Collaborating with your Rivals: Identifying Sources of Co-opetitive Performance

Abstract

Co-opetition builds on the idea that firms cooperate to create value and create a bigger pie, and when the time comes to divide the pie they compete to appropriate value. Despite extant research on this topic, our understanding about how firms improve their performance by being engaged in co-opetitive networks with their rivals is still in its infancy. Strategic research have treated the collaborative and competitive relationships between firms separately, while in a co-opetitive network managers need to evaluate and manage relationships where they are simultaneously pursuing these two conflicting behaviors. Our framework proposes a definition for a firm’s co-opetitive performance. It also identifies three potential sources of co-opetitive performance: network resources, absorptive capacity and relationship governance.

Introduction

Co-opetition builds on the idea that firms competing for their market share can not just focus on their rivalry, they also have to cooperate in different means, most importantly for innovation and economical purposes. In the strategy literature the hybrid behavior comprising cooperation and competition has been named "co-opetition"(Brandenburger and Nalebuff 1996; Lado, Boyd et al. 1997; Zeldin 2004). Co-opetition suggests that firms perform better when they simultaneously engage in collaborative and competitive relationships. Despite extant research on this topic, our understanding of how firms are able to improve their performance when being engaged in co-opetitive networks with their rivals is still in its infancy.

The main reason behind this gap is that strategy literature has essentially been developed around two opposite perspectives, i.e., the competitive perspective versus the cooperative perspective. The competitive perspective postulates that firms have conflicting interests as they aim to accrue their economic rent at the expenses of the others, and advocates that firms should develop their exclusive resources and capabilities to achieve competitive advantage. Conversely, the cooperative perspective postulates that firms can enhance their performances by mutually developing common interests, for example, by pulling together their complementary resources. However most relationships in strategic network are neither strictly competitive nor strictly cooperative; they involve mixed motives in which members have private and common interests (Khanna, Gulati et al. 1998; Gulati, Nohria et al. 2000; Padula and Dagnino 2008 ). In these co-opetitive networks, firms cooperate to jointly create value and create a bigger pie; and firms compete when the time comes to divide the pie and capture value (Brandenburger and Nalebuff 1995). Thus, inspecting co-opetitive networks from a competitive or a cooperative perspective
separately leads to some inconsistent results, such as firms should share resources the uniqueness of which is at the essence of their competitive advantage.

The phenomenon of co-opetition has gained an increasing importance in the era of information and telecommunication business economy. New information and communication technologies have played an enabling role in blurring organizational boundaries and formation of networks of firm. In these networks, competing firms jointly coordinate resources and capabilities to develop new products and create new common markets. Ultimately they compete in these jointly created markets. An interesting phenomenon in the last decade is the arise of voluntary Standards Setting Organizations (SSOs), where competitors jointly develop and promote uniform technical standards. Competitors find substantial strategic implications in voluntary joining SSOs. On one hand, they exchange and share resources and valuable knowledge about new technologies in order to develop technical standards which promise interoperability between their products or processes. The aim is to enlarge their customer base, create a larger overall market, and commonly exploit new opportunities in this new market. On the other hand, firms defend in the SSOs their private interests by supporting the technological paths which better support their business model. The goal is to ultimately appropriate the largest market share from the jointly created market, by for example developing complementary innovative products to the standard product.

Success in today's business world consequently requires from firms to develop, manage and assess complex co-opetitive relationships. However, evaluating co-opetitive performance is challenging since the traditional measures of pure competitive or collaborative performance are not indicative of how well firms manage the interplay between these two conflicting behaviors. In this paper we propose a model which helps identifying firms which are deficiently co-opeting in their network, and capabilities that should be developed within the firm in order to enhance its co-opetitive performance. The purpose of our model is two fold. First, it provides a definition of a firm’s co-opetitive performance. Although scholars have acknowledged that firms generate economic rents and achieve superior performance through simultaneous cooperation and competition (Brandenburger and Nalebuff 1995; Brandenburger and Nalebuff 1996; Lado, Boyd et al. 1997; Bengtsson and Kock 2000), they did not provide a measurable definition of a firm’s co-opetitive performance. Based on the premise that firms collaborate to create value, thus increasing the size of the pie, and compete to appropriate value, thus dividing the pie, we suggest that a firm’s co-opetitive performance is synergy function of two orthogonal dimensions: their collaborative performance and their competitive performance. Second, the model identifies three potential sources of co-opetitive performance: network resources, absorptive capacity, and relationship governance. We examine each of these potential resources, and we explain how each source affects the collaborative and competitive performance of the firm concurrently. We focus on co-opetitive relationships where collaboration occurs between rival firms in the same network at technological and market levels.

First, we introduce our dependant constructs the collaborative performance, the competitive performance, and the co-opetitive performance of a firm. Second, we define the different sources of a firm’s co-opetitive performance. We provide propositions on
how these sources affect the collaborative and the competitive performance of the firm. Finally we conclude and discuss the implications for practitioners for research.

**Definition of a firm’s co-opetitive performance**

By definition, the essence of co-opetition is that firms collaborate with each others to increase the size of the pie, then compete in splitting it (Brandenburger and Nalebuff 1996). Hence, co-opetitive relationships are the interplay of two paradoxical interactions, i.e. collaboration and competition (Bengtsson and Kock 2000; Padula and Dagnino 2008). Strategy literature has already examined firms’ performance under collaborative or competitive interactions separately. However, the mechanisms underlying these two behaviors are conflicting, therefore the related definition of performance are not indicative of how well firms perform in their co-opetitive efforts. In this session, we aim to introduce a measurable definition of firms’ performance when these latter are engaged in a network of co-opetitive relationships with their rivals. We first define the scope of the co-opetitive relationships that we examine. Following, we investigate the strategy literature’s contribution to the definition of co-opetitive performance. The literature suggests that co-opetition is a maximization of collaboration and competition (Lado, Boyd et al. 1997; Bengtsson and Kock 2000). We consequently define the collaborative performance of firm and its competitive performance in a co-opetitive context. The co-opetitive performance is defined as a result of the synergistic blend between these two performances.

In this paper we focus on co-opetitive relationships where collaboration occurs between competing firms in the same network at the technological and market levels. Co-opetitive relationships have been broadly defined as relationships between different independent organizations which cooperate and compete at the same time with each other (Brandenburger and Nalebuff 1995; Zeldin 2004). According to this definition, co-opetition occurs between a firm and its complementors, suppliers, customers and rivals. Yet, extant literature has addressed the performance of firms being engaged with competitive interactions with their common collaborators, i.e. complementors or suppliers (Dowling, Roering et al. 1996; Di Guardo and Galvagno 2007; Padula and Dagnino 2008; Afuah 2009), or competing with some firms while collaborating with others (Dyer and Singh 1998; Gnyawali and Madhavan 2001; Luo 2007). First, we emphasize in this paper on co-opetitive relationships where collaboration occurs between competitors. Firms are considered as competitors if they produce and market the same products. The collaborative state between these firms is not a permanent or a compulsory one; otherwise we are in a traditional alliance context. After collaborating, rivals compete fiercely to divide the commonly created benefit by the network, giving that their partners in the network are opportunistic and would appropriate more value to what they have contributed to overall value. This approach is more realistic and goes beyond what traditional work on co-opetition have assumed, which is that firms cannot take away more then they added to the pie (Brandenburger and Nalebuff 1995). Secondly, prior research addressing co-opetition between rivals have inspected co-opetition at a dyad level perspective (Lado, Boyd et al. 1997), while in this paper we take a network perspective and consider that firms are embedded in a network of rivals and can
collaborate with multiple rivals (Bengtsson and Kock 2000; Gnyawali and Madhavan 2001; Gnyawali, He et al. 2006). Finally, prior research in co-opetition has suggested that firms can collaborate according to two dimensions: the market commitment level and the technological development commitment level (Garaffo 2002). In this paper we consider the case where rival firms are committed at both technological and market levels. For instance, in a SSO firms collectively define and formalize their needs and their technical solutions and, once the solution is formulized and developed, they promote the adoption of the technology in the industry.

Now that the nature of the inspected co-opetitive relationships is clear, assessing the performance of a firm when managing these types of co-opetitive relationships becomes of crucial importance. There is a general believe in the literature on co-opetition that firms engaged in co-opetitive relationships achieve superior performance than firms that are engaged either in competitive or in collaborative relationships with their peers (Lado, Boyd et al. 1997). Based on the assumption that competition and collaboration are paradoxical behaviors, researchers have concluded that a high level of co-opetitive performance is associated with a high level of competition and a high level of cooperation simultaneously (Luo 2007; Chin, Chan et al. 2008). Nevertheless, a measurable definition of a firm’s co-opetitive performance, which helps researchers as well as managers assessing firms’ co-opetitive performance of a firm and explaining how the interplay between competition and collaboration is conflicting, is still missing. To build this definition, we start from the premise that the essence of performance in a co-opetition is co-opetitive is value creating and value appropriating (Brandenburger and Nalebuff 1995; Afuah 2009). Firms cooperate when all the players share a common interest and work together to create value and make a bigger pie; and firms compete when the times come to divide the pie and capture the value.

Let us inspect first when firms cooperate to create value and make a bigger pie. The value created by the network is ‘the difference between the benefit perceived by the customers and the costs of providing these benefits by the different network players’ (Afuah 2009). The different firms of a network have heterogenous resources. When rivals collaborate, they combine their different resources to develop new innovative technological products, thus reducing the costs of internally developing these resources. Also, when rivals commonly promote a technology, they increase the interoperability between the products and services, engender a positive network effect in the joint market, and so enhance the value perceived by their customers. The value created, i.e. the pie, is therefore bigger when the network of firms cooperating is greater, and is the sum of the different value added by the firms to the network. The value added of a firm can be resources, as well as capabilities that the firms add to the pie. The value added is in other word ‘the amount by which the total value created would shrink if the firm left the game (i.e. the network).’ (Afuah 2009)\(^1\) (p. 289). For example, suppose that three firms A, B and C formed a SSO

\(^1\) It is the total value created with the firm in the game minus the total value created without the firm in the game.
and decided to create a common standard technological platform. Figure 1 shows the value added of each firm. The Value added of \([A, B, C] = [10, 7, 4]\). Therefore the value created= 10+7+4 = 21. This reasoning shows that rivals when collaborating in a co-opetitive relationship have to maximize their value added in order to maximize the value created by the network. The \textit{collaborative performance} is therefore the ‘share of the value added by the firm to the total value created jointly by the network (of rivals) of which the firm is a part of.’

Once the pie is created, rivals compete to maximize the value appropriated from the co-opetitive network. Firm’s success depends not only upon the creation of new products, services or processes but also whether the firm can reap the benefits from its investments. The \textit{value appropriated} is ‘about who gets to profit from the value created. It is about what slice of the pie one ends up getting.’(Afuah 2009) (p 94). In a pure competitive framework, firms that have the biggest market share are judged to be the best performing. However, in a co-opetitive framework, this definition is not lucid anymore. Suppose that the value appropriated by firm A is 8, and the one appropriated by C is 6 (Figure 2). Although firm A has appropriated more value then firm C, the return on what it has invested as a value added is poor. Therefore, in a co-opetitive framework, we suggest that firms which are more competitive are the one which capture a value that is proportional or greater to what they have invested during the process of value creation. This definition of competitive performance refines previous assumptions made in co-opetitive research. Scholars on co-opetition usually assume that the value appropriated by each player in the network is proportional to the value added by the actor and that no firm can appropriate more than it has created (Brandenburger and Nalebuff 1995; Brandenburger and Stuart 1996; Brandenburger and Nalebuff 1996; Afuah 2009). (Brandenburger and Nalebuff 1995) stated that in a co-opetitive game “you cannot take away from the game more than you bring to it” (p.58). This assumption clearly fails when we take into consideration the firms’ opportunistic behavior. According to (Dyer, Singh et al. 2008) “In some cases, firms may enter an alliance relationship to generate private benefits that may not be apparent to the alliance partner, and therefore are not considered in the negotiations that split the common benefits from the alliance” (p.138). We thus define a firm’s \textit{competitive performance} as ‘the ratio of the value appropriated by the firm and the value added by it.’

Co-opetition is the interplay of two paradoxical interactions, i.e. collaboration and competition (Lado, Boyd et al. 1997; Bengtsson and Kock 2000; Padula and Dagnino 2008 ).The provided definitions of a firm’s \textit{collaborative performance} and a firm’s \textit{competitive performance} show in which way a firm’s co-opetitive performance depends on two orthogonal dimensions. Firms are more collaborative when maximizing the value created and thus when maximizing their value added. While firms are more competitive when improving the ratio between their value appropriated and their value added, and thus firms may be willing to reduce their value added if they can not increase proportionally their value appropriated. To measure the co-opetitive performance of
rivals in a co-opetitive network, we propose to measure individually their collaborative and their competitive performance. The co-opetitive performance is thus conceptualized as the ‘synergy realization of the firm’s collaborative and competitive performances’. Synergy is defined as the extend to which pursuing a co-opetitive behavior yields to additional value from the interplay of collaborative and competitive behaviors beyond the simple sum of their respective performances. Co-opetition performance is hence not simply the addition of collaborative and competitive performance. The concept of synergy is closely related to interactions discussed in the literature of diversification and mergers and acquisitions (Carter 1977; Larsson and Finkelstein 1999; Eisenhardt and Galunic 2000; Stan Xiao Li 2004; Tanriverdi and Venkatraman 2005; Yang and Kang 2008). A synergy realization is conceptually well suited for our model since firms that are either competitive or collaborative are considered to be poorly co-opetitive. Also, viewing co-opetitive performance in terms of synergy realization avoids the problems of measuring co-opetition at a dyadic level and take into consideration that a firm is embedded in a network of relationships. In summary, the co-opetitive performance of a firm is the synergy realization of its collaborative performance and its competitive performance. Subsequently, it is vital for managers to determine and manage competences which enhance jointly the firm’s collaborative and competitive performance, and hence its co-opetitive performance.

Sources of co-opetitive performance: balancing collaboration and competition

We define a source of co-opetitive performance as a set of resources and capabilities affecting simultaneously the collaborative and competitive performance of a firm. A company in a co-opetitive network has to keep its eyes on both competences which create value and capture it at the same time. Strategy literature has essentially treated the sources of collaborative performance and competitive performance separately, which leads to some conflicting results when examining co-opetitive relationships. The cooperative perspective, based on the relational and network theories, postulates that firms can enhance their performances by developing together common interests and forming a network of cooperative linkages (Dyer and Singh 1998; Gulati 1998; Gulati, Nohria et al. 2000). Theory have identified four sources for enhancing a firm’s collaborative performance: Investment in relation-specific assets, substantial knowledge exchange, combining scarce complementary resources and capabilities, lower transaction costs owing to more effective governance (Dyer and Singh 1998). Alternatively, the competitive perspective postulates that firms have private conflicting interests and generate economic performance in fundamentally two ways: (a) The firm chooses an advantageous position in the industry (Bain 1968; Porter 1980; Porter 1981) \(^2\); (b) the

\(^2\) The industrial organization theory assumes that the industry’s structure (Bain-mason model and Porter’s 5 forces model) determine the firm’s performance. Consequently, firms choose between cost advantage (when a firm offer the same value at a lower price then its competitors) and differentiation advantage (when a firm offer a superior value to its customers then its competitors) to position themselves in the industry’s value chain in order to make supernatural economical rents.
firm develops internal resources that are valuable, rare, inimitable, and not substitutable (Barney 1991; Peteraf 1993; Barney 2001). There seems a contradiction in the fact that partners are supposed to share resources and knowledge (collaboration) which are at the same time a key determinant of their competitive performance. This suggests that the sources of co-opetitive performance should balance the competences that enable the companies to create benefits in its collaborative relations while avoiding the risks that external partners benefit from these competences to appropriate more value.

The ambition of our model is nothing less than to explain how can a firm improve its co-opetitive performance. Our model identifies three potential sources of co-opetitive performance: network resources, absorptive capacity, and relationship management. For each of these sources, we identify the aspects that (a) affect the firm’s collaborative performance and enable it to collaborate with its rivals in creating the pie and (b) improve the firm’s competitive performance by helping the firm control rent distribution when the pie is being split. Figure 2 summarizes our propositions. This list of sources is by no means comprehensive or mutually exclusive but simply reflects some broadly defined areas in strategy research where we see some of the greatest potential from applying a co-opetitive lens. These sources were distinguished by (Dyer and Singh 1998) as the main sources of firms’ interorganizational competitive advantage, and they analyzed them from a pure collaborative lens. We aim to show in the sections that follow that these sources can better explain the firm’s interorganizational competitive advantage if they reflect the interplay of collaboration and competition. This goal can only be reached if we integrate arguments from the relational and network theory, resource base view theory and transaction cost/governance theory. Our work emphasize that taking a co-opetitive perspective to strategy research add additional explanatory power to our existing models of strategy to understand the synergy that a firm should deal with when collaborating and competing simultaneously in their network of relationships.

**Network resources**

The notion of network resources was introduced by (Gulati 1999) to refer to the resources that firms accrue from the interfirm networks in which they are located. In this section we suggest that firms should develop simultaneously two types of network resources, which were previously treated separately in the network and relational theories, in order to generate co-opetitive rents. The collaborative lens suggests that firms sharing and combining complementary resources with their partners in the network increase the jointly create value. However, the competitive lens proposes that firms gain competitive advantage over their partner in the network by being advantageously positioned in the network.

Scholars have long acknowledged that some resources inhere not so much within the firm but reside in the interfirm network (Dyer and Singh 1998; Gulati 1998; Gulati, Nohria et al. 2000). Firms are fundamentally heterogeneous in terms of their resources and internal capabilities. Rarely does any one firm possess all the necessary resources and capabilities for the development and commercialization of new products (Teece, 1986). A firm’s network can therefore be considered as a means to access inimitable resources and capabilities (Gulati, Nohria et al. 2000). Thus, firms develop collaborative relationship to
explore and exploit these network resources (Nohria and Garcia-Pont 1991; Gulati 1998; Gulati 1999; Ahuja 2000). The exploitation of these complementary resources residing in the network enables firms to jointly create value and generate relational rents (Dyer and Singh 1998). Based on this analytical approach, we perceive two ways for a firm to increase its value added in a co-opetitive network. First, a firm increases its value added when bringing distinctive resources to the network, which when combined with resources of other co-opetitive partners result in creating value and increasing the size of the pie. For these resources to be distinctive and increase the value added, it is necessary that no firm in the co-opetitive network possesses or is willing to share these resources and that the value created would considerably shrink in the absence of these resources. Second, a firm increases its value added when being capable of combining the different resources residing in the network, thus contributing the value creation. Firms can develop this capability by developing specific inter-firm organizational routines which have an impact on the likelihood of resource recombination (Dyer and Singh 1998; Galunic and Rodan 1998).

The pie being created, the main disadvantage for the firm is that its co-opetitors have access to its resources that are no more unique and thus no more considered as source of competitive advantage. Network theory proposes that the position that the firm occupy in the network has an impact on its competitiveness (Gulati 1998; Gnyawali and Madhavan 2001; Gnyawali, He et al. 2006). We suggest that the firm’s centrality in the network and its structural autonomy increase the firm’s competitive performance in two ways. First, they enhance the firm’s access and control over information and resource flow in the network. The differential access to network resources leads to resource asymmetries between the firms and therefore to differences in competitive behavior (Gulati 1998; Gnyawali and Madhavan 2001; Gnyawali, He et al. 2006). Second they increase the firm’s bargaining power towards its rival, and therefore affect positively the way the firm capture the value when co-opeting with rivals. The Bargaining power is defined as the ability to favorably change the terms of agreements, to obtain accommodations from alliance partners, and to influence the outcome of a negotiation (Yan and Gray 1994).

Following we explain our propositions

Firm’s centrality is an index of the firms’ position in the network. Centrality in a coopeetitive network refers to “the extend to which a firm occupies a strategic position in the network by virtue of being involved in many significant cooperative ties with its competitors” P. 512 (Gnyawali, He et al. 2006). This means that highly central firms have a large number of connections. To capture the value created with its rivals, a focal firm occupying a central position in the network enjoys a greater access to resources and a greater bargaining power. Indeed, high centrality leads to higher volume and speed of asset, information and status flows and therefore has a positive impact on the firm’s competitiveness (Gnyawali and Madhavan 2001; Gnyawali, He et al. 2006). Also, occupying a central position provides the focal firm by a greater availability of alternative alliance increasing the firm’s bargaining power vis-à-vis its rivals. The ability to pursue the same objective with other firms improves the firms’ position in negotiations and its capacity to extract disproportional rents when being in an alliance with a rival.
Firm’s structural autonomy is an index of how many structural holes are in the firm’s network. A firm is structurally autonomous if there are structural holes between the actors to which it is connected but is free of structural holes at its own end. Structural autonomy in a co-opetitive network refers to “the extend to which a firm enjoys structural holes in its network of cooperative relationships with its competitors. For example, if Actor A has ties with both B and C but B and C are not tied directly to each other- that is, B and C can not reach each other only through A- a structural hole exists between B and C, which A can exploit.” P. 514 (Gnyawali, He et al. 2006). Hence, highly structurally autonomous firms are those having non redundant ties. A firm that is structurally autonomous has a wide contact across unconnected groups of firms and means having access to less redundant and to new information earlier to its rivals. Besides, the firm benefiting from a structural autonomous position in the network has a greater bargaining power over its rivals, by enjoying control over the information and resource flow in the network. (Gnyawali and Madhavan 2001; Gnyawali, He et al. 2006). Hence, the firm has a greater power to allocate the beneficial rent of the coopetitive relation and reduce its coopetitors’ share of common benefits relative to their added value. Also, a firm that is structurally autonomous has a diverse set of competitors, so it can learn about diverse way to appropriate value from diverse firms. We thus propose:

**Proposition 1**: The greater firms’ network resources, the greater their co-opetitive performance will be.

**Proposition 1-a**: Firms (a) bringing distinctive resources to the co-opetitive network, and (b) combining complementary resources in the co-opetitive network, increase their collaborative performance.

**Proposition 1-b**: Firms occupying a central or/and structurally autonomous position in the co-opetitive network, increase their competitive performance.

**Absorptive capacity**

(Zahra and George 2002) defined absorptive capacity (ACAP) of a firm as “a set of organizational routines and processes by which firms acquire, assimilate, transform, and exploit knowledge to produce dynamic organizational capability” (P185). The first two component of ACAP (i.e. acquisition and assimilation) are defined as potential absorptive capacity (PACAP), and the second two components (i.e. transformation and exploitation) are defined as realized absorptive capacity (RACAP). (Zahra and George 2002) examined how the interaction between PACAP and RACAP affect the competitive advantage of a firm. Our aim is to investigate how the different components of a firm’s ACAP enhance its coopetitive performance. At a firm level, (Cohen and Levinthal 1990) defined the absorptive capacity as a firm’s ability to recognize the value, assimilate and apply new

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3 Zahra and George 2002 defined the absorptive capacity (ACAP) as “a dynamic capability pertaining to knowledge creation and utilization that enhances a firm’s ability to gain and sustain a competitive advantage” P 185
knowledge. By definition the first two constructs refer to the PACAP and the third construct refers to the RACAP. In their attempt to stretch Cohen and Levinthal’s (1990) absorptive capacity image from a firm-level construct to a dyadic-level construct, (Dyer and Singh 1998) defined partner-specific ACAP as the firm’s “ability to recognize and assimilate valuable knowledge from a particular alliance” (P665). We notice that in their definition, which emphasizes on collaborative relationships, they did not include the third construct of Cohen and Levinthal’s (1990) related to RACAP. They argued that the greater the PACPA is, the greater the potential to generate relational rents through knowledge sharing. We conclude that the PACAP affect the collaborative performance of the firm, as for the RACAP it affects the competitive performance of the firm.

This conclusion is strengthen by (Lane and Lubatkin 1998) work on the different types of knowledge responsible for the effectiveness of each of the three constructs of the ACAP, at an interfirrm level. They suggested that: (a) the “know-what” knowledge, that is the scientific and technological knowledge background, supports the ability to recognize the value of new external knowledge; (b) the “know-how” knowledge, which refers to the organizational systems, affects the ability of the firm to assimilate these external sources of knowledge; (c) and the “know-why” knowledge, which captures the firm’s “dominant logic”4, is responsible for the ability of a firm to apply the external knowledge to commercial end. The distinction between know-how and know-why is related to what (Henderson and Clark 1990) name architectural as opposed to component knowledge. The notion of know-how is relate to the component knowledge and the know-why is much more related to the architectural knowledge which is the “knowledge about the way in which components are integrated and linked together into a coherent whole” (Henderson and Clark 1990). The know-what and know-how knowledge are therefore the antecedents of a firm’s PACAP and help the firm increase its value added in the co-opetitive network by being enabling it to enhance the co-created product at a component knowledge. As for the know-why is more responsible for the RACAP of a firm and enhances its ability to create new knowledge by exploiting and transforming the exiting knowledge in the network.

There are direct and indirect ways for a firm to appropriate value when developing RACAP. The direct way consists of capturing the value co-created with the rivals. A firm possessing RACAP directly captures value since through its transformation capabilities it has the ability to change exiting processes and take advantage of existing resources and capabilities in its environment (Zahra and George 2002). For example, if the focal firm and its rivals have jointly developed a standard software, the firm having high RACAP can develop proprietary new functions to this software or provide new services related to the software. To indirectly capture the value, firms has to develop exploitation capabilities which help the firm create new resources and capabilities and convert them into an innovative products (Zahra and George 2002). An indirect way to increase the appropriated value from co-opetition is to capture the competitor’s resources and knowledge and exploits them. The resources of the competitor become no more valuable, rare, inimitable, or non substitutable. Instead, the focal firm benefits from its competitors’

4 Dominant logic is or the managers’ mental representations of the world that shapes how they interpret and operate in a given business
resources to enrich its internal set of resources and thus enable it to develop new innovative products. We thus propose:

**Proposition 2**: The greater firms’ absorptive capacity (ACAP), the greater their co-opetitive performance will be.

**Proposition 2-a**: Firms developing strong potential absorptive capacity (PACAP), i.e. acquisition and assimilation capabilities, increase their collaborative performance.

**Proposition 2-b**: Firms developing strong realized absorptive capacity (RACAP), i.e. transformation and exploitation capabilities, increase their competitive performance.

**Relational capability**

There is an important link between the management of a co-opetitive relationship and the firm’s co-opetitive performance. When being engaged in a network of co-opetitive relationships a firm faces the challenge of employing governance mechanisms that achieve concurrently the objectives of (1) maximizing the value created while at the same time (2) minimizing the threat of opportunism. By definition the first is related to enhancing the collaborative performance and the second to improving the competitive performance, since firms that are able to avoid opportunistic behaviors can maximize their appropriate value compared to their value added. Achieving these objectives simultaneously would result in what Dyer and Singh (1998), defined as effective governance. However, Dyer and Singh have inspected the effective governance mechanisms of collaborative relationships. Our aim is to define the relational capability that a firm should develop when being embedded in a network of co-opetitive relationships where, contrary to a collaborative context, the opportunism is likely and uncertainty about the value creation effectiveness is very high.

Governance research has recognized that the governance mechanisms required to address the two objectives, i.e. maximizing value and minimizing the threat of opportunism, are paradoxical (Zajac and Olsen 1993; Poppo and Todd Zenger 2002; Hansen, Hoskisson et al. 2008). The paradox results from the fact that joint creation of value requires the use of self-enforcing governance mechanism related to the social embeddedness of the firm in the network, such as trust and reputation, that are less costly then the written contracts. However, these written contracts are crucial governance mechanisms in a hazardous context to control the opportunistic behavior of the firms. As a result of this paradox, the relational and network governance network views has been more interested by the first objective, hence examining processes to maximize the value create and arguing that self-enforcing mechanisms are effective governance mechanism since they increase the value created by reducing the cost related to legal contract (Zajac and Olsen 1993; Jones, Hesterly et al. 1997; Dyer and Singh 1998). On the other hand, the transaction costs theory has more focused on the second objective, and appears to begin at a point where the value created is fixed and the aim is to minimize the threat of opportunism by defining the format of the legal contract objective (Gulati 1995). Recent research has argued that these different views do not function as substitute but as complement in helping the firm achieving relational rents (Poppo and Todd Zenger 2002; Hansen,
Hoskisson et al. 2008). By integrating arguments from the relational governance and the transaction cost theories, we show that trust and contractual capability defines the set of a firm’s effective relational capability affecting both its collaborative and its competitive performance, thus its co-opetitive performance.

(Hansen, Hoskisson et al. 2008) argued that firms possessing strong form of trustworthiness can simultaneously pursue both gain maximization and opportunism minimization objectives. Trust between firms refers to the confidence that a partner will not exploit the vulnerabilities of the other (Gulati, Nohria et al. 2000). Firm possessing strong form of trustworthiness are the ones having internal principal and values of which violation imposes internal costs on the offending economic actors (Barney and Hansen 1994). On one hand, firms developing strong form of trustworthiness with their partners improve the coordination in the network thus their collaborative performance. Firms engaged with strong trustworthy partner are able to develop common goals and have greater awareness of the rules and procedures that each needs to follow (Gulati, Nohria et al. 2000). Trust is thus an essential element for helping firms in a co-opetitive network to define clear common goals, which are at the essence of value creation (Chin, Chan et al. 2008). Also, trust enables firms to gather greater knowledge about each other’s resources and capabilities and have greater confidence in their mutual assessments of their respective resources, which enhances the value created by the network (Gulati, Nohria et al. 2000; Chin, Chan et al. 2008). On the other hand, firms developing strong form of trustworthiness with their partners increase the cost of opportunism thus minimizing opportunism in the network. First, these costs are defined internally by the firms, thus refraining firms from pursuing opportunistic actions (Hansen, Hoskisson et al. 2008). Second these costs are socially defined at the network level. In a social network, the reputations effects are amplified, thus firms fear if they pursue an opportunistic action to be collectively sanctioned by their partners based on the reputation (Jones, Hesterly et al. 1997).

Firms possessing strong form of contractual management capabilities can simultaneously pursue both gain maximization and opportunism minimization objectives. Contractual management refers to the ability to efficiently write contracts which serve as the basis of

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5 Jones, Hesterly et al. 1997: Collective Sanctions: Collective sanctions involve group members punishing other members who violate group norms, values, or goals and range from gossip and rumors to ostracism (exclusion from the network for short periods or indefinitely) and sabotage; In network governance one’s reputation is hurt when one recommends someone whose performance does not meet expected standards.

Reputation involves an estimation of one’s character, skills, reliability, and other attributes important to exchanges and is important under exchange conditions of uncertainty and customization. Reputations enhance the safeguarding of customized exchanges.
decision making within alliance (Hansen, Hoskisson et al. 2008). Written contracts can enhance the coordination between the firms by explicitly defining the roles of the different partners and creating shared expectations (Poppo and Todd Zenger 2002), thus minimizing coordination costs and hence maximizing the value created. In addition, according to the TCE, contract’s format determines the effective governance mechanism which minimizes the threat of opportunism. These contracts serve as a foundation upon which monitoring and enforcement are based in case of conflict. Written contracts that are based on equity are defined as hierarchical structure of governance, and the once based on non-equity are market structure governance mechanism (Gulati 1995). TCE proposes that hierarchical structure governance structures should be favored to market structure when opportunism is likely and transaction costs are high (Gulati 1998; Gulati, Nohria et al. 2000). In co-opetitive network, the uncertainty is high and competing firms have high incentives to behave opportunistically, therefore firms capable to manage written contract based on equity structure achieve higher competitive performance.

The previous arguments suggest the following proposition:

**Proposition 3**: The greater firms’ relational capability, i.e. it is trustworthiness and contractual management capability, the greater their co-opetitive performance will be.

**Proposition 3-a**: Firms developing strong relational capability develop more easily common goals and coordinate better, and hence increase their collaborative performance.

**Proposition 3-b**: Firms developing strong relational capability reduce the threat of opportunism, and hence increase their competitive performance.

**Conclusion**

In the era of information and telecommunication based business, a growing number of rival firms are developing network of relationships where they collaborate to jointly create value and compete to capture the value. The hybrid behavior comprising competition and cooperation concurrently has been named “co-petition”. Co-petition goes beyond the old rules of competition and collaboration to be the interplay of the mechanisms of both behaviors. Hence, if firms are to get the most of out their co-opetitive relationships, they must assess their co-opetitive performance and understand the sources that affect both their collaborative and competitive behaviors. The paper proposes a model that can be helpful for managers and organizations in two ways. First, it suggests a tool to understand and assess the co-opetitive performance of a firm interacting with a network of rivals. Second, it determines some required competences to cope with the paradoxical situation of collaboration and competition simultaneously. More specially, we define the firm’s co-opetitive performance as synergy realization of the firm’s collaborative and competitive performances. We define a firm’s collaborative performance as the share of the value added by the firm to the total value created jointly by the network of rivals of which the firm is a part. We define the firm’s competitive performance as the ratio of the value appropriated by the firm and the value added by it. We also argue that firms will realize greater co-opetitive performance when they develop
sources that affect concurrently their collaborative and competitive performance. We examine three sources of co-opetitive performance: (1) network resources: firms bringing distinctive resources to the network and capable of combining complementary resources in the network achieve greater collaborative performance; and firms occupying a central or/and structurally autonomous position in the co-opetitive network achieve greater competitive performance (2) Absorptive capacity: The firm’s potential absorptive capacity affects its collaborative performance, while the firm’s realized absorptive capacity affects its competitive performance (3) Relationship management capability: Firms developing strong trustworthiness and contractual managerial capabilities improve coordination with their partners thus enhance their collaborative performance; and reduce opportunism by imposing costs on opportunistic actors and defining equity contract thus enhance their competitive performance.

In this article we contribute to the literature on co-opetition by specially delineating the sources that drive differential performance from such relationships. An addition contribution of this paper is that strategy literature has usually tried to explain the performance of firms from a collaborative or a competitive perspective. Although strategy literature recognized that rival firms achieve superior performance by being engaged in co-opetitive relationships, it tended to examine independently competition and cooperation and treated them as opposite ends. In this paper, we proposed a model which provides coherence to the divergent positions in the strategic management literature regarding competition and cooperation. For this end, our paper brings multiple perspectives. Our arguments incorporate resource dependence-based considerations as well as considerations that are drawn from the relational and network view, and transaction cost view. This integrative approach is necessary because each of these perspectives has usually been used either in a collaborative context or in a competitive one.

In conclusion, substantial work exists to understand the rise of co-opetition; the same cannot be said for the question of managing co-opetitive relationships. We address this question by defining the concept of co-opetitive performance and positing sources that influence it. More empirical work is needed to test the different propositions that we develop in this paper. Also, on limitation for our model is that it is static. One should note that in co-opetitive networks the values created and appropriated are dynamic and change over the time, and it is hard for firm to assess the collaborative and competitive performance at the same time.
Figure 1: Definition of a firm’s coopetitive performance

Value added

Value appropriated
Figure 2: Sources of co-opetitive performance

- Occupying a central or a structurally autonomous position in the network
- Sharing distinctive resources
  - Combining complementary resources
- Transformation and exploitation of knowledge
- Absorptive capacity
  - Acquisition and assimilation of knowledge
- Reduction of opportunism
- Relational capability: Trust and contract management
  - Development of common goals and coordination
- Network Resources

- Synergy

- Collaborative Performance
- Competitive Performance

- Co-opetitive Performance


