



An interpretive framework of the interplay of competition and cooperation

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Published online: 24 January 2020

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Abstract

This paper unravels four logics that inform the interplay of competition and cooperation: the either/or (dichotomic) logic, the from/to (switch) logic, the both/or (dialectic) logic and the both/and (combinative) logic. Furthermore, by using “resource similarity” and “market commonality” as key dimensions to capture the rivalry between two firms as well as their advantages in cooperating, this paper provides an interpretive framework that unveils the basic provisions underlying the firms’ adoption of each specific logic. Interestingly, we finally juxtapose our insights on the logics that inform the interplay of competition and cooperation with the extant literature on cooperation.

Keywords Competition · Cooperation · Coopetition · Logic · Interplay

1 Introduction

Two of the most significant areas of the strategic management research are the ones related to competitor analysis (Chen 1996; Hitt et al. 2005; Peteraf and Bergen 2003; Porter 1980) and competitive dynamics (Chen and Miller 2012, 2015; Gao et al. 2017; MacMillan et al. 1985a, b; Young et al. 2000). Competitor analysis concerns the relationship between two firms and is “especially meaningful if it can be used to predict interfirm rivalry” (Chen et al. 2007: 102), whereas competitive dynamic stakes into consideration a wide set of moves and countermoves (Chen et al. 2007), as well as the features of the attacker and the defender (Chen and MacMillan 1992; Smith et al. 1991). Competitor analysis and competitive dynamics are both rooted in the relationship between the identification of the firms’ competitors (Bergen and

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Peteraf 2002; Porac and Thomas 1990), as well as the actions and moves firms make to predict and develop interfirm rivalry (Smith et al. 2001).

Interestingly, over the last couple of decades, one of the most notable trends in business practice has been the increasing number of firms that cooperate with rivals (Brandenburger and Nalebuff 1996; Dyer and Singh 1998; Hamel 1991). This type of situation has significantly changed the way that competitors interact and their related behavioral aspects (Chen et al. 2007). Consequently, management studies have come to acknowledge that interfirm rivalry encompasses not only competition between firms but also the crucial interplay of competitive and cooperative actions between rivals (Chen and Miller 2015). Accordingly, *cooperation among rivals* turns into the appropriate setting in which the interplay of competition and cooperation occurs (Hoffmann et al. 2018; Gnyawali and Charleton 2018).

Despite these relevant advances, the extant studies fall short of including the full gamut of the antecedents of the interplay of competition and cooperation, as they ignore a critical issue concerning *how* the interplay of competition and cooperation may take place (Strese et al. 2016). Therefore, we ask the following question: what is the *motivation* for the interplay of competition and cooperation? This gap in the literature calls for an exploration of the core assumptions of the interplay of competition and cooperation between firms and how they operate. Based on this, our paper investigates the assumptions underlying when and how firms are able to simultaneously compete and cooperate to advance an interpretive framework that explores the interplay between cooperation and competition. In so doing, the paper offers four contributions. First, it provides a more intelligible understanding of the interplay of competition and cooperation. Specifically, we use the concept of *logic* to explain how managers handle the relationship with a rival firm (Ford and Ford 1994; Sutton and Staw 1995). Second, the paper develops an interpretive framework concerning the interplay of competition and cooperation. In this vein, we move from Chen's (1996) competitor analysis to explain why market commonality and resource similarity are central to "previous interfirm rivalry studies and prove to be equally useful for cooperative analyses and applications" (Chen 2016: 513). By matching the concept of logic rooted in philosophical studies with market commonality and resource similarity, we dig deeper into the *mechanisms* characterizing interfirm rivalry and explain how the interplay of competition and cooperation between rivals actually takes place. Therefore, this paper extends the understanding of interfirm relationships among rivals by showing why the same conditions (i.e., market commonality and resource similarity) tackling competition may also inform the rivals' decision to cooperate with each other (Chen 2016). This condition, in turn, develops the previous inquiry on the antecedents of a firm's competitive and cooperative actions among rivals. Third, the paper allows the deepening of the competitive dynamics inquest by enlarging the spectrum of a firm's actions that are both competitive and cooperative. By identifying four logics of the interplay between competition and cooperation, the study pushes forward the investigation on the dimensions underlying competitive dynamics (Chen and Miller 2015: 758). In so doing, this paper complements other studies aimed at disentangling the mechanisms and means of action/reaction among rivals that are central to the interplay of competition and cooperation (Smith et al. 2001). Finally, the paper juxtaposes the contours of the

logics informing the interplay of competition and cooperation with the shared view of coopeitition (Minà and Dagnino 2016; Dagnino and Minà 2018). We note that a relatively limited number of authors have used the word “coopeitition” (Brandenburger and Nalebuff 1996; Dagnino and Rocco 2009; Yami et al. 2010) to identify a relationship where “two firms can compete and cooperate simultaneously” (Bengtsson and Kock 2000: 414). By delving into the coopeitition research, we extend the extant conceptualization of the concept of coopeitition by clarifying whether it is tantamount to the (*full*) interplay of competition and cooperation or merely pinpoints a *specific* pattern of the interplay of competition and cooperation.

The paper is structured as follows. Section 2 introduces the key concepts underlying the study at length (i.e., competition, cooperation, and the interplay of competition and cooperation). Section 3 provides the pathway of the research. Section 4 unravels the four logics that inform the interplay of competition and cooperation. Section 5 develops our interpretive framework that unveils the basic features explaining the adoption, at the interfirm level, of each specific logic of the interplay of competition and cooperation. Finally, Sect. 6 proposes a research agenda to apply and extend the interpretative framework proposed earlier.

2 Conceptual pillars

In this section, we provide a short overview of competition, cooperation, and the interplay between them. Table 1 reports a synopsis of the main interfirm relationships.

2.1 Competition

The concept of competition and its essential mechanisms are often associated with *rivalry* and antagonism and conflicts of interest among actors (Barney 2001; Dierickx and Cool 1994; Dyer and Singh 1998; Porter 1980). Actually, competition implies that each firm responds by using an integrated and organized set of resources and actions to secure an advantage over its rivals (Rindova and Fombrun 1999). This condition improves firm performance and worsens the performance of other firm(s). Accordingly, under competition, firms face conflicting interests that involve the “drive to win, or defeat one’s opponents” (Kilduff et al. 2010: 943). Conflicting interests among firms enhance rivalry and zero-sum game interactions with other firms. Firms want to win a good deal for themselves, thereby making the others lose (Adair and Brett 2005; Tjosvold 1998). Therefore, the higher performance of a firm usually comes at the expense of the other. Since firms “must constantly strive to do better than their rivals in order to survive” (Astley 1984: 527), competition pushes firms to endlessly perform offensive moves and defensive countermoves in the quest for achieving a competitive advantage (Chen and MacMillan 1992; MacMillan et al. 1985a, b; Porter 1980).

Table 1 Synopsis of the main interfirm relationships

	Competition	Cooperation	Interplay of competition and cooperation	Cooperation
Agent interests Managing the coexistence of competition and cooperation	Conflicting	Converging	Some aspects are compatible On the basis of multiple logics: either/or logic, from/to logic, both/or logic, and both/and logic	Partially converging As contradictions (Bengtsson and Kock 2000; Fernandez et al. 2014) or as complements (Brandenburger and Nalebuff 1996; Dagnino 2009)
Commitment between agents	Rivalry is not defined per se but on the basis of the focal firm's perspective (Chen 1996).	On the basis of the focal firm's perceptions of the potential benefits, which depend on market commonality and resource similarity	Asymmetric on the basis of the focal firm's view of market commonality and resource similarity	Symmetric and defined a priori. Agents' commitment level may vary over time
Clearly stated in studies on	Explicit or implicit	Typically explicit	Typically explicit in the space of cooperation and explicit or implicit in the space of competition	Explicit
Outcomes	Interchangeable win-lose game	Balanced positive sum game	Uncertain ex ante. On the basis of the logics of interplay that both firms assume	Balanced but variable positive sum game Contingencies are not clearly predefined
Key references	Bergen and Peteraf 2002; Chen 1996; Chen et al. 2007; Chen and Miller 2012, 2015; Gao et al. 2017; Hitt et al. 2005; MacMillan et al. 1985a, b; Porac and Thomas 1990; Porter 1980; Smith et al. 1991, 2001; Young et al. 2000	Adair and Brett 2005; Axelrod 1981; Dyer and Singh 1998; McCarter et al. 2011; Park and Zhou 2005; Rothaermel and Boeker 2008	Hoffmann et al. 2018; Cozzolino and Rothaermel, 2018; Gnyawali and Charleton 2018; Ranganathan et al. 2018	Bengtsson and Kock 2000, 2014; Brandenburger and Nalebuff 1996; Bouncken et al. 2015; Dagnino 2009; Gnyawali et al. 2008; Fernandez et al. 2014; Ritala et al. 2014

2.2 Cooperation

Cooperation is often associated with complete agreement and full convergence of interests among actors. In exploring cooperation, while some studies have involved cooperation, trust and mutual commitment (Dyer and Singh 1998), others have asked the following question: since each individual has an incentive to be self-interested, how can cooperation ever emerge? (Axelrod 1981). Under cooperation, the goals are positively linked in such a way that firms work together for their common interests and to maximize joint outcomes (Adair and Brett 2005; Park and Zhou 2005). Therefore, the basis for cooperation should be related to rational beliefs rather than trust (Dasgupta 2012). “Robinson Crusoe aside, people do not live in isolation” (Dasgupta 2012: 180). Thus, they reason and make their choices based on the following two key aspects: (a) what they expect the others will do; and (b) the likelihood of the present and future consequences of their respective choices. From such a perspective, cooperation is far from being a matter of trust but is rather a matter of *rational belief*, i.e., that it is the most rational choice.

In practice, firms usually cooperate with other firms “to achieve goals they could not attain independently” (McCarter et al. 2011: 621). First, cooperation may allow firms to strengthen their market power (Kogut 1991). Second, through cooperation, the partner firms are able to pool together valuable and critical resources (Gulati and Singh 1998; Rothaermel and Boeker 2008). Then, firms may “joint[ly] develop, manufacture, and/or distribute products” (Zollo et al. 2002: 701) and access capabilities that are organizationally embedded (Kogut 1989; Hoffmann et al. 2018). Furthermore, in a dynamic perspective beyond firm boundaries, cooperative agreements provide expanded access to knowledge (Ahuja 2000; Dyer and Singh 1998) and to the emergence of learning races (Hamel 1991). Finally, by cooperating with each other, firms can reap benefits from cost and risk sharing (Hagedoorn 1993; Porter and Fuller 1986) so that they can increase their efficiencies (Ahuja 2000).

2.3 The interplay of competition and cooperation

Hoffman et al. (2018: 3) argue that, while competition and cooperation have commonly been conceived as “separate modes of interaction among firms”, only in recent years scholars have progressively acknowledged that firms usually “engage in competition and cooperation with each other” (Hoffman et al. 2018: 3). The management studies have shown that only a few collaborations are “perfectly and perpetually collusive” and “the fact that a firm chose to collaborate with a present or potential competitor could not be taken as evidence that the firm no longer harbored a competitive intent vis-à-vis its partner” (Hamel 1991: 84).

Cooperation with rivals leads to the coexistence of *private* and *common* benefits between them (Arslan 2018; Khanna et al. 1998). In turn, such coexistence leads to the emergence of conflicts (Ang 2008; Ranganathan et al. 2018), threats of opportunistic behaviors and learning races (Hamel 1991). Rivals in cooperation may, thus, experiment with a *partial* convergence of interests (Dagnino 2009), and this aspect

pushes them to associate with one another to face technological changes and the risks and costs associated with competitive environments (Cozzolino and Rothaermel 2018; Gnyawali et al. 2006, 2008; Lado et al. 1997). In approaching the study of competition and cooperation, management scholars have closely studied co-opetition (Bengtsson and Kock 2000, 2014; Brandenburger and Nalebuff 1996) to underscore that a firm “can compete without having to kill the opposition” and “cooperate without having to ignore [its own] self-interest” (Brandenburger and Nalebuff 1996: 5). Accordingly, in their pioneering book titled “*Co-opetition*”, Brandenburger and Nalebuff (1996: 5) advanced a value net model to show that firms may cooperate to “create a pie”, even if they “compete when it comes to dividing it up”. Therefore, rival firms may find themselves cooperating in some activities whilst they also compete in the same or in different activities (Bengtsson and Kock 2000).

Studies on co-opetition have explicitly considered the simultaneous coexistence of competition and cooperation and have identified several antecedents (Dagnino 2009; Gnyawali et al. 2008; Mariani 2018), processes (Bengtsson and Raza-Ullah 2016; Fernandez et al. 2014; Ritala et al. 2014), and outcomes underlying co-opetition (Ritala 2012; Park et al. 2014a, b). Among them, Bengtsson and Raza-Ullah (2016) provided a framework that depicts internal, relational-specific, and external antecedents for co-opetition. Specifically, the *internal* drivers encompass the firm’s tangible and intangible resources and capabilities (Gnyawali and Park 2009), the *relational-specific* antecedents consider the partners’ features and resource endowments for rival partner selection, and the *external* drivers include the environmental features, “such as industrial characteristics, technological demands and external stakeholders’ influences, that either compel or force firms to engage in co-opetition” (Bengtsson and Raza-Ullah 2016: 6). Furthermore, Mariani (2018) acknowledges the role of policy makers in developing co-opetition among rival firms and identifies four situations in which regulators contribute to the emergence of co-opetition.

Notwithstanding the rapid intensification of studies focusing on co-opetition (Dagnino and Minà 2018; Minà and Dagnino 2016; Bouncken et al. 2015) and of inquiries centered on the interplay of competition and cooperation (Hoffman et al. 2018), overall, the extant studies fall short of providing a deeper examination of the core tenets of the interplay of competition and cooperation. For this reason, exploring how the interplay of competition and cooperation takes place (Strese et al. 2016) would add clarity regarding the core tenets of the interplay of competition and cooperation and, thereby, help unveil the roots of co-opetition as well (Minà and Dagnino 2016).

3 Pathway of research

This paper uses the concept of *logic* to explain how managers approach the relation of their firm with a rival firm (Ford and Ford 1994: 785). Specifically, the paper aims to develop an interpretive framework that shows the conditions under which each specific logic underlying the interplay of competition and cooperation characterizes the relationship between firms.

In this section, we illustrate our research pathway, which complies with the principles of theory-development reported in Whetten (1989). The first principle addresses the following question: “*which factors (...) should be considered as part of the explanation of the social or individual phenomena of interest?*” (Whetten 1989: 490). First, we observe that different streams of research have tackled the interplay of competition and cooperation by adopting *various logics* of reasoning to deal with such interplay. Given our purpose to clarify the assumptions underlying why firms manage the interplay between cooperation and competition (Sutton and Staw 1995), we introduce the concept of *logic* to indicate the set of assumptions about the way to approach and manage such interplay (Ford and Ford 1994).¹ The underlying assumptions are deeply grounded in and “form a framework within which reasoning takes place” (Horn 1983: 1). As is known, logic identifies the rules and boundaries; it “poses the problems, provides the language for explaining and understanding them, and determines their solutions” (Darwin et al. 2002: 186). Logics represent the ‘point of view’ or ‘frames’ according to which people see and understand reality (Ford and Ford 1994). Each logic has its own features and coding, and this condition leads to a specific schema that, in turn, shapes the way the interplay between competition and cooperation takes place.

Second, drawing on Chen (1996), we recognize *resource similarity* and *market commonality* as the constituent elements of the explanation of the logics of interplay of cooperation and competition. Specifically, resource similarity is defined as the comparability with the rival’s resources in terms of type and amount (Chen 1996). Market commonality represents the number of markets overlapping between two firms and the degree of importance of the single markets to each of them (Chen 1996). Drawing on Bergen and Peteraf (2002: 160), we consider market overlap in terms of “customers’ needs served”.

Rephrasing the second principle proposed by Whetten (1989), we tackle the following question: after identifying the logics and understanding that resource similarity and market commonality are essential parts of the explanation of the interplay of competition and cooperation, *how are they related?* To respond to this question, we draw on the idea that each logic of the interplay of competition and cooperation

¹ Considering, for instance, marriage or, more generally, mate-selection; i.e., the selection process of the partner within a given population. It is acknowledged that the way marriage is conceived is mainly *cultural*. In Western countries (such as Western Europe and United States), the mate-selection criterion is mainly based on “love”. When people are in love, they stay together and, eventually, consider the possibility of marrying each other, which may also justify the fact that when deep conflicts between the couple occur and love seems to vanish, the relationship might be broken and the marriage may fail. Divorce may occur once people’s feelings change and they want to break their legal relationship. In these cultural contexts, the underlying assumptions for marriage and mate-selection are love and voluntary commitment, whereas marrying for money or other material reasons may be subject to social disapproval (Winch 1958). On the contrary, in other societies and cultural contexts (such as the Asian ones), women may marry to improve their social status and not only for love. In such cases, the main assumptions that shape the way people “see and understand marriage” is that mate-selection is not driven only by feelings but also includes societal status drivers. As a result, it might happen that, initially, people are not committed to relationships, but family duties and cultural obligations may cause them to marry. In these contexts, divorce seems to occur quite seldom since it does not seem to be an option. As we can see from this example, reality is usually constructed based on “logics” or “points of view”.

emerges on the grounds of a specific combination of resource similarity and market commonality.

The third element proposed by Whetten (1989:441) to develop a theoretical contribution refers to “*the underlying (...) dynamics that justify the selection of factors and the proposed causal relationships.*” Arguably, resource similarity and market commonality allow us to recognize those competitors that approach markets with the same perspective (Abell 1980). In fact, resource similarity and market commonality “categorize the competitive field from the *point of view of a focal firm*” (Bergen and Peteraf 2002: 161, *italics added*). In this way, they make feasible the juxtaposition of the focal firm with any other firm present in the competitive landscape. In particular, the level of market commonality defines whether two firms are in competition, while high resource similarity increases the firms’ perception of vulnerability (Peng et al. 2012). On the other hand, resource similarity and market commonality allow us to appreciate the “opportunities for collaborative and cooperative activities, such as joint advertising to increase industry demand, in addition to identifying and monitoring threats” (Bergen and Peteraf 2002:162). Peng et al. (2012) argue that resource similarity increases the opportunities to achieve economies of scale and supports risk sharing in R&D cooperative agreements. Then, by taking resource similarity and market commonality in conjunction, we are able to explore how competing firms usually adopt cooperation with each other “to achieve goals they could not attain independently” (McCarter et al. 2011: 621). Interestingly, the extant literature (Gimeno 2004; Gnyawali et al. 2006; Luo 2007; Silverman and Baum 2002) considers resource similarity and market commonality as the key dimensions to construe not only purely competitive relationships (Chen 1996) but also the crucial interplay of competition and cooperation (Peng et al. 2012).

Actually, when a firm interacts with a competitor, the form of the competitive relationship depends on the interaction between market commonality and resource similarity because they contribute to shape the set of the conditions under which firms deal with conflicting interests (Chen 1996). Similarly, the type of the cooperative relationships also depends on the interaction between market commonality and resource similarity because they contribute to molding the set of conditions under which firms have common interests that drive them to jointly perform the same activities. While we recognize that firms may have to compete with all industry rivals or to cooperate with all of them, or, alternatively, to compete with some and cooperate with others, our attention does not focus on multiple relationships, but on the *dyadic relationship* between two firms. Finally, to bolster the readers’ understanding, some illustrative examples of the four logics emerging from the juxtaposition of resource similarity and market commonality will be discussed.

4 The logics informing the interplay of competition and cooperation

In this paper, we acknowledge the existence of four key logics through which to explain the interplay of competition and cooperation, as follows: (a) either/or logic—also termed as dichotomic logic; (b) from/to logic—also termed as switch logic; (c) both/or logic—also termed as dialectic logic; (d) both/and logic—also

termed as combinative logic. Table 2 provides descriptions of the four logics and includes representative studies that have used them. We also identify four labels that critically summarize the main features underlying each of the four logics. We shall start by exploring the first logic underlying the interplay of competition and cooperation, i.e., the either/or logic.

4.1 The either/or logic (dichotomic logic) between competition and cooperation

The either/or logic considers competition and cooperation as disconnected frames. Like any on/off light switch, the either/or logic posits the existence of dualism between competition and cooperation that are conceived as contradictory and irreconcilable concepts (Li 2018). Two concepts are in contradiction when there is no possible intermediate or alternative to them. Like life and death, a man is either alive or dead, but he cannot be both at the same time. As a result, one must choose between either one side or the other and, hence, between competing or cooperating (Li 2018).

The either/or logic is based on the following three main laws: (a) axiom of contradiction; (b) axiom of identity, and (c) axiom of excluded middle. According to the *axiom of contradiction*, “a thing cannot be it-self and something else” (Ford and Ford 1994: 760), either it is “A” or “not-A”. Therefore, competition and cooperation are separate and independent concepts, for which there is a “clear-cut and decisive contrast, a well-define boundary, and no overlap” (Farjoun 2010: 203). According to the *axiom of identity*, the essence of a thing cannot change over time. Hence, competition and cooperation remain unchanged in nature since they maintain their own patterns and features. The underlying assumption is that, not only are competition and cooperation strategic alternatives for firms to pursue, but they are characterized by different mindsets and contradictory elements. While competition involves conflict, rivalry, and opposition, cooperation involves trust, commitment, and agreement among the actors. Thus, the elements characterizing competition differ deeply from the elements characterizing cooperation, thereby making the interplay between them actually impossible. Finally, according to the *axiom of excluded middle*, any assertion must be wholly true or false, and there is no chance to have any grey area in between them.

As Li (2018) underscores, in the either/or logic, consistency prevails over completeness, and the coexistence of opposites is denied since they are mutually exclusive. Then, competition and cooperation are mutually exclusive and cannot be both or something in between the two (Ford and Ford 1994; Lebeck and Voorhees 1984). There is a self-reinforcing tendency for which competition leads to more competition and cooperation leads to more cooperation. Competing firms will be oriented to increase their rivalry, whereas cooperating firms will develop trust, and this condition will allow them to increase their commitment toward cooperation. Such a self-reinforcing tendency to move to the other polar extreme, not converging into a midway situation, simply explains why competition cannot encourage aspects of cooperation and vice versa. For the abovementioned reasons, we label the either/

Table 2 Synopsis of the logics of the interplay of competition and cooperation

Logic of the interplay of competition and cooperation	Description	Label	Representative studies
Either/or logic	Dualism between competition and cooperation, which are conceived as contradictory and irreconcilable concepts	Dichotomic logic	“Because joint ventures, as we noted, tend to be comparatively rigid and long-term (and can be either cooperative or competitive (...)), they will tend to culminate in mergers/acquisitions. In contrast, funded research and product bundling are short-term oriented and flexible—so that dissolution will tend to be the end result. Of course, most alliance types share a mix of small imbalances rather than a straightforward dominance of either competitive/flexible/short-term or cooperative/rigid/long-term combinations. Such mixes of slight imbalances work for maintaining the stability of alliances. In sum, because different alliance types suggest different kinds of small imbalances, they also induce the alliances toward specific types of alliance terminations” (Das and Teng 2000: 94)
From/to logic	Competition and cooperation are two poles located along a continuum. An increment of competition implies a reduction of cooperation and vice versa	Switch logic	“Some horizontal relationships consist of pure competition and others of pure cooperation, and <i>between the two extremes</i> , there are relationships consisting of a mix of both, where some business units cooperate with the competitor’s corresponding business units while other business units compete in the traditional way” (Bengtsson and Kock 2000, 424, <i>emphasis added</i>)

Table 2 (continued)

Logic of the interplay of competition and cooperation	Description	Label	Representative studies
Both/or logic	It accepts the contrast between competition and cooperation, while in the end, the solution falls short of encompassing the coexistence of the contradictions among them	Dialectic logic	<p>“Success in today’s business world often requires that firms pursue both competitive and cooperative strategies simultaneously. (...) striking a balance between competition and cooperation is vital to the performance and survival of business enterprises” (Lado et al. 1997: 111)</p> <p>“Collaboration is competition in a different form. Successful companies never forget that their new partners may be out to disarm them. They enter alliances with clear strategic objectives, and they also understand how their partners’ objectives will affect their success” (Hamel et al. 1989: 133)</p>
Both/and logic	Firms simultaneously cooperate and compete. Their actions occur independently and they experiment with various degrees of intensity	Combinative logic	<p>“The notion of ‘paradox’ transcends the either/or conception of paradox by adopting a both/and perspective” (Chen 2008: 11)</p>

or logic as *dichotomic* logic since dichotomy is the most representative feature that characterizes the interplay of competition and cooperation.

The either/or—or dichotomic—logic took central stage in management inquiries quite a long time ago. Actually, for a significant period of time, scholars argued that, “like oil and water, competition and cooperation do not mix. Instead, they operate side by side” (Gomes-Casseres 1996: 70). This approach considers competition as occurring to a varying degree in industries. Hence, competition varies from context to context; it is stronger when there is higher probability of the existence of zero-sum relations between two firms (Barnett 1997: 129). When competition is present, any form of cooperation is neglected. Drawing on Mead (1937), Barnard (1938), and Deutsch (1949), a widely accepted stance is to see competition and cooperation as merely dichotomous and contrasting elements.

If competition and cooperation are in contradiction, they seem incompatible to one another, and hence, they cannot coexist (Czakon et al. 2014; Poole and Van de Ven 1989). For instance, since rivals might decide to cooperate to “destroy” the other firm, firms implicitly assume that they cannot cooperate with each other. The idea of cooperating with rivals is simply not conceivable. In arguing that “goals are primarily cooperative or competitive” (Alper et al. 1998: 36), competition and cooperation have been envisaged as antonyms (Alper et al. 1998). Therefore, they represent two completely distinct settings (Asgari et al. 2013; Lumineau and Quélin 2012). The main assumption scholars have made in adopting the either/or logic is that competition and cooperation are contradictory elements. If two firms, for instance, firm A and firm B, compete with each other, they cannot also cooperate with each other. This condition occurs because the either/or logic underscores an ‘all-or-nothing’ dichotomy between competition and cooperation. Firms approaching the competitive arena following the either/or logic assume that competition and cooperation are dichotomous and hence that they are in contrast. This situation mainly happens because competing firms struggle to win the fight over the others and, thus, see no room for cooperating with the same firms with which they are competing. Therefore, firms cannot simultaneously cooperate and compete with rivals. Then, relationships among firms could be either cooperative or competitive, “either benign or rivalrous” (Gulati et al. 2000: 206).

4.2 The from/to logic (switch logic) between cooperation and competition

Whereas the either/or logic bases its reasoning on the fact that competition and cooperation are characterized by different structuring elements and are mutually exclusive and contradictory, the from/to logic posits that competition and cooperation are opposites located along a continuum. According to the from/to logic, competition and cooperation are two poles located along a continuum, for which increased competition should imply a reduction of cooperation and vice versa. The from/to logic draws on the idea that the essence of the world is explained by means of opposite facets of nature.

Although competition is exogenous to the firm (Porter 1980), “firms within an industry compete differently depending on their resources and their competitive

efforts” (Ang 2008: 1057). Accordingly, firms operating in the same industry do not necessarily have the same capacity to prevail in the clash for strategic resources (Barnett 1997). On the other hand, firms can decide to cooperate in some specific activities by sharing resources.

Competition and cooperation are seen as the two poles of a spectrum of gradual intensity that include more/less competition/cooperation. Since it is difficult to imagine rival firms that, by means of cooperating, completely lose their proclivity to compete, this logic underscores that the two patterns are rather close.

An example helping to clarify the from/to logic is related to a single pole slide-dimming switch, in which various solutions that are located somewhere along the continuum between the two extremes do exist. Thus, we can have more/less light depending on where the slide is located. Usually, firms experiment with a midway solution that balances competition and cooperation, such as a negotiation. Accordingly, in the business context, we would expect to see an inclination towards competition and cooperation rather than perfect or pure forms of either one.

The from/to logic is based on two key arguments that support this line of reasoning. First, the elements characterizing competition are the same as those that characterize cooperation. Specifically, competition implies that actors have *conflicting interests* that induce them to struggle with one another. Cooperation implies that actors have *converging interests* that induce them to join their efforts to achieve a common purpose. Thus, competitive relationships emerge when an actor needs to tackle another actor for scarce resources, while cooperative relationships emerge when actors join together with the aim of sharing information with one another (Bengtsson and Kock 2000; Long and Schiffman 1997). Second, the resources devoted to competition are the same ones that are devoted to cooperation, and they are *limited*. Thus, the interplay between competition and cooperation implies that an increase in competition leads to a reduction in cooperation and vice versa. For instance, if a firm plans to invest 100,000 US\$ in marketing, it can decide to spend 50,000 US\$ toward cooperation with other firm(s) to increase the basic demand and the other 50,000 US\$ to capture new customers for itself. Alternative scenarios are to spend 20,000 US\$ for cooperation and 80,000 US\$ for competition, or 30,000 US\$ toward cooperation and 70,000 US\$ toward competition, and so on. Thus, a firm can select the levels of competition and cooperation, but an increment in cooperation activities means an automatic reduction of competition. For the reason above, we label the from/to logic as *switch* logic since the idea of switching from competition to cooperation is the most representative feature that depicts the interplay of competition and cooperation based on this logic.

The from/to (or switch) logic comes to light in management studies when scholars recognize that players might be “partly motivated to cooperate on common interests and partly motivated to compete for a large share of resources” (Cox et al. 1991: 831). Scholars have argued that, between the two extremes of competition and cooperation, firms interact with each other depending on the (various) degree of cooperation and competition (Bengtsson and Kock 2000). However, the implementation of cooperation requires that firms reduce their incentives to compete, and vice versa (Cachon and Zipkin 1999; Chen 2002). From this perspective, competitors cooperate since increased cooperation among firms is expected to reduce competition,

thereby creating barriers to entry, increasing market power, and engendering negative effects in the organizations that are not involved in the cooperative agreement (Dobbin and Dowd 1997; Ingram and Yue 2008; Podolny and Scott Morton 1999).

The from/to logic provides an additional option vis-à-vis the either/or logic simply because it encompasses several possibilities emerging in between the two extremes of competition and cooperation. However, it is still a one-dimensional perspective since it does not admit that an increase of cooperation might lead to an increase of competition as well.

4.3 The both/or logic (dialectic logic) between cooperation and competition

The both/or logic represents an alternative epistemological stance toward achieving a more complete understanding of reality. The both/or logic is based on the following three main axioms: (a) axiom of transformation; (b) axiom of oppositional struggle; and (c) axiom of negation. According to the *axiom of transformation*, gradual increases in quantities will lead to a qualitative shift, which means that competition and cooperation can be increased in quantity, thereby leading to new solutions that differ from the pre-existing ones (Darwin et al. 2002). The implication of this axiom is that there are no limits to the increase in the quantity that is required to develop a new solution. Therefore, an increase in competition does not necessarily imply that a reduction in cooperation will occur, and vice versa.

According to the *axiom of oppositional struggle*, each unit is a unity of contradictory opposites. Therefore, each unit includes its opposites, for which ‘the whole’ includes both ‘A’ and ‘not-A’ (Ford and Ford 1994: 762). Opposites in-unity means that, although in contradiction, opposites are still complementary, and hence, they form the whole as based on the coexistence of opposites that are systematically related to each other. This dialectical system acknowledges the presence of “an absolute full integration of all compatible aspects of opposite elements (in a spatial terms)” (Li 2018: 44) and a full separation of the conflicting aspects of such opposite elements.

Finally, according to *the axiom of negation*, change occurs through the negation of the previous form. Specifically, each element includes its opposite, there is no permanent identity and the internal opposites explain why things change. In this vein, the axiom is able to explain why things change their nature. Specifically, the continuous struggle between such opposite tendencies continues gradually until something different from the pre-existing situation (i.e., a synthesis between competition and cooperation) emerges.

The three axioms discussed above underscore the law of dialectical logic, that is, the coexistence of *contradictions*. Different from the either/or logic, for which opposites are strongly contradictory (i.e., true and false) and, hence, they cannot co-occur ever, the dialectical both/or logic assumes that opposites are *weakly* in contradiction and are not mutually exclusive. Accordingly, opposites can complement each other and occur reciprocally. Interestingly, such coexistence is non-destructive since the dialectical logic temporarily balances opposites along a continuum, but ultimately considers them as mutually exclusive. In other words, while initially the

dialectical logic seems to accept the contrast occurring among opposites, ultimately, the solution fails to encompass the coexistence of contradictions among them (Li 2012, 2018). Therefore, we label the both/or logic as *dialectical* logic since the idea of a temporary coexistence of competition and cooperation is the most representative feature that characterizes the interplay of competition and cooperation based on the both/or logic.

The both/or ‘dialectical’ logic between competition and cooperation has inspired studies that acknowledged the relevance of jointly considering competition and cooperation to accomplish a competitive advantage. Accordingly, the dialectical logic of competition and cooperation summarizes the idea of cooperating with a rival for developing learning races (Hamel 1991).

4.4 The both/and logic (combinative logic) between cooperation and competition

The both/and logic draws on the attempt to extend the either/or logic and the both/or logic earlier analyzed in such a way to accept “the coexistence of the salient opposite elements of cooperation and cooperation” (Li 2014: 322). Therefore, competition and cooperation could be *combined* since cooperation among rival firms does not necessarily lead to a reduction of competition among them. Firms may still continue to cooperate and compete simultaneously since their actions may occur independently. In this perspective, scholars have acknowledged (Raza-Ullah et al. 2014) that the both/and logic allows a significant number of alternatives within the extreme dimensions of competition and cooperation to be taken into account. We refer to these alternatives as competitive intensity and cooperative intensity.

Competitive intensity is “the magnitude of effect that [a firm] has on its rival’s life chances—regardless of the particular tactics or strategies involved” (Barnett 1997: 130). Specifically, it represents the firm’s ability to affect the rival’s competitiveness as a reaction to competitor attacks (D’Aveni 1994; Gimeno and Woo 1996). Competitive intensity is measurable by taking on the level of aggressiveness, speed, and the pattern of competitive moves and countermoves a firm can deploy within its industry (Chen 1996; Gimeno and Woo 1996; Guedri and McGuire 2011). The presence of a robust competitor is liable to amplify the competitive intensity (Ang 2008). Therefore, high levels of competitive intensity may imply the presence of a fierce competitor that is able to significantly diminish the rivals’ survival chances. On the contrary, low levels of competitive intensity imply the presence of a mild competitor that “harms its rivals’ life chances only slightly” (Barnett 1997: 130).

Cooperative intensity is the magnitude of commitment that a firm may experiment with in developing collaborative activities with other firms. Specifically, the cooperative intensity identifies the amount of constraints (e.g., in the amount of production), shared resources, information, and knowledge between two firms. Although firms can reap advantages from cooperating with each other, that does not mean that they would be equally committed towards cooperation. Accordingly, both the antecedents and the expected outcomes underlying the firm’s choice to cooperate to achieve a common purpose fall short of explaining the level of commitment each firm may deploy for the success of the cooperation and, hence, how “intense”

and “relevant” the cooperation for each partner is. Thus, firms have different degrees of commitment in cooperating with each other to grasp strategic opportunities. Cooperative intensity is low when firms “have a simple division of labor with minimal ongoing adjustments that require each partner to share information about the progress of its initiatives for the partnership to achieve strategic goals” (Dyer and Singh 1998: 785). On the other extreme, cooperative intensity between two firms is high when they develop frequent and deeper exchanges of resources and knowledge. Accordingly, the interdependence between two firms is extended as firms will likely “entail continuing mutual adjustments” (Dyer and Singh 1998: 785). In this instance, “the intensity of cooperation between partners captures the extent to which a (...) firm can learn from a certain partner and share and acquire valuable knowledge from that partner” (Park et al. 2014a: 212).

While “high intensities of competition and cooperation would be beneficial for firms in their pursuit of innovation” (Park et al. 2014a: 210) and cooperation among rivals may help them develop new knowledge and concurrently reduce the lock-in issues that usually emerge in cooperative settings, it is noteworthy that rivals are committed to cooperate as long as they can benefit from the cooperation in terms of private and common benefits (Khanna et al. 1998). From this perspective, cooperation among rivals leads to learning races that, in turn, affect the firms’ competitive positions (Hamel 1991; Gnyawali et al. 2006; Park et al. 2014a, b). For the reasons mentioned above, we label the both/and logic, as *combinative* logic since the idea of combining competition and cooperation is the most representative feature that depicts the interplay of competition and cooperation based on this logic.

5 Interpretive framework

In this section, we provide an interpretive framework of the conditions under which a specific logic is expected to affirm vis-à-vis the other in a cooperative agreement with competitors. The two dimensions of *resource similarity* and *market commonality* become helpful in capturing the competitive relationships between firms and their actions to anticipate competitive and cooperative moves and countermoves (Chen and Miller 2012). Actually, they are important “not only to identify those competitors who mirror your particular approach to the market” (Abell 1980: 229) but also to appreciate the sharing of resources that cooperation with competitors may generate. We explore how competing firms usually adopt cooperation with each other “to achieve goals they could not attain independently” (McCarter et al. 2011: 621).

A significant additional aspect that we ought to consider to explain the interplay of competition and cooperation is *competitive asymmetry*, meaning that “if A is B’s primary competitor, it does not necessarily follow that B is A’s primary competitor” (Chen 1996: 116). Therefore, in terms of market commonality and resource similarity, “each competitive relationship is unique and directional, non-symmetrical” (Chen 1996: 116). For the sake of simplicity, we assume the perspective of one firm, which we term as the *focal firm*. Specifically, we develop our framework by taking into consideration how the focal firm intends to adopt the interplay of competition and cooperation with another firm. The choice to focus on the focal firm is consistent

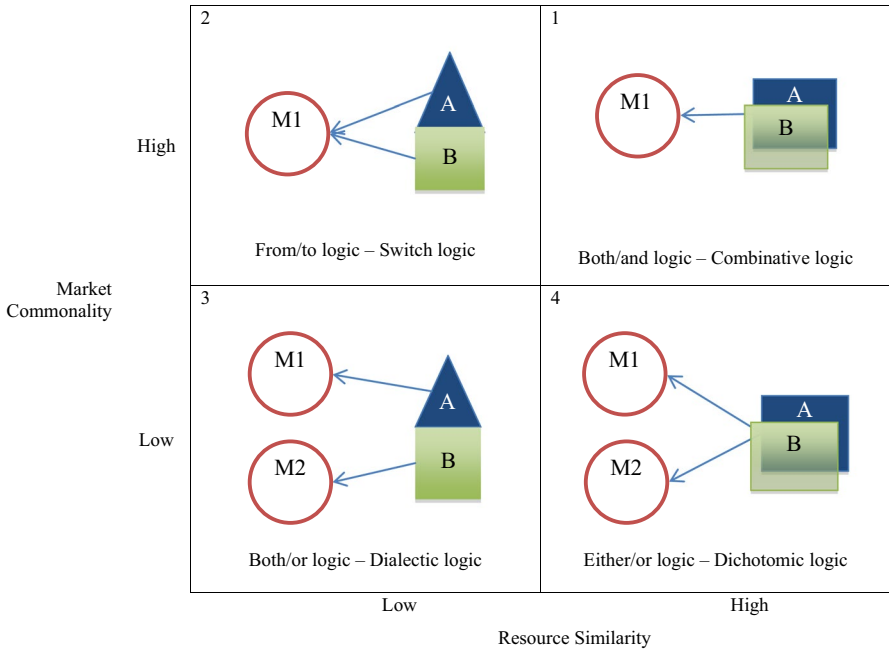


Fig. 1 Matrix of the interplay of competition and cooperation. Source: Our elaboration from Chen (1996). M1: Market 1, M2: Market 2, A: Firm A’s resources, B: Firm B’s resources, A/B: Both firms, i.e., firm A and firm B, have the same resources

with previous competitive dynamics studies (Chen and MacMillan 1992; Ferrier 2001) that recognize the *relational* nature of competition (Kilduff et al. 2010). This condition implies that the nature of competition and cooperation may vary depending on the relationships between rivals (Kilduff et al. 2010: 944). In other words, the rivals are not defined per se but are defined from the perceived perspective of a defined focal firm (Chen 1996).

Figure 1 shows that juxtaposing market commonality and resource similarity yields four quadrants in a two-per two-matrix, and in each of them, a given form of interplay of competition and cooperation takes place. In this vein, we draw from Chen’s (1996) archetype of interfirm rivalry to highlight how the interplay of competition and cooperation might emerge in each quadrant by providing illustrative examples of sensible cases.

5.1 Quadrant 1: The interplay between cooperation and competition under the condition of high resource similarity and high market commonality

Quadrant 1 in Fig. 1 exemplifies the relationship of the focal firm with a competitor characterized by high resource similarity and high market commonality. Since firms operating in this quadrant have both similar resources and strategic capabilities and they approach any other firm considering “clearly a direct and mutually

acknowledged competitor” (Chen 1996: 106), in this quadrant, the focal firm would choose to cooperate with its fierce rival only if this condition occurs without reducing competition. In fact, the condition for which the focal firm may have an interest in cooperating occurs if it does not imply a reduction in competition, and this situation may occur, in turn, when the focal firm cooperates with a fierce rival with whom there exists a significant market commonality and overlap in terms of customers served and products and services provided. The focal firm may enhance its cooperative intensity and, hence, its magnitude of commitment towards the other firm to increase its benefits stemming from the cooperation. Furthermore, the focal firm may increase its competitive intensity in such a way to impact its rival’s reaction (D’Aveni 1994; Gimeno and Woo 1996). The condition that the focal firm has the same resource endowment and operates in the same markets implies that cooperation among rivals can lead to learning races (Hamel 1991). The logic underlying the interplay of competition and cooperation in such a case is the *both/and* logic, where rivals cooperate with one another to gain technological improvement at relatively lower costs and risks compared with the case in which they sustain such technological investment in a stand-alone manner. In a condition of high-paced technological change (D’Aveni 1994), firms must invest in R&D to tackle the speed of technological change. A high level of resource similarity shores up the process of cooperation. Nonetheless, since rivals operate in the same markets, they may consider cooperating with one another if it allows them to create new knowledge (Gnyawali and Park 2009, 2011; Ritala 2012), to acquire knowledge from their partners in terms of best practices and successful strategies, and to start learning races to improve their core competencies and strengthen their competitive advantages (Hamel et al. 1989; Luo et al. 2006).

An illustration enlightens our line of reasoning. Rivalry among actors operating in the fast food industry has significantly increased in the last decades. Among them, McDonald’s and Burger King have been historically considered as particularly vicious rivals. Accordingly, both firms have similar resource endowments, and they substantially compete in the same markets since they try “to sell similar products and services to similar customers” (Williams 2015:170). Given the significant market overlap between McDonald’s and Burger King, it is quite surprising to see the ‘bizarre’ deal that Burger King (that we consider as the focal firm) announced in December 2018. Specifically, Burger King asked McDonald’s, its long term vicious rival, to collaborate. The deal called “Whopper Detour” implied that “customers could get a (Burger King) Whopper for just \$0.01. But they had to go to McDonald’s” (Taylor 2019). This project aimed to promote the Burger King’s new app for smartphones. Once customers had registered and the app signaled that a “customer was within 600 feet of a McDonald’s location, it unlocked the deal to order a Whopper for \$0.01” (Taylor 2019).

On the one hand, McDonald’s is aware that the increased value created through cooperation would be destroyed if competition in the marketplace was lessened (Gomes-Casseres 2009). Therefore, McDonald’s is interested in cooperating with Burger King only if its own competitiveness is enhanced. Specifically, in selling Burger King’s whoppers for only 1 cent, McDonald’s has the chance to become acquainted with Burger King’s customers and their preferences, and once

they enter into McDonald's stores, McDonald's may encourage them to try other products. On the other hand, Burger King has an interest in collaborating with McDonald's to enhance its popularity. In addition, through the customers' registration using the app, Burger King may be able to dispatch customized promotions and secure customer loyalty.

When competitors have similar resources, compete for the same customers, and sell similar products, they inevitably experience significant interfirm rivalry pressures. Therefore, the focal firm will cooperate with a rival/partner only if it can adopt the *both/and (or combinative) logic* and, hence, both compete and cooperate with the rival partner. Furthermore, this case shows that Burger King and McDonald's have enhanced both their cooperative intensity through the joint agreement and their competitive intensity by orienting consumers and building customer loyalty.

Interestingly, the *both/and (or combinative) logic* may occur even if the focal firm only enhances its cooperative intensity toward its rival partner, without enhancing its competitive intensity. A supplementary example clarifies this argument. As Peng (2013: 233) states, "the high-flying Starbucks and the down-to-earth McDonald's used to have little resource similarity. Both have high market commonality in the United States, both blanketed the country with chain stores". When, in 2009, McDonald's (the focal firm) launched the McCafé, it "aspired to go 'up market' and offered products such as iced coffee designed to eat some of Starbucks' lunch" (Peng 2013: 233). Starbucks reacted by offering coffee at lower prices. Thus, we observe a shift from low to high resource similarity between McDonald's and Starbucks to consider them as fierce competitors in the breakfast foods, instant drinks and coffee market segments. Whilst competitors, in 2018, McDonald's and Starbucks agreed to launch together the Next Generation Cup Challenge initiative, by signing an agreement to jointly develop and co-found a fully recyclable cup, including the lid and the straw, thereby making their operations more sustainable. While, on their own, both firms were already making technically recyclable cups out of the same fibers and plastics, "in most markets these materials aren't easily recovered" (Openvideo 2019).

As Marion Gross, McDonald's chief supply chain officer for the United States said, "we're looking at this as a pre-competitive opportunity. Before we would even compete in the normal way we traditionally would compete, this is a step further back in the chain" (Wilson 2018) since "there are certain things we'd say that we're not competitors on (...). We all have to come with solutions and make sure we're watching out for the public's interest" (Wilson 2018). McDonald's and Starbucks both acknowledge the relevance of jointly cooperating for redesigning fiber cups that are "truly recyclable", and hence, the value added of such an initiative. Accordingly, the benefits for Starbucks and McDonald's would not accrue in terms of cost optimization or potential financial savings (Gibbons 2018), but rather affect their brand image and greater social impact. They will enhance their cooperative intensity by cooperating on social issues and environmental sustainability, and they will still maintain their competitive intensity level by competing for sales on a daily basis.

5.2 Quadrant 2: The interplay between cooperation and competition under the condition of low resource similarity and high market commonality

Quadrant 2 in Fig. 1 illustrates the relationship of the focal firm with a competitor characterized by low resource similarity and high market commonality. This is the case in which two firms operate in overlapping markets and assign the same importance to such individual markets, but they do not have similar resources and capabilities on which to establish their competitiveness (Chen 1996). Because of the significant interest of accessing a rival's resources, the focal firm may be committed towards cooperating with its competitor to win a competitive advantage in the marketplace. Accordingly, such cooperation allows the focal firm to obtain access to (or to internalize) other resources and “know-how beyond the firm's boundaries, to exploit economies of scale and scope, or to share risk or uncertainty with their partners” (Kale et al. 2000: 217). However, since the focal firm faces high competition due to high market commonality with its rival, the focal firm may have an interest in cooperating with its competitor only if the cooperation will reduce the competition between them. Accordingly, if cooperation enhanced its rival's competitiveness, the focal firm would not find it beneficial to collaborate with a rival.

An example clarifies our line of reasoning. Pizza Hut (which is considered as the focal firm) is one the top competitors operating in the fast food industry that competes fiercely with Burger King, Domino's, Dunkin Donuts, KFC, McDonalds, Pizza Hut, Starbucks, Subway, Taco Bell, and Wendy's (Bhasin 2018). While all of them have high market commonality since there is significant market overlap in terms of consumer needs, Pizza Hut and KFC have low resource similarity. In fact, they ground their competitive advantage on different types of resources, assets, capabilities, processes and knowledge (Peng 2013). Accordingly, Pizza Hut offers pizza and typical Italian foods, while KFC offers fried chicken and chicken-based products.

Because of high market commonality, Pizza Hut and KFC are direct competitors. Therefore, they will consider the opportunity to cooperate only if this implies a reduction of competition. Interestingly, on February 9, 2019, to celebrate National Pizza Day, KFC and Pizza Hut stores located in the UK teamed up to create a “new pizza” encompassing both the Pizza Hut's typical ingredients and KFC's favorite ingredients. This collaboration was developed as a trial for a limited edition to produce the Gravy Supreme; i.e., “Pizza Hut Cheesy Bites pizza bathed in KFC gravy and topped with Popcorn Chicken pieces, mozzarella, sweet corn, and garlic sprinkles” (Eccleston 2019). While the joint production would enhance the cooperation between Pizza Hut and KFC, we still see a reduction in their competition since both firms will sell the Gravy Supreme Pizza in their stores. In other words, the logic underlying the interplay of competition and cooperation is in such a case is the *from/to* (or switch) logic, for which an increase in cooperation should imply a reduction in competition, and vice versa. Otherwise, there is no room for the interplay of competition and cooperation to occur.

5.3 Quadrant 3: The interplay between cooperation and competition under the condition of low resource similarity and low market commonality

Quadrant 3 in Fig. 1 illustrates the relationship between the focal firm and a competitor, characterized by low resource similarity and low market commonality. On the one hand, the low resource similarity between the competitors allows the firms “to have diverse repertoires to draw on because of the unique profiles of their strategic resources” (Chen 1996: 107). Therefore, in this case, the motives for cooperation are limited. On the other hand, low market commonality implies that little or no overlap exists in terms of markets in which they operate. Consequently, the competition degree is not particularly fierce. Since the cooperation will not affect the competition between firms, the logic that informs the interplay will be *both/or*.

This condition occurs when the focal firm wants to penetrate the market served by other firms with the aim of breaking into the markets in which the other firms already operate. An example clarifies the argument. In December 2018, American Express (henceforth, Amex), a financial and travel-related services diversified firm, and Alitalia, the main Italian airline company, renewed their 20-year long partnership based on co-branded fidelity cards for Alitalia’s frequent flyer customers. Accordingly, Amex and Alitalia have long cooperated and promoted membership reward programs by offering transfer bonuses to the holders of the co-branded Alitalia-Amex credit card. While low market overlap and low resource similarity between Amex (which is considered as the focal firm) and Alitalia exist, both firms still experience a few situations in which they *temporarily* cooperate and compete with each other. Accordingly, while there exists a long-standing cooperative relationship between Amex and Alitalia, Amex temporarily competes with Alitalia in regard to advertising Amex’s own credit cards rather than the co-branded ones (Corporate Communication Alitalia 2019). In fact, Amex has a greater interest in promoting its own branded credit cards. Alternatively, it promotes the co-branded card to penetrate the market represented by Alitalia’s frequent flyer customers and offers them additional advantages if they become holders of the American Express Credit Card. In other words, the logic underlying the interplay of competition and cooperation between Amex and Alitalia is *both/or* (or dialectic logic), where they are in cooperation or (temporarily) in competition with each other.

As the focal firm, Amex cooperates and temporarily competes with Alitalia, although the condition of low market commonality and low resource similarity makes Amex weakly concerned in doing both. Therefore, although the *both/or* logic assumes that competition and cooperation are not in intense contradiction and may mutually coexist, Amex adopts the *both/or* logic as a “*bridging solution*”, which temporarily acknowledges the interplay of competition and cooperation, to ultimately opt for competition or, in this instance, for cooperation (Li 2018).

5.4 Quadrant 4: The interplay between cooperation and competition under the condition of high resource similarity and low market commonality

Quadrant 4 in Fig. 1 illustrates the relationship of the focal firm with a competitor characterized by high resource similarity and low market commonality. In this

instance, the firms are potential rivals since the firm uses resources similar to those of the focal firm but serves different market needs. Because of such potential competition and since the two firms have the same resources, there is no real space for cooperation. Accordingly, the logic that informs the interplay will be *either/or*.

An example clarifies our line of reasoning. While Coca Cola has long been considered the world's soft drink giant, it had never operated in the energy drink business before 2015. Accordingly, in mid-2015 Coca-Cola made its entry into the energy drink business by acquiring a 16.7% stake in Monster, one of the leaders in the energy drink business (Schroeder 2018). Further, Coca Cola started this partnership with the purpose of the agreement being to strengthen the firms' reciprocal positions in the beverage industry. Specifically, Coca-Cola gave Monster its global energy drink business, while Monster gave Coca-Cola its non-energy* drink business.

"As part of their original agreement, Coca-Cola agreed not to compete in the energy drink category with certain exceptions" (Schroeder 2018). The misunderstanding generated by such exceptions eventually caused conflict between Coca Cola and Monster. Consequently, Coca Cola developed two energy drinks, named Coca-Cola Energy and Coca-Cola Energy No Sugar. As Rodney C. Sacks, chairman and CEO of Monster, maintained in his November 7, 2018 conference call with financial analysts, Coca Cola "believes it may market under an exception relating to the Coca-Cola brand," while Monster argued that such an exception does not apply (Schroeder 2018). This circumstance led to an arbitration between Coca Cola and Monster to solve the commercial controversy that had emerged. Interestingly, "Coca-Cola has indicated that it has suspended the proposed launch of such energy products until April 2019" (Schroeder 2018).

In this case, both firms have high resource similarity since their products include functional ingredients and water-soluble vitamins. However, Coca Cola and Monster (which is considered as the focal firm) began the collaboration because they had a relatively low market commonality. Accordingly, Coca Cola has widespread market and broad target in terms of age and individual's lifestyle, while Monster typically targets athletes, musicians, and employees that need 'healthy' energy drinks for their daily activities. While we acknowledge that both firms have an interest in cooperating, this may occur only if they stop competing, and vice versa. The case shows that Monster and Coca Cola interacted according to the *either/logic* (or *dichotomic*) logic, for which they either compete with each other, by penetrating each other's market segment, or continue to cooperate. No midway situation is accepted.

5.5 Additional remark

As previously mentioned, our framework draws on Chen (1996), according to whom *competitive asymmetry* does exist among rival partners. As Chen and Miller (2012: 140) argue, "it is unlikely, for example, that two rivals will perceive every competitive action or relationship in the same way. Due to differences in assumptions about

the industry outlook and disparate organizational arrangements and preferences, rivals may differ in their views of their competitive relationship. Put symbolically, $d(a, b) \neq d(b, a)$. For this reason, we have developed our framework by considering the focal firm's perspective. The consequence of the competitive asymmetry is that, for instance, in cooperating with its competitor, firm A may approach firm B according to the from/to logic, whereas firm B may approach firm A according to the either/and logic. In other words, "implicit in our discussion are the motivations and cognitions of the actors who initiate and respond to competitive actions—all of which relate to human perception" (Chen and Miller 2012:152).

Another example clarifies this argument. In the early 1980s, two of the world's largest carmakers of the time, Toyota and GM, announced that they had established a massive joint venture termed "New United Motor Manufacturing Inc.," or NUMMI. Both parties approached the joint venture with different aims and gains (Gomes-Casseres 2009). For Toyota, NUMMI epitomized the initial entry of Toyota's production in the US, and thus, the way to learn how to adapt its successful Toyota Production System to US suppliers and, in turn, how to acquire knowledge on the peculiarities of the US automotive market. Interestingly, after only 2 years in school with GM, Toyota had so heavily financed its initial wholly-owned plant in the US that it became the largest plant outside Japan. GM, for its part, also aimed to learn and exploit the Toyota Production System from the venture. However, its task was more difficult to accomplish since it wanted to "glean tips from Toyota's magic. But the way the joint venture was run kept this learning to a minimum" (Gomes-Casseres 2009). Accordingly, while GM placed approximately a dozen executives at the plant with the aim of gaining knowledge from Toyota, Toyota was in charge of operating the plant and benefiting from the learning-by-doing of Toyota's managers. Accordingly, while GM initially adopted the from/to logic in the cooperation with Toyota, assuming that Toyota would reduce competition within the joint venture, Toyota approached the cooperation with GM by following the both/and logic, thereby considering competition and cooperation as independent matters. Quite intriguingly, gaining an understanding of the logics underlying the interplay of competition and cooperation will clarify what rival partner(s) firms should consider in regard to cooperating and competing simultaneously. Consequently, thanks to the understanding of the logics underlying the interplay of competition and cooperation and the existence of competitive asymmetry between firms, we are able to unveil the emergence of competitive-cooperative or *coopetitive dynamics*. Actually, since the logics at hand result from the interactions between partners, they show an inner dynamic nature. In fact, competitive-cooperative dynamics develop within a specific logic of interaction, as well as when a swing from one logic of interaction to the other occurs. Although each of the logics bears specific features and assumptions that ultimately make it clear the frame of reasoning adopted by managers, we pinpoint that it is possible to shift out and in of the different logics. For instance, a combinative reasoning may become dialectic reasoning once ideas come into conflict with each other, with the aim of finding a middle way among conflicting positions.

6 Discussion and conclusion

This paper is aimed to develop a deeper understanding of the four logics that inform the interplay between competition and cooperation (Li 2018). These are as follows: (a) *either/or (or dichotomic) logic*, according to which cooperation and competition are in contradiction and are not reconcilable; (b) *from/to (or switch) logic*, according to which cooperation and competition are in contradiction but are located along a continuum; (c) *both/or (or dialectical) logic*, according to which cooperation and competition are in contradiction and, although a superficial integration of the two is possible, ultimately, the solution does not encompass the coexistence of the contradictions between them; and (d) *both/and(or combinative)logic*, according to which competition and cooperation are two orthogonal choices. Additionally, based on the focal firm's perspective regarding market commonality and resource similarity, as reported in Fig. 1, the paper is also aimed to grasp the conditions explaining why firms cooperate and compete following a specific logic in a cooperative agreement with competitors.

In light of the insights provided, we are able to juxtapose the literature on the interplay of competition and cooperation with the literature on cocompetition and summarize the contributions of the paper.

6.1 Juxtaposing the literature on cocompetition and on the interplay of competition and cooperation

In the aftermath of Brandenburger and Nalebuff's foundational work, scholarly research on cocompetition has begun to increase (Gnyawali and Park 2011). Scholars have shown a budding interest in exploring the drivers (Bengtsson and Raza-Ullah 2016; Mariani 2018) and supporting conditions (Chen 2002) for cocompetition to occur by *explicitly* taking on the simultaneous existence of competition and cooperation. We call attention to two relevant aspects to juxtapose the literature on cocompetition with the one on the interplay of competition and cooperation.

First, this paper complements Bengtsson and Raza-Ullah's inquest (2016) on the antecedents of cocompetition; i.e., internal, external, and relational. By focusing on market commonality and resource similarity, we give importance to *relational-specific drivers* to show that the combination of market commonality and resource similarity construes the logic that executives are likely to follow in managing the interplay of competition and cooperation.

Second, the framework we propose elucidates that the interplay of competition and cooperation can be either *explicit* or *implicit* (Hoffmann et al. 2018). Explicit competition is observable when both firms activate a set of actions to wipe out their rival. However, competition may take many forms that go beyond explicit market commonality and resource similarity (Chen 1996). Accordingly, the condition where rival firms have explicit resource similarities does not mean that they necessarily engage in explicit competition, although resource similarity represents an interesting starting point for interfirm rivalry to occur (Barney 1991; Chen 1996; Hoffmann et al. 2018). In such a case, competition is *latent* and will become tangible when

both firms decide to wipe out their rival. Actually, our framework allows for the *relational* nature of competition (Kilduff et al. 2010). In fact, it implies that rivals are not defined per se but are defined based on the *perceived* perspective of the (pre-determined) focal firm (Chen 1996). Similarly, the extant literature shows the existence of various forms of cooperation; i.e., from explicit forms, such as equity joint ventures and strategic alliances, to implicit forms, such as collusion (Hoffmann et al. 2018).

A second assumption represented in the coopetition literature is related to the *symmetry* of the competition-cooperation relationship (Hoffmann et al. 2018). While coopetition studies have initially drawn on game theory (Brandenburger and Nalebuff 1996), this approach falls short to consider “the implications of being the firm that initiates versus the firm that reacts to such a unilateral decision” (Hoffmann et al. 2018: 13). Accordingly, if two firms are partners, and one of the two decides to enter the partner’s market and to become a competitor, the other partner has no choice but to succumb to the partner’s decision. Conversely, our framework supports the idea that the focal firm strategy assumes that its competitive moves towards a rival are defined per se. The focal firm should, therefore, consider a set of alternative logics that rivals may take on the grounds of their awareness, motivation, and capability to react.

Interestingly, coopetition scholars have hitherto considered competition and cooperation as sometimes being in contradiction (i.e., Bengtsson and Kock 2000; Fernandez et al. 2014), while they are complements at other times (Brandenburger and Nalebuff 1996; Dagnino 2009; Minà and Dagnino 2016). In this paper, we have disentangled four specific logics that are linked to the condition that cooperation and competition may (or may not) be in contradiction and may (or may not) be reconcilable. Accordingly, for the sake of transparency, we make an open call to competition-cooperation scholars, as well as to coopetition researchers, to explicitly declare the logic that they adopt in their studies from now onward.

6.2 Contributions

This paper offers four main contributions to the strategic management research. First, we recognize four logics that inform the interplay of competition and cooperation, which are as follows: (a) either/or logic or dichotomic logic; (b) from/to logic or switch logic; (c) both/or logic or dialectic logic; and (d) both/and logic or combinative logic. While a coopetition inquiry frequently assumes a single logic (i.e., the both/and logic) of the interplay of competition and cooperation, we unveil the existence of *multiple* logics that inform such a relationship and that are related to one another.

Second, we contribute to extant studies by advancing an interpretive framework that allows us to connect the interplay of competition and cooperation with the critical dimensions of resource similarity and market commonality. This point appears particularly crucial because the literature on the interplay of competition and cooperation has been sharply criticized for lacking a clear theoretical base (Bengtsson and Kock 2014). As such, since this paper links the understanding of “what firms do

when they compete with specific rivals” (Chen and Miller 2012: 136) with studies of cooperation, it contributes to clarifying how the interplay of competition and cooperation between rivals emerges. While this paper is focused on the interplay of competition and cooperation within industries or at the business level, we believe that it may also be helpful to understand the interplay between competition and cooperation at the corporate level. In fact, as Chen (1996: 124) describes, “the framework is amenable to the analysis of competitors pursuing a single, dominant, or related diversification strategy”. Similarly, our framework is appropriate for understanding cooperation among rivals at various levels of analysis and across industries and markets.

Third, by exploring the core assumptions of the interplay of competition and cooperation and how resource similarity and market commonality shape this interplay, this study “widens the theoretical scope of competitive dynamics” (Chen and Miller 2015: 759) and contributes to advancing the path towards the achievement of a more integrated view of the interplay of competition and cooperation among and between firms.

Finally, this paper juxtaposes the findings of the logics informing the interplay of competition and cooperation with the shared view of cooptation (Minà and Dagnino 2016). While cooptation studies explicitly consider the simultaneous existence of competition and cooperation, our framework supports the idea that the interplay of competition and cooperation may be either explicit or implicit. Additionally, while the extant cooptation inquiries usually assume the existence of symmetry in the competition-cooperation relationship (Hoffmann et al. 2018), we show that the focal firm supposes that its competitive and cooperative moves towards a rival firm may be defined per se. In this way, we recognize the *relational* nature of the interplay of cooperation and competition (Kilduff et al. 2010), which means that managers will approach the interplay of competition and cooperation on the grounds of how they perceive the rivalry stipulation with their partners (Chen 1996).

6.3 Limitations and research agenda

As with any paper, this paper has some limitations, which open new pathways for future research on the interplay of competition and cooperation. First, based on Chen’s (1996) two fundamental dimensions of competitor analysis (i.e., resource similarity and market commonality), our proposed framework focuses on how firms select the logics underlying the interplay of competition and cooperation. Nonetheless, in this process, we do not consider the impact of the interplay of competition and cooperation on firm performance. To achieve this aim, future research should plug into the framework by leveraging the role of *cooperative capabilities* that might allow firms to benefit from the adoption of each specific logic in various ways (Ritala 2012).

Second, we recognize that our interpretive framework works over a one-period time-span. Therefore, in discussing the both/and logic (combinative logic) between cooperation and cooptation, we overlook considering how the cooperative intensity shapes the firms’ relational embeddedness (Uzzi 1996) or relational/social capital.

For instance, one might suppose that intense cooperation can lead to learning races (Hamel 1991) and that firms should join a race to see which party can learn the most in the least amount of time. We therefore call for longitudinal studies to investigate this key aspect. In addition, we acknowledge that the specific conditions of market commonality and resource similarity that shape the interplay of competition and cooperation may change over time. Consequently, by also drawing on game theory, we call for multi-stage studies to explore such variations of market commonality and resource similarity vis-à-vis the interplay of competition and cooperation.

Third, an underlying assumption of this paper is that firms *intentionally* implement a competitive strategy, cooperative strategy, or the interplay of competition and cooperation. However, previous cooperation inquiries show that cooperation strategies can also be nonintentional and emergent (Kylänen and Mariani 2014; Mariani 2009). Often times, emergent cooperation strategies are influenced not only by technological and market uncertainties but also by policy makers and regulators. For instance, Mariani (2007) introduced the construct of “induced cooperation” to interpret the empirical evidence from an Italian Consortium of Opera Houses and pinpointed the role of the “third external actor”. Accordingly, we call for future studies that explore the conditions under which each specific logic of the interplay of competition and cooperation is expected to apply in the presence of an emerging strategy combining competition and cooperation.

Fourth, in addition to macro-economic factors, resource similarity and market commonality, competitive dynamics studies show that firm choice can be dependent on *firm characteristics* (e.g., perception fairness and past interfirm relationships), which, for reasons of parsimony, we have overlooked in this paper. Consequently, we call for future studies to explore what firm characteristics become more important when firms operate in the same market, rather than when they compete in different markets. Even more importantly, we ask the following question: how do such characteristics affect the firms’ decision regarding the logic of interplay of competition and cooperation to adopt?

Fifth, one of the assumptions of the proposed framework is that firm relationships are asymmetric (Chen et al. 2007). Accordingly, we have taken into account the focal firm perspective in defining the logic underlying its relationship with a rival partner. Interestingly, competitive asymmetries among rivals imply that firms may adopt different logics for managing the interplay of competition and cooperation. An extension of our framework lies, therefore, in explaining how *asymmetries* between and among firms may play a role in the dynamic interplay of competition and cooperation. We have argued that the affirmation of a specific logic (either/or logic, from/to logic, both/or logic, and both/and logic) depends on the dynamics of the interaction among partners that, in turn, may follow dissimilar logics. By delving deeper into the connective fabric of the logics of competition and cooperation, we encourage scholars to show how it is possible to make the crucial transition not only from one logic to another, but also from asymmetry to symmetry and back again.

Sixth, our framework identifies the conditions under which the focal firm may adopt a specific logic of the interplay of competition and cooperation. Most of the cooperation inquiries have emphasized the benefits of the coexistence of competition and cooperation concerning increasing firm performance and achieving higher

levels of innovativeness (Gnyawali et al. 2006, 2008). Future studies might address the relationship between a firm's decision to adopt a specific logic of the interplay of competition and cooperation and its innovative performance achievement. For instance, one might suppose that the both/and logic supports a level of innovation for both partners that is higher than that of the from/to logic. Actually, while the from/to logic supports the combination of knowledge, it thwarts the benefits associated with competition. While the both/and logic allows firms to cooperate to combine of knowledge, their interest to achieve a competitive advantage explains their tendency to effectively use such knowledge.

Seventh, while our interpretive framework focuses on the interplay of competition and cooperation between two firms (dyadic perspective), the focal firm may decide to compete or cooperate with all its competitors (the so-called *multiplex* perspective) or, alternatively, to compete with some and cooperate with others. In this vein, while the proposed framework explains the logics that the focal firms pursue when the decision to cooperate with a rival is taken, a fertile line of study is to inspect the *competitive partner selection process*. Knowing more about the cooperative partner selection process may illuminate the full gamut of the multi-partner relationship evolution from its initial design to its implementation down to its termination.

Eighth, we recognize that while our interpretive framework discusses how specific dyadic conditions of market commonality and resource similarity shape the interplay of competition and cooperation, it falls short of capturing how the complex relationships among firms may affect the choice of the logic of such interplay. For instance, a complex relationship may occur because firms are embedded in multilateral cooperative relationships (e.g., Li et al. 2012), which is a condition that commonly occurs in tourism destinations (Kylänen and Mariani 2014; Mariani and Kylänen, 2014) and business ecosystems (Minà et al. 2015). Another complex relationship occurs because, with the expansion of global markets and competitive landscapes, an increasing number of firms compete across multiple markets. In this way, firms find themselves competing in some markets while they are cooperating in others. On this ground, we argue that the interplay of competition and cooperation may emerge in contexts that are more complex than those explained by dyadic relationships. Accordingly, we call for studies exploring how a complex competitive and cooperative setting may affect the choice of a specific logic of interplay of competition and cooperation.

Ninth, concerning the empirical analysis of the framework proposed, we call attention to the importance of qualitative research to extend the validity our framework. Actually, qualitative research is conceived as the most appropriate approach especially “in the critical, early phases of a new management theory” (Gibbert et al. 2008: 1465), which also occurs as concerns the interplay of competition and cooperation. Since the nature of the cooperation and competition interaction is intrinsically complex, dynamic, and instable (Dagnino 2009), longitudinal qualitative case studies investigation might help identify typical paths (and fallouts) of the interplay of cooperation and competition over time.

Finally, this paper found four logics that firms can adopt in running the interplay of competition and cooperation. We imagine that, for instance, if competition and

cooperation are conceived as two poles along a continuum (according to the from/to logic), their interplay is expected to be intended as $\frac{\text{competition}}{\text{competition} + \text{cooperation}}$ because an increase in competition implies a reduction of cooperation, and vice versa. Conversely, if competition and cooperation are conceived as independent variables (according to the both/and logic), their interaction may be operationalized as the product of two different measures, one for competition and one for cooperation, because competition and cooperation may occur independently ($\text{competition} * \text{cooperation}$). These insights may be helpful to future studies on the interplay of cooperation and competition that will make them more visible the crucial ways to measure the interplay of competition and cooperation.

6.4 Managerial implications

From a managerial point of view, this study provides insights on firm interactions with rival partners. Specifically, our framework suggests that managers should be able to understand the levels of higher/lower market commonality/resource similarity that the focal firm shares with a particular rival and what underlying logic the firm needs to apply to fruitfully interact with it both competitively and cooperatively. Likewise, this paper provides insights for the focal firm's managers to pre-emptively envision how a potential rival-partner may respond to the focal firm's logic of the interplay of competition and cooperation.

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