a new range of products but they lacked of financial capacity to sustain their innovation.

Astrium and TAS needed institutional investments from the French institution CNES (Centre National des Etudes Spatiales – National Center of Space Studies) and from the European institution ESA (European Space Agency). Because the institutional support was limited, CNES and ESA forced Astrium and TAS to pool their human, technological, and financial resources to develop together a common new range of satellites. In 2001, Astrium and TAS, supported by ESA, implemented a program called Alphabus to design and build a

[1] GIFAS Report 2010-2011

new European orbital platform able to support very powerful telecommunications satellites and compete with American manufacturers on the top-of-the-range market segment. The objective of CNES and ESA was to stimulate European innovation to improve European competitiveness against the American leadership. Alphabus is the case studied.

2.2.3. Yahsat: a case of coopetition suffered from the third party

In August 2007, Al Yah Satellite Communications Company (Yahsat) contracted with Astrium and TAS for the manufacturing of a dual system of telecommunications satellite. With a global value of approximately 1.8 billion dollars, Yahsat became the most important worldwide space programme. To compete against a strong American competitor and to share a high level of risks, Astrium and TAS decided to pool their forces to answer the bid together. The implementation of a coopetition strategy allowed Astrium and TAS to offer a better proposition and win the market. Astrium was responsible for the development of the platform while TAS was responsible for the payload manufacturing. Because of the high risks, TAS and Astrium decided to share all the risks on a no-fault basis. This formal commitment represented a significant departure from classical vertical collaborative relationships. With the full risk-sharing rule, Astrium and TAS moved from subcontractors to real horizontal partners.

2.3. DATA COLLECTION AND ANALYSIS

We intentionally conducted a qualitative case study to avoid the constraints of a preliminary choice of analytic tools or data (Yin, 2003), making it possible to access heterogeneous data collected from a variety of sources (Langley and Royer, 2006). Following the recommendations of Bengtsson *et al.* (2010), we investigated coopetition tensions across the organisational and team levels. The units of analysis are the firm and the project team. Following the criteria for qualitative analysis (Eisenhardt and Graebner, 2007), we began our case study analysis by interviewing key decision makers in top management within Astrium and TAS.

The first round of interviews began with semi-structured interviews, keeping in mind the general research questions regarding coopetition but allowing constructs to surface freely regarding the nature of the phenomenon for the partners (Glaser and Straus, 1967). After the first round of interviews, we were able to delimit the different current telecommunications programs and identify the individuals involved in the teams. The second round of interviews was conducted with project managers and team members of the coopetitive (i.e., Yahsat) and non-collaborative programmes. In total, forty semi-structured interviews lasting

approximately 60 minutes each were conducted individually, recorded and transcribed. All of the interviews were conducted in France (Paris, Cannes and Toulouse).

Data gathered from the interviews were corroborated by secondary data from multiple sources. Internal secondary data came from extracts taken from contracts, meetings, presentations and managerial reports. External secondary data came from national reports, expert analysis and press articles. Interviews were coded in two rounds using NVivo software. The second round of "*interpretive*" coding enabled us to go beyond the descriptive coding in the first round (Miles and Huberman, 1994). The discussion below is based on the information collected from the primary and secondary data sources. We provide quotes and related information in developing our insights. We refer to the quotes whenever appropriate, without naming the companies. Firm A and Firm B will be used to preserve anonymity.

3. FINDINGS

3.1. THE THIRD PARTY: INITIATOR OR RESISTANT TO COOPETITION?

The concern is about deeply understanding the position of the third party when coopetition strategies are decided. What is the role-played by the third party? Is the third party facilitating and encouraging the development of coopetition strategies or rather resisting and fighting against coopetition? Our findings show different situations depending on the type of third actor.

3.1.1. Public institutions: initiator of coopetition

At the beginning of Alphabus, Astrium and TAS were willing to develop their own range of satellites separately. Astrium and TAS could not afford to develop their own range of satellites. Thus, they individually asked for financial support to space agencies. The European Space Agency (ESA) and the French Space Agency (CNES) had a double role in the space industry. They were the main clients in some sectors as science, earth observation or meteorology. On the sector of telecommunications satellites, the agencies' actions were to technologically and financially support the industry. Their mission was to help European manufacturers to reduce the impact of the R&D costs. Space agencies could not accept to fund Astrium and TAS to develop two new ranges of satellites. It was too costly and too risky. The potential of this new market was not important enough for two different ranges of products. ESA and CNES encouraged collaboration between TAS and Astrium to innovate together. Such collaboration was the condition to obtain funding from the agencies. An Alphabus project manager from a space agency explained the importance of the partnership:

"The French government and CNES at the corporate level definitely wanted that the two companies would progress together partially because of the fact that the satellite, the satcom industry in particular, was costing the French government too much to maintain two companies at the same time."

Astrium and TAS would rather develop alone their own range of satellites. They were not confortable with the idea to innovate with their main competitor. Facing a dilemma they had to decide between not doing anything and developing a new platform with their competitor. The head of the engineering system of Yahsat from firm B, clearly explained that the offer of the agencies had influenced their strategic decision:

"Alphabus-Alphasat was different. It was the agencies encouraging to do it. They did not want to fund the development otherwise. I think Astrium and TAS would have been very happy to develop an Alphabus a 100% Astrium or a 100% TAS. They would have preferred it. But, the deal would have not been concluded. So, it is better to get a 50% with the support of the agencies than 0."

TAS and Astrium did not deliberately enter in a coopetition strategy. The coopetition strategy was strongly driven by the space agencies. As highlighted by the ESA project manager, it was hard to convince the manufacturers to work together:

"And they basically - it took some while to convince them that we would only work on this programme if they wanted the programme with one contract."

In the Alphabus case, space agencies played a role of third party driving and encouraging the emergence of coopetition strategies. Space agencies initiated coopetition strategies. On the contrary, in the Yahsat case, the client was acting like a third party against coopetition strategies. The client was resisting to coopetition.

After their involvement in the early stages of the process, the question is thus what are the roles of third parties in the implementation and in the management of coopetition strategies.

3.1.2. Private client: resistant to coopetition

In Yahsat, during the first step of the bid, the client was stimulating the competition between all the potential suppliers. At this time, Astrium, TAS and Boeing were competing. Astrium and TAS wanted to maximize their chances to win against their third American competitor. Besides, Yahsat was considered as the most risky project in the whole space industry. The client was completely unknown in the market. Its financial capacity was not confirmed. He did not have any reputation to trust in. Suppliers would face financial, commercial and technological risks. For both reasons, the will to win against Boeing and the risk sharing, Astrium and TAS decided to ally their forces in the second step of the bid. A joint offer of Astrium and TAS was thus competing against Boeing's offer.

Yahsat disagreed on this strategy. He refused it. From its point of view, an alliance between its suppliers was a source of disadvantage. He was afraid to loose power in the negotiation process. He was afraid to pay a higher price for a worse technology quality. Moreover, Yahsat had a strategic agenda. This program was its first space program but he planned to launch other satellites in a few years. Thinking about futures bids, he wanted to preserve and maintain a high level of competition between its suppliers in order to negotiate the prices and the terms of the contract. A strong competition was the only way to obtain the best offer, technically and financially.

In the program, Astrium and TAS entered in a long and tough negotiation process with the client. They had to reassure him about the price and the technology. They explained the client that this collaboration between them would lead to a pooling of the best technologies of both partners. This way, the client would get the best telecommunication system of the market. The client was seduced by the technological argument. But, he was still worried about the complexity of dealing with two suppliers at the same time. He eventually accepted the collaboration between TAS and Astrium but on one condition. He expressly required having a single representative. He did not want to have to deal with conflicts or tensions between both suppliers. In Yahsat the client strongly resisted to Astrium and TAS decision to collaborate. Suppliers had to point out a technological argument to ensure the client that he would get the best offer.

3.2. THE THIRD-PARTY STIMULATOR OF COLLABORATION

Our findings provide interesting illustration of the role of the third-party in the stimulation of collaboration in coopetition strategies. In the Alphabus case, a committee composed of Astrium, TAS, ESA and CNES was governing the program. Space agencies were involved in the industrial realization of Alphabus. Both institutions worked together as a mediator to manage coopetition tensions between manufacturers. A project manager from a space agency pointed out the importance of the role of the agencies in the management of tensions:

> *"We also had an agreement with industry to have something like a steering board. So in the steering board the high level management of ESA, CNES, Astrium and Alcatel were represented. So these were not the project managers but were actually the bosses and that turned out also to be a very useful way of dealing with difficulties. And in fact it helped a lot also to let's say whitewash problems that there were between Astrium and Alcatel because there was always a sort of third party who could mitigate or mediate between the two. And likewise straight away when there were issues between ESA and CNES they could sometimes effectively have industry in the steering board who would help."*

More concretely, CNES and ESA contributed to the management of coopetitive tensions in two different ways. First, since CNES and ESA were funding the project, they were behaving

as clients. While private clients were only focused on profitability, institutional clients were also pursuing a more qualitative objective: the promotion of the European space agency. Consequently, space agencies were more flexible than private clients. For example, instead of putting pressure on the manufacturers in case of delays or technical failures, space agencies were understandings and supported them to find financial or technical solutions.

Second, space agencies participated in the management of coopetitive tensions. When partners were too competitive, when the tensions could put in danger the program, space agencies were stimulating collaboration. They were particularly involved in the management of three coopetitive tensions: technical coopetitive tensions, informational coopetitive tensions and marketing coopetitive tensions.

In Alphabus, technical tensions in Alphabus appeared about deciding what technology should be used or not and what development should be make or not. Astrium and TAS were competing to promote their own technology, to benefit from Alphabus more than their partner. Space agencies contributed to the management of these technical tensions. They monitored the program in financial and technical terms. Space agencies were invited to managerial and technical meetings. They accessed all the documents about the program development. They evaluated Astrium and TAS technical proposals regarding the schedule, the risks and the costs. They gave their opinion about technical choices and could also ask for a revision of the decision. Even if the final decision remained in the hands of TAS and Astrium, space agencies were formulating important technical recommendations to guide partners' final choice. Space agencies controlled TAS and Astrium opportunistic behaviors. Partners were tempted to use the funds for other developments. ESA and CNES were controlling the appropriate allocation of the fund raised. The involvement of space agencies helped partners to solve conflicts and to take the best decisions for the program. The presence of space agencies guaranteed a technological optimization and limited partners' opportunistic behaviors.

The information sharing was a critical issue for TAS and Astrium during Alphabus. What information should be shared or protected? Each partner was trying to limit the sharing to avoid its partner to learn from him. At the same time, each partner was trying to learn from its competitor. Each firm was encouraged to protect its strategic information. If both partners were doing the same, the project would have failed. When partners were refusing to share key information required for the development of Alphabus, space agencies took a step in the process to say, "Share it". They explained that it was essential for the program. Astrium and

TAS accepted their action because they were respecting the confidentiality of the data. No information about Astrium was shared with TAS through CNES or ESA and reciprocally. Space agencies were encouraging the necessary collaboration for Alphabus. Space agencies were not very confortable with this mission. They were afraid to drive the industry in a wrong direction. A project manager from a space agency explained how tensed the situation was and how complicated it was to convince the partners to pursue collaborating:

"There was a case at the sub-contracting level where we had to arbitrate. But I mean really arbitrate between manufacturers because they did not want to work together anymore. We did a lot of efforts and we got them to keep working together. It was highly positive. But, from my point of view, it is something we should avoid."

The development of Alphabus was a highly innovative new platform and clients did not want to test it first. Astrium and TAS were developing an innovation with an uncertain market potential. Without clients, all the efforts done to develop the new range of products would have been useless. This issue was an important source of tensions between partners. Space agencies decided to help the manufacturers to sell the first satellite based on Alphabus technology in order to demonstrate the reliability of the product.

The study of Yahsat provided interesting results on the role of the third party on the management of coopetitive tensions. After the definition of the project and the division of the activity, some tensions between individuals appeared. Individuals from TAS and Astrium found extremely hard to work in this coopetition context. They had different languages, different process. An engineering manager from firm B insisted on the importance of the tensions:

"On Yahsat, we collapsed because we did not get to really recreate common processes. We hide behind common words. But make people working together, it is a big difficulty."

Project managers from Astrium and TAS tried to motivate their teams without in vain. Facing this impasse, they decided to contract an external agent: a consulting group. The mission of this third party was to establish a diagnosis of the situation to understand the sources of tensions and proposals to solve them. Project managers were expecting concrete solutions. The project manager from firm B explained the approach:

"Because after six-nine months, there were a lot of people saying 'it is complicated to work with the English. We are sick of it'. Teams were worn out after the first year. As heads the program we tried but we did not succeed because were are also stakeholders. So the only solution was to involve an external member, with a new eye, to do a diagnosis and to tell us 'the solution is obvious - do this or do that. It will work better'. Members of the program have been interviewed, to express what was good and what was wrong. Based on this data we tried to work, to improve our organization and our functioning."

This diagnosis pointed out major differences in the practices between both companies.

Project management methods differed from TAS and Astrium. It was thus necessary to create a common frame of reference. But the consulting group failed in their mission. They did not convince team members with their proposal. Team members perceived these proposals as bureaucratic solutions, too external and not relevant for their daily work. From their point of view, consultants could not understand them really.

The implication of an external third party did not contribute to manage coopetitive tensions. The intervention was useless. Coopetition management remained the mission of project manager.

Our findings show that while space agencies i.e. public institutions positively contributed to the management of coopetition, consulting agency failed in the same mission.

3.3. THE THIRD-PARTY STIMULATOR OF COMPETITION

Our findings provide interesting illustration of the role of the third-party in the stimulation of competition in coopetition strategies. While a private client initiated Yahsat program, public institutions initiated Alphabus program. However, Alphabus concerned the development of a new platform and a new range of products based on this technology. The marketing of Alphabus involved a new actor: a private client. Eventually, in both programs, a private client was involved. This third party represented an important source of tensions. We have identified two main sources of tensions: a source of commercial tensions and a source of informational tensions.

First, the presence of a private client increased the commercial tensions between TAS and Astrium. Yahsat was a new client in the whole market. It was its first contract. But, the clients expressly mentioned its intention to develop its space activities. There was no agreement between TAS and Astrium to reproduce the same collaboration plan for future contracts. Most probably, TAS and Astrium would be competitors for future bids. In order to maximize their chances the win the future contracts, TAS and Astrium were playing against each other in the current contract to improve their brand image and to increase their notoriety. They tried to organize private meetings with the client claiming a question about the current program. During the meeting, they were trying to highlight their strengths discrediting their partner at the same time. The client benefitted a lot from this increasing competition between both manufacturers. Powerful, he could negotiate with each of them separately in order to get better prices and better technologies.

In Alphabus, as the ESA became the real first client of the first contract named Alphasat, the agency started to behave as a private client. The evolution of the role of ESA impacted the

relationship between TAS and Astrium. In case of technical difficulties or delays, Astrium and TAS played with the agency. Instead of assuming its responsibilities, each manufacturer was trying to shift its responsibilities on the partner. TAS and Astrium were discussing alone with their client to improve their image: "the fault was not mine but the partner's". When the partner realized this attempt to manipulate the client to its detriment, new tensions emerged between TAS and Astrium.

Second, the involvement of a private client in an industrial program created informational tensions between partners. Manufacturers lacked confidence in the client to share confidential information with him.

The client can interfere in the manufacturing process of a space program. Private telecommunication operators have both a technical and commercial functions. They rely on the technical function every time they buy a satellite. Lacking experience, Yahsat should develop specific competencies about satellites and telecommunication systems. Yahsat decided to poach employees from manufacturers of satellites and other operators. Individuals were suppliers until now and they became clients. These staff transfers created confusion and new tensions as highlighted by a project member from firm A:

"For example, when were competing against Boeing at the beginning, well there was this guy well Yahsat hired him. He was in charge of the Boeing offer. So, at first we thought it was good. It was our competitor and he became our client. But, he would have a full visibility on what we do. He is our client. Who knows what this guy would do once the program would be over, would not go back to Boeing for example. We have no guarantee."

Besides, the client could require additional clauses to the initial contract such as technical improvements. Each new requirement of the client represented a source of tensions between manufacturers. For TAS and Astrium, a requirement represented the opportunity to get new funds. The equilibrium of the relationship between TAS and Astrium was disturbed and dominated by competition. Each partner was negotiating individually with the client, trying to be entrusted for the new development. The head of the space segment for firm A explained:

"Sometimes, when we have to make a change, when the client requires something new, one or the other partner explains to him that he could probably do better than its partner."

The coordination of Yahsat was complicated. Astrium and TAS were reusing technologies from their own range of products, Eurostar and Spacebus respectively. Thus, they had to share internal and strategic information. This information was essential for the common program but also highly competitive for TAS and Astrium. Facing a high risk of transfers, partners agreed on different rules about what kind of information should be shared, how and when. The complexity of the management of information increased during meetings with the client.

The client would have access to all the confidential data from TAS and Astrium. Even if partners were designing an information system to prevent them from the risks of transfers, transfers could still occur through the client. The client's requirements for detailed information about a payload or about the ground segment increased the tensions between partners. In this case, Astrium or TAS had to share the information with the client. The challenge was to share the information only with the client and not with the partner. During physical meetings between both manufacturers and the client, the risks of transfers were very high as the project manager from firm A explained:

"It is good to mail separated documents to Yahsat from Astrium or TAS. Astrium or TAS would not have the documents. But if three days later, in a meeting, we will discuss the content the document all together, it will not work. The information would be shared."

The client, could intentionally or not share the information with the partner. Its objective was to increase its own competitiveness, thus to get the best innovation to compete on the operating market. Transferring information to the partner would increase the competition between TAS and Astrium. The client would expect partners to be challenged to find new solutions for new developments. The client's aim was its own interests, no matter if the tensions between TAS and Astrium were more intense. He was benefiting from the situation.
In Alphabus, partners did not pool their strengths but their weaknesses in order to benefit from the new development made for Alphabus for their own range of product. So, confidential information was about partners' weaknesses. The presence of the client in the program would increase tensions between TAS and Astrium. When an incident happened on a component, the client required the details of the issue. If the anomaly came from TAS, Astrium did not have access to the documents and reciprocally. The documents should remain strictly confidential. A technical manager from firm A explained the complexity of this configuration:

"Even the client is sometimes embarrassed because he should not share the information with us. But it is a delicate issue. We are prime contractor and we were not there when some incidents occurred while our client was there with our partner. It was tough to handle. Because after that, we have to trust the partner when he explained to us that the problem was solved. If the client is happy and says, "I am ok with what has been presented, it is solved", this is fine. But on the contrary, it could be difficult. We guarantee the satellite."

The presence of the client in the program intensified the informational tensions between Astrium and TAS. The manufacturer excluded from the meeting was prejudiced from. An asymmetry in the relationship was thus created.

4. DISCUSSION

Our study aims to answer the following questions: (a) Is the third party initiating coopetition or suffering from coopetition? (b) Is the third party stimulating collaboration and/or competition between coopetitors? Our findings highlight two categories of actors considered as third parties and their roles in the coopetition process (table 3).

Table 3. Types and roles of third parties in coopetition

Type of third party / ***Role***	***Public Institution***	***Private client***
At the beginning	Initiator of coopetition	Suffering from coopetition
During the implementation	Stimulator of collaboration	Stimulator of competition

Our findings show that public institutions can be initiators of coopetition. Alphabus appeared as an exemplar case of an externalized management of collaboration through a third party. Public institutions encouraged TAS and Astrium to collaborate with strong financial incentives. This result is consistent with previous studies (Bengtsson and Kock, 2000; Freel, 2003; Eriksson et al., 2008; Depeyre and Dumez, 2010).

Our findings pointed out that when the third party is initiating coopetition it also appears as a stimulator of collaboration. From the early stages of the program, space agencies were monitoring the program and helping partners to coordinate. Their objective was to enhance the collaboration between both manufacturers. Tensions between TAS and Astrium were important during the industrial division. Partners were about to quit the project. Space agencies helped partners to find a relevant tasks division based on equity. They facilitated the management of tensions during interfaces. Their single objective was the success of the program. The involvement of public institutions in Alphabus reduced the intensity of the tensions between coopetitors. Our results are consistent with the study of Freel (2003). The author pointed out the importance of the role of public institutions to facilitate coopetition relationships in innovation networks. More generally, our result is in line with previous studies considering the third party as a stimulator of collaboration in coopetition context (Bengtsson and Kock, 2000; Rindfleisch and Moorman, 2003; Castaldo et al., 2010).

So, our first major result shows that public institutions encourage coopetition and contribute to the success of the relationship with an appropriate management of the collaboration. Tensions between partners are thus reduced. Partners could then focus their attention on the

program success and deal only with one dimension: the competition. This conclusion enables us to formulate proposition 1:

Prop 1. When the third-party is a public institution, it initiates coopetition and it is a powerful stimulator of collaboration between coopetitors

Previous studies highlighted the influence of private client in the emergence of coopetition strategies (Eriksson et al., 2008; Depeyre and Dumez, 2010). Our results obtained on Yahsat program seemed contrary to these scholars. In the case, the private client strongly resisted to coopetition at the early stages of the process. He represented a major obstacle to coopetition. Afraid to loose its power in front of their suppliers, he started to refuse coopetition. He only accepted the situation we was expecting a higher value creation than in pure competition.

Even after the acceptance of the context, the client was playing with the duality, encouraging competition and rivalry between partners. He tried to turn the situation to its own advantage. The client did not represent a facilitator of the management. On the contrary, Astrium and TAS considered him as an added source of tensions. He could be the cause of important damages and of the program failure. Our results enable us to formulate proposition 2:

Prop 2. When the third-party is a private client, it resists to coopetition and it is a powerful stimulator of competition between coopetitors

The two research propositions highlight a controversy at the emergence of coopetition and during the management of coopetition. Indeed, 1) they confirm the role of third party as an initiator of coopetition but they also highlight the role of a third party as a resistant to coopetition and 2) they confirm the role of the third party as a stimulator of collaboration but they also highlight the role of a third party as a stimulator of competition. The question is thus why the behavior of a third party in a coopetition context could be that different? Our findings show that it depends on the status of the third party: public institution or private client.

When the third party is a public institution, its only concern is the success of the project. In Alphabus, space agencies were focused on the promotion of a new European innovation. They were acting like the brewer association in Bengtsson and Kock's study (2000), like the government agency in Rindfleisch and Moorman's study (2003) or like the supplier of professional services in Castaldo et al.'s study (2010). In all these studies, third parties are acting without hidden agenda. In favor of coopetition they are promoting collaboration between partners in order to maximize the chances of success. Their external and neutral position increased their legitimacy to offer solutions to individuals dealing with high levels of tensions.

On the contrary, when the third party is a private client, it follows its own business model. It has no interest in collaboration between its suppliers. On the contrary, such collaboration could lead to higher prices offers. Its objective is to increase tensions between partners in order to stimulate competition. Competition is good for the client to obtain better prices and better technologies.

When the third party is initiating coopetition strategies, it will also actively participate in the management of coopetitive tensions, preserving collaboration. When the third party is suffering from coopetition, its presence during the project will increase competition and thus create new tensions between partners. Team members from Yahsat and Alphabus can feel the differences of tensions in their daily work. Teams responsible for Yahsat and Alphabus were located in the same building but at different floors. A Yahsat project manager from firm B was sharing a feeling: "*it is not the same stress when we run into them. They are just downstairs. We do not feel the same level of tensions*". This manager was assuming that the level of tensions were higher in Yahsat than in Alphabus.

We can wonder why and discuss this assumption. The presence of a third party in the management of coopetition could reduce the level of tensions. When the objectives of the third party fit with the partners' ones, the third party does not represent an added source of tensions. The Alphabus case provides strong evidence on this result. On the contrary when the objectives of the third party differ from the partners', the third party represents an added source of tensions. It will act against the partners promoting competition. The Yahsat case provides evidence on this result. The telecommunications operator owns a hidden agenda and its own business model. Its actions aim to defend its competitive advantage. It has no interest in encouraging suppliers to collaborate but more in encouraging them to strongly compete. The involvement of a private client in a coopetition strategy between suppliers complicated, technically and organizationally, the relationships between suppliers. According to previous studies (Madhavan *et al.*, 2004; Castaldo *et al.*, 2010) coopetitors should pay attention to the strategic intent of the third party before accepting its implication in the program.

Proposition 3: the role of a third party depends on the convergence of its interest with the interest of coopetitors. When the strategic interest of the third party matches with coopetitors' interests, it will initiate coopetition and stimulate collaboration; when the strategic interest of the third party is opposite to coopetitors' interests, it will resist to coopetition and stimulate competition

Moreover, the two case studies provided an unexpected insight about the performance of

coopetition. Intuitively we could expect a higher performance when coopetition is initiated by a third party and when collaboration is managed by a third party than when coopetition is suffered from a third party and when the third party is increasing competition between coopetitors. However, our findings seem to show the contrary.

Our data do not allow us to measure the performance of coopetition. But, based on the cases studied was can discuss the efficiency of the project regarding their duration and their cost, i.e. two indicators of the success of a space program. While the Alphabus platform was supposed to be achieved in five years, the first satellite based on Alphabus technology was launched in 2013, i.e. twelve years after the beginning of the project. Yahsat satellites were launched in 2011 and 2012, with one and two years of delays. The initial schedule seemed more respected in Yahsat than in Alphabus. The same observation can be made on the costs structure although data were confidential. While Yahsat respected the initial budget of 1.8 billion dollars, the budget of Alphabus doubled after five years and doubled again two years after that.

The level of tensions seemed higher in Yahsat than in Alphabus, mostly because of the action of the third party. In the first case the third party is increasing the tensions between partners and creating new ones while in the second case the third party is contributing to the management of coopetitive tensions. We can wonder if the reduction of the levels of tensions is a factor of non-performance. Coopetitors seem to do less effort when a third party supports them than when they are alone. However, the delays and the cost increasing observed in Alphabus could have many other explanations. Our assumption should be evidenced and discussed with further investigation.

CONCLUSION

This research investigated the role of third party in coopetition strategies. So far, previous studies have considered that the third party can initiate coopetition and can also stimulate collaboration between coopetitors (Bengtsson & Kock, 2000; Freel, 2003; Rindfleisch & Moorman, 2003; Eriksson et al., 2008; Depeyre & Dumez, 2010; Castaldo et al., 2010). These scholars conceptualized coopetition as a deliberate strategy neglecting that coopetition can also be an emergent process (Mariani, 2007; Czakon, 2010; Pellegrin *et al.*, 2013) undesired by the third party.

In this study, we aim to fill this gap by answering the following questions: (a) Is the third party initiating coopetition or suffering from coopetition? (b) Is the third party stimulating collaboration and/or competition between coopetitors? To provide insights on these questions,

we investigated two exemplar cases of both coopetition initiated by a third party and coopetition undesired by a third party. Our findings show that public institutions and private clients can play the role of third party. When the third party is a public institution, it will initiate coopetition and stimulate collaboration between coopetitors. On the contrary, when the third party is a private client, it will suffer from coopetition and stimulate competition between coopetitors. The role of the third party will thus depend on the match between its interests and coopetitors' interests. If third party's interests fit with coopetitors' ones, the third party will stimulate collaboration. If not, the third party will stimulate competition.

However, our findings are facing some limitations that offer opportunities for further research. First, we set up two case studies which exemplarity could be questioned. Would the same results be obtained in other contexts? Other empirical studies are required to generalize or discuss our findings. Second, we focused our attention on two types of third party: public institutions and private clients. Other types of third party should be considered in future research such as unions, consulting groups etc. It would be interesting to compare the roles played by all these potential third party in the coopetition process. Third, the private client seems suffering from coopetition and stimulating competition between coopetitors. This situation is characteristic from a B-to-B relationship in which the client is more powerful than the supplier. It would be interesting to study the role of clients in B-to-C relationships. In this case, we can wonder if clients would be coopetition avoiders or coopetition promoters.

Finally, this research provided unexpected results regarding the performance of different coopetition strategies, involving or not a third party. Our findings suggest that the performance is higher when the coopetition is suffered from the third party and when the third party stimulates competition between coopetitors. This counter-intuitive result should be further empirically investigated. If similar results would be found in other studies, it would prove that coopetition creates profitable tensions. Coopetition would be more profitable when the induced tensions would not be reduced by a third party but relevantly managed by the coopetitors themselves. To conclude, further researches are required to better understand all the implications and the complexity of the coopetition phenomenon.

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