COOPETITION RELOADED: LOOKING BACK TO STRATEGIC MANAGEMENT RESEARCH FOR MOVING COOPETITION INQUIRY FORWARD

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ABSTRACT

In the last quarter of a century, coopetition has increasingly garnered the attention of management scholars. Notwithstanding, the extensive corpus of literature developed on coopetition has remained largely separate from mainstream strategic management research. This paper aims to review this “off-the-way” development of coopetition literature, and reconnect it to the realm of strategic management research. To establish a closer and more forward-looking links between coopetition and current strategic management research, first, we build a comprehensive map of the coopetition literature. Second, we retrace the key constructs in strategic management research that have informed the advancement of the coopetition stream, and reveal how they have been embodied in coopetition. Finally, we suggest a research platform for future investigation that promises to move coopetition body of inquiry forward.
INTRODUCTION

“You can’t connect the dots looking forward; you can only connect them looking backward”
(Steve Jobs, CEO of Apple Inc. and Pixar Animation Studios, Commencement Address at Stanford University, June 12th 2005)

While competition and cooperation have progressively taken center stage in strategic management research, they have traditionally tended to be studied separately rather than jointly. On one hand, scholarly efforts have attempted to investigate how firms can achieve a competitive advantage (Barney, 1991; Porter, 1980). On the other hand, scholars have focused on the cooperative advantage of sharing costs or combining resources between firms (Das and Teng, 2000; Dyer and Singh, 1998). Thus, with a few exceptions (e.g., Cox, Mann and Samson, 1997; Hamel, Doz and Prahalad, 1989; Lado, Boyd and Hanlon, 1997; Parkhe, 1993), strategic management research has traditionally assumed that “like oil and water, competition and cooperation do not mix” (Gomes-Casseres, 1996, p. 70).

In the last two decades, an increasing number of scholars has suggested that firms often attempt to gain both competitive and cooperative advantages simultaneously, for which they adopt “a combination of [cooperation] and competition taking place in the context of a relationship” (Ritala, Kraus and Bouncken, 2016, p. 2). Extant literature has labeled such coopetition as a multifaceted relationship that includes both competitive and cooperative elements (Bengtsson and Kock, 2000; Brandenburger and Nalebuff, 1996; Dagnino, 2009; Dowling, Roering, Carlin and Wisnieski, 1996; Gnyawali and Charleton, 2018).

Over the past years, academic research on coopetition has intensified copiously, in quantity and quality, especially in the form of journal articles (Bouncken, Gast, Kraus and Bogers, 2015; Dorn, Schweiger and Albers, 2016), books and books chapters (Dagnino and Rocco, 2009; Fernandez, Chiambaretto, Le Roy and Czakon, 2018; Yami, Castaldo, Dagnino and Le Roy, 2010), using both qualitative and quantitative methods (Gnyawali and Song,
While coopetition may arise at different levels of analysis (e.g., interpersonal, intra-firm, dyadic inter-firm relations, inter-organizational networks, and platforms), the bulk of coopetition studies focuses on dyadic inter-firm relations. In particular, within dyadic inter-firm relations, authors have investigated the reasons why rivals ally with each other (e.g., Kraus, Meier, Niemand, Bouncken and Ritala, 2018), the criteria for rival-partner selection (Bengtsson and Kock, 2000), and the management of tensions underlying coopetition and their implications (e.g., Bengtsson, Raza-Ullah and Vanyushyn; 2016; Fernandez, Le Roy and Gnyawali, 2014; Tidström, 2014). Some scholars have developed comprehensive literature reviews (Dagnino and Minà, 2018; Dorn et al., 2016; Bengtsson and Raza-Ullah, 2016; Rai, 2016) with the aim of framing the landscape of coopetition studies with a specific focus on dyadic inter-firm relations. While these studies partially overcome the fragmentation in coopetition inquiry \(^2\) (Minà and Dagnino, 2016), they cover only a part of the full picture, thereby missing out on the opportunity to explicitly explore coopetition in the broader framework of strategic management research. Highlighting the fundamental links between coopetition and strategic management research and how they have contributed to develop

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1 For instance, scholars have investigated the rise of coopetition in various industries, such as the wine industry (Garcia, Bardhi and Friedrich, 2007), the pharmaceutical industry (Baglieri, Carfì and Dagnino, 2016; Lee, Fong, Barney and Hawk, 2019; Pitelis, Desyllas and Panagopoulos, 2018), ICT (Minà, Dagnino and Ben Letaifa, 2015; Ratzmann, Gudergan and Bouncken, 2016), the publishing industry (Lin and Zhang, 2005), the craft beer industry (Mathias, Huyghe, Frid and Galloway, 2018), the shipping industry (Nowińska, 2019), and the tourism industry (Chim-Miki and Batista-Canino, 2017). Additionally, the inquiry on coopetition has also expanded to global rivals (Luo, 2007a, 2007b; Luo, Shenkar and Gurnani, 2008) and small businesses enterprises (Lechner and Leyronas, 2009; Galloway, Kuhn, Collins-Williams, 2019).

2 While they are synonyms, the terms “research” and “inquiry” have different nuances. From an etymological point of view, inquiry draws from old French inquirĕre, quaerĕre, quæsitum, and from Latin inquiĕri that means “to seek”. Specifically, inquiry indicates the process through which it is possible to find out the cause of something or information about something (Oxford English Dictionary, 2022). The word “research” originates from the Middle French *"recherche"* that means “to go about seeking.” Specifically, research indicates the careful study of a subject, with the aim of discovering new facts or information about it (Oxford English Dictionary, 2022). While different in etymological roots, both terms share the seeking to understand something in detail. To avoid terminological confusion, in this paper we consider the terms ‘inquiry’ and ‘research’ in an interchangeable fashion. Notwithstanding that, to warrant clarity and readability to the paper, we will preferably adopt, respectively, the periphrases “strategic management research” and “coopetition inquiry.”
coopetition can, in fact, allow us to reconnect some of the dots in coopetition discourse by identifying strategic management constructs and adopting established explanations prevalent in the separate streams. We, therefore, see the opportunity to build a theoretically grounded contribution that can serve to integrate established constructs and theories into the dyadic inter-firm coopetition discourse.

This paper thus contributes to the existing literature in two ways. First, by critically reviewing extant studies, it builds a comprehensive map of the coopetition literature, clarifying the mechanisms that can reveal why, with whom, and when coopetition occurs, which logics of coopetition take place, how to deal with coopetition, and what are the performance effects of coopetition. Second, at a broader level, this paper contributes to the ongoing debate within strategic management research. Indeed, on the grounds of the comprehensive map of coopetition inquiry tackling the above-mentioned relevant questions, we position coopetition as an area of study within the strategic management field.

Lastly, concerning the managerial implications of this work, we advance that, while a coopetitive strategy might generate tensions between firms and inside the same firm, this is also a way of creating an endogenous pressure to innovate and boost market (and social) performance.

**RESEARCH METHOD**

To appreciate the closer and more forward-looking connections between coopetition studies and strategic management research, we have carried out three analytical phases: (a) reviewing coopetition inquiry; (b) mapping coopetition inquiry; and (c) linking coopetition literature with strategic management research.

**Phase 1: Reviewing coopetition inquiry**

We selected articles using the Scopus platform. The process was organized as follows. We started by retrieving all articles, for all the available years (1978 to October 2020),
published in journals with titles, abstracts, or keywords containing ‘coope	"
"t*’, OR ‘co-
"opet*’. We limited our search by type of document to articles, reviews, and editorials. Then, we then restricted our analysis to the subject areas of business and economics, in journals edited in English. We thus found a total of 914 articles.

We further limited our sample by including only those journals ranked as 4*, 4, or 3 outlets in the following lists of the British Association of Business Schools 2018: (a) entrepreneurship and small business management; (b) ethics, CSR, management; (c) innovation; (d) international business; (e) organization; (f) strategy; and (g) marketing. The journal ranking system represents a global landmark for scholars in addressing to “the range and quality of journals in which business and management academics publish their research” (Academic Journal Guide 2018). It takes into consideration journal metrics and summary information in a consultation process carried out by select subject experts. Compared to the Financial Times’ journal list (FT50), the British Association of Business Schools’ ranking appears more inclusive of emerging journals. Since coopetition inquiry is now in its younghood phase (Dagnino and Minà, 2018), we wanted to include the “highly regarded journals” that show elevated journal metrics, such as impact factor, relative to other journals in their field. The number of articles based on these keywords was thus reduced to 181.

In our initial screening of the 181 articles, we applied certain inclusion and exclusion criteria. We included only articles that explicitly contribute to the understanding of coopetition between two firms (i.e., dyadic), and analyze inter-organizational relations. We excluded articles on supply chain partners, and intra-firm coopetition or inter-organizational

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3 Specifically, according to the British Association Business School (ABS) list the journal ranking should encompass both the rigor of the review process, and the impact of the article in the field, the journals that are listed as 4* are considered as world-wide exemplars of excellence. Papers’ selection and review process is highly rigorous and demanding. Therefore, the accepted papers are extremely fine-crafted and highly impactful in their field. Journals listed as 4 are top journals in their field and, they have among the highest citation impact factors within their field. Papers in these journals go through a heavy review process that explains the high rate of submission, and the low rate of acceptance. Finally, journals listed as 3 encompass original and well executed research papers. Journal articles receive a significant number of articles but they are very selective in the kind of research papers they decide to publish. This explains the demanding review process.
coopetition among more than two firms\textsuperscript{4}. Then, we reviewed the studies of inter-firm relations that have been extensively explored (Dagnino and Minà, 2018; Dorn et al., 2016; Bengtsson and Raza-Ullah, 2016; Rai, 2016). In doing so, we were able to consider a manageable number of papers and summarize insights on the formation, governance, and evolution of single alliances with rivals, as well as their implications. Our analysis may also serve as groundwork for studies of inter-firm relations involving more than two firms, as well as network and supply chain relationships where additional variables may come into play. We, additionally, excluded articles that, while referring in some way to coopetition, were not really centered on the key issue in question. Each author of this paper separately analyzed the abstracts of the articles in the original database, so as to avoid cross-sectional bias in approaching the research articles.

Finally, we included a few additional pieces (articles and book chapters) that, while they are widely acknowledged as seminal pieces in coopetition inquiry (e.g., Padula and Dagnino, 2007), were not included in the preliminary database, since they fell short of satisfying the aforementioned article selection criteria. These are pieces that have been extremely impactful in the coopetition domain, demonstrated in terms of citation numbers. Accordingly, we included 12 book chapters focused on coopetition.

Table 1 shows a synopsis comparing the methodological choices we made with the article selection procedures adopted in other recent coopetition reviews.

\textit{Insert Table 1 here}

**Phase 2: Mapping coopetition inquiry**

As Figure 1 shows, we organized our coopetition inquiry to address six relevant issues

\textsuperscript{4} Specifically, we do not consider articles focusing on networks, ecosystems, regional clusters, and crowdfunding and technological platforms.
considered key questions for identifying the main features underlying coopetition studies: (1) “Why” coopetition occurs; (2) “With whom” coopetition occurs; (3) “When” coopetition occurs; (4) “Which” logic underlying coopetition occurs; (5) “How” coopetition strategy is dealt with; and (6) “What” are the performance effects of coopetition. These questions resonate with classical questions in strategic management (Rumelt, Schendel and Teece, 1994). Accordingly, they allow us to identify “what variables are important and for what reasons, [identifying] how they are interrelated and why, and (..) the conditions under which they should be related or not” (Campbell, 1990, p. 65). Additionally, according to Sutton and Staw (1995), these fundamental questions support theoretical development, since they sanction the creation of connections among phenomena, and explore why acts, events, structures and thoughts emerge and are interrelated, as well as the timing of events.

Once again separately, each author of this paper analyzed the articles in order to identify, for any of the aforementioned questions, the constructs addressed in each coopetition-related contribution included in our database. We then discussed each of the constructs in order to classify them in the boxes that compose the comprehensive map of coopetition inquiry reported in Figure 1. When we had any disagreement in positioning a construct in the boxes in Figure 1, we asked a third expert coopetition scholar for an opinion. In the majority of cases, such third-party opinions were taken as critical to making the final decision.

Arguably, our coopetition map (Figure 1) is largely consistent with two recent reviews on coopetition; i.e., Dorn et al. (2016) and Bengtsson and Raza-Ullah (2016). However, differently from Dorn et al. (2016), we dig much deeper into the literature by explicitly focusing on dyadic interactions among rival firms, as well as by providing a
temporal context for coopetition (i.e., we consider “When” coopetition occurs). Differently from Bengtsson and Raza-Ullah (2016), we disentangle the factors underlying the coopetition process, considering “Which” logic underlying the coopetition occurs, and “How” coopetition is dealt with. Furthermore, we take into consideration certain fundamental issues that have recently emerged in coopetition studies (e.g., paradox management) that are covered neither in Dorn et al. (2016), nor in Bengtsson and Raza-Ullah (2016). In addition, we label the basic issues in the coopetition map after the six ‘key questions’ for identifying links between coopetition studies and fundamental questions in strategic management research. It is worth noting that, while this coopetition map comes to light from the analysis of all the articles in our database, for the sake of parsimony and for space constraints, here we dig deeper into the constructs that are more directly valuable in enhancing our understanding of coopetition studies, and look more closely at the aspects of these constructs in need of additional investigation.

**Phase 3: Linking coopetition studies with strategic management research**

In order to identify links between coopetition literature and strategic management research, we draw on selected highly influential, pro-tempore dominating, or domain-shaping theories of strategic management to explain selected aspects of coopetition, and to use their explanatory mechanisms to reveal links that coopetition literature has still to pick up on. Specifically, we disentangle emerging links, that is, constructs that are (explicitly or implicitly) traceable in coopetition studies. Successively, we discover research opportunity links by considering the constructs that, though foundational for strategic management research, have not yet informed coopetition literature, and, thus, may inform future inquiry.

*Insert Figure 2 here*
“WHY” COOPETITION OCCURS

“Why” is a basic question on the cause or reason for which something happens. Traditionally, firms show conflicting interests that “drive [them] to win, or defeat one’s opponents” (Kilduff, Elfenbein and Staw, 2010, p. 943). Therefore, since the very beginning, the “Why” question has been foundational for coopetition studies investigating firms competing and cooperating with each other and the forces, for example, institutional and industry characteristics, that trigger cooperation with rivals (Bengtsson and Kock, 2000; Gnyawali, He and Madhavan, 2008).

First, it appears that coopetition occurs to exploit market power or efficiency (Luo, 2007b; Bengtsson et al., 2020). For instance, firms may cooperate “to create a pie and then compete when it comes to dividing it up” (Brandenburger and Nalebuff, 1996, p. 5). The symbolism of the pie highlights the creation of a market through joint competition and cooperation of firms (Bouncken et al., 2015, 2020).

Second, institutional settings and sources of power, such as governments and legal policies, may create incentives or coerce firms to align with policies imposed on them. Thus, rivals may, for example, find themselves cooperating and sharing resources with each other with the aim of cutting increased costs as a consequence of a curtail in government funding (Mariani, 2007).

Third, technological discontinuities stimulate firms to create relationships, allowing them faster access to new capabilities, as well as the exploitation of existing resources within their joint range (Bouncken and Kraus, 2013; Ritala and Hurmelinna-Laukkana, 2013), to create and share new knowledge (Katila, Rosenberg and Eisenhardt, 2008; Kang and Afuah, 2010; Wang, Dolsma and Bij, 2019), and to co-develop products, technologies, and services (Ang, 2008; Cozzolino and Rothaermel, 2018; Teece, 1992). Technological change and the development of relationships with coopetitors can thus affect a firm’s technology entry
timing, thereby reducing time to market (Afuah 2004; Chiambaretto, Bengtsson, Fernandez and Nasholm, 2020; Teece, 1992).

Fourth, technological discontinuities may lead to *inter-industry convergence*, driving firms to cooperate and compete in overcoming industry standards (Garud, 1994; Ritala, 2012) or to enlarge existing competitive grounds (Carayannis and Alexander, 2001). Indeed, technological discontinuities and the definition of dominant designs deeply impact “strategic decisions made by organizations interacting with each other” (McGrath, MacMillan and Tushman, 1992, p. 140), since they may substitute or even displace existing technology (Tushman and Anderson, 1986).

Finally, *environmental uncertainty* may stimulate firms to consider cooperation with rivals in order to face technological and market uncertainties (Chai, Li, Clauß, and Tangpong, 2019; Ritala, 2012; Bouncken and Kraus, 2013). This condition can be especially true for small firms that are more likely to form ties with large firms (Zhu and Liu, 2018). Interestingly, “the same structural conditions that seed competition also present opportunities for cooperation” (Ingram and Yue, 2008, p. 276). Thus, while originating from dissimilar starting points (i.e., competition or cooperation between two firms), “collaboration and competition can go hand-in-hand” (Clarke-Hill, Li and Davies, 2003, p. 2).

*Linking “Why” coopetition occurs with contingency theory and resource dependence theory*

To link “Why” coopetition occurs with strategic management research, we considered, in particular, studies investigating the origin of strategies by calling attention to environmental conditions. The need to make a link between the environment, the firm level and technological change has represented a *leit motiv* for several scholars, who, drawing on various theoretical lenses, have attempted to explain the drivers of cooperation between one firm and another. Contingency theorists, on one hand, have highlighted that firm success
depends on the “fit between organization structure and some contingency factor such as technology, situational favorability, and environmental uncertainty” (Tosi, Aldag and Storey, 1973, p. 27). Resource dependence theorists, on the other hand, have underlined how firms have sought ways to reduce or overcome environmental uncertainty (Dess and Beard, 1984; Pfeffer and Salancik, 1978). Consistent with resource dependence theory, interdependence has also been shown to represent a key driver for the formation of ties between rivals (Provan, Buyer and Krutybosch, 1980; Zhu and Liu, 2018).

There are, in fact, *emerging* links between coopetition and the abovementioned theories, since they provide explanations for why firms cooperate. However, coopetition scholars criticize that both theories fundamentally acknowledge only positive inter-firm interdependences for cooperation. Conversely, Dagnino and Padula (2002) maintain that cooperation has both positive and negative interdependences between partners. More recently, also the “dear enemy effect,” which was originally elaborated in evolutionary biology, has been used to explain why cooperation occurs among rivals in an open innovation system (Lee, Fong, Barney, Hawk, 2019). This argument recalls that “evolutionary biology provides a contrasting perspective: despite conflict, cooperative outcomes can emerge in repeated interactions between proximate territory holders based on the principle of mutual gains” (Vasudeva, Leiponen and Jones, 2020, p. 3; our italics).

### “WITH WHOM” COOPETITION OCCURS

The selection of firms “With whom” to develop inter-firm relationships is one of the most influential factors that has an impact on a central firm’s effectiveness (Shah and Swaminathan, 2008). This aspect is even more crucial in coopetition literature. Accordingly, recent studies have explored partner selection criteria by focusing on market overlaps (Bouncken et al., 2020), resource similarity (Kraus, Meier, Niemand, Bouncken and Ritala, 2018), and their interplay (Minà, Dagnino and Vagnani, 2020).
Four aspects, in particular, are viewed as critical in selecting partners: relational openness; mutual dependence; prior exchange history; and expectations of continuity in the inter-firm relationship (Lascaux, 2019, p. 3). “Firms lacking coopeetition experience find it difficult to understand the nature of coopeetition and manage paradoxical issues” (Park, Srivastava and Gnyawali, 2014, p. 2), and may fail to learn from coopeetition experiences in an effective way (Estrada and Qi Dong, 2019). In addition, trust is a relevant notion that affects partners’ capability to develop a specific project together and their intentions in doing so (Nooteboom, 1996). Thus, high levels of mutual trust, based on prior experience, can positively impact the effectiveness of R&D projects (Bengtsson and Kock, 2000; Chai, Li, Tangpong and Clauß, 2019), while the lack of trust in a partner discourages managers from engaging in coopeetition strategies (Bengtsson, Raza-Ullah and Srivastava, 2020; Estrada and Dong, 2020; Hoffmann, Lavie, Reuer and Shipilov, 2018).

Interestingly, “small firms are less reluctant to coopeete than large firms” (Chiambaretto, Bengtsson, Fernandez and Näsholm, 2020, p. 1). Though, in any case, coopeetition partners need to develop analytical and emotional capabilities to manage the paradoxical relation, and accept the ambivalence of emotions underlying coopeetition (Raza-Ullah, Bengtsson and Vanyushyn, 2018; Raza-Ullah, 2020).

The selection of firms “With whom” to develop inter-firm relationships is, thus, one of the most influential factors having an impact on coopeetition effectiveness (Shah and Swaminathan, 2008). In exploring the question of “With whom” firms coopeete, it is, therefore, also important to consider the action-response that the rival partner may exert, and the relational aspects that may emerge during the coopeetitive interaction. For this reason, we discuss here the following two theoretical approaches: (a) competitive dynamics; and (b) the relational view of cooperative advantage. We select two such emerging links since, from a complementary viewpoint, they consider both the firms’ actions and responses in order to
achieve competitive advantage and improve industry positioning (Smith, Ferrier, and Ndofor, 2001), and the benefits relating to cooperation. In the following section, we shall first consider “With whom” coopetition occurs in light of the theory of competitive dynamics.

**Linking “With whom” coopetition occurs with competitive dynamics theory**

Competitive dynamics research focuses on inter-firm rivalry (MacMillan et al., 1985), where the essence of rivalry is “a striving by firms for potentially incompatible positions” (Baum and Korn, 1996, p. 255). Thus, competitive dynamics theory investigates “competitive actions and reactions, their strategic and organizational contexts, and their drivers and consequences” (Chen and Miller, 2012, p. 3). Since “paradoxically, close competitors are not the most intense rivals” (Baum and Korn, 1996, p. 255), the emphasis here is on the so-called action/response dyad (Chen, 1996; Chen et al., 2007; Grimm, Lee, and Smith, 2006; Smith, Ferrier, and Ndofor, 2001). In fact, according to the awareness-motivation-capability framework (Chen et al., 2007, Chen and Miller, 2012), a competitor responds if “it is aware of the actions, motivated to react, and capable of responding” (Chen and Miller, 2012, p. 7). Rivals’ responses depend essentially on five features: the attributes of the attack (i.e., the efforts and time required and the irreversibility of the attack, Chen and MacMillan, 1992), the characteristics of the attacker and those of the defender (Chen, Smith, and Grimm, 1992), the comparative resource endowments, and the market features (Ferrier, Smith, and Grimm, 1999; Ferrier, 2001).

Additionally, since “competitor and collaborator may be regarded as different forms of ‘the other’” (Chen and Miller, 2012, p. 50), coopetition studies have implicitly drawn on competitive dynamics to bring in competitive attributes helpful for predicting the emergence of cooperative agreements and alliances (Harrigan, 1988) with competitors (Gimeno and Woo, 1996a; Gimeno and Jeong, 2001; Gimeno, 2004). Nonetheless, while competitive dynamics theory has been implicitly adopted in coopetition studies, the core constructs
underlying competitive dynamics and the development of that conceptual approach are, instead, based on the analysis of observable actions and reactions (i.e., moves and countermoves) that rivals carry out (Chen et al., 2007; Chen and Miller, 2011, 2012). However, since interaction mechanisms and competitive vitality lie at the very heart of competitive dynamics (Chen and Miller, 2011, 2012, 2015), it is often difficult to distinguish between actions and responses in the sequence of firms’ competitive dynamics.

Arguably, competitive dynamics is mainly concerned with the specific strategy of the firm and “the context vis-à-vis its competitors’ strategies and positions” (Chen and Miller, 2012, p. 6). Therefore, in such cases, competitive asymmetry usually exists between the two firms, as they do not have the same perception about their relationship or interaction in the competitive arena (Chen et al., 2007). For this reason, we see that coopetition inquiry is firmly anchored in the relational nature of competition, according to which, in a given specific competitive environment, “actors will reliably identify certain opponents as rivals because of the relationships they have with these opponents” (Kilduff, Elfenbein and Staw, 2010: 946).

Furthermore, firms’ strategic interactions may depend on firm-specific or idiosyncratic conditions (Chen, 1996; Baum and Korn, 1996). For instance, market overlap and resource similarity can predict the actor with whom a firm will interact, no matter whether or not that actor becomes a rival partner (Chen and Miller, 2015). Similarly, studies on multimarket competition (Baum and Korn, 1996; Gimeno and Woo, 1996, 1999; Klein et al., 2020) are open to considering cooperative and competitive interactions among rivals (Klein et al., 2020; Ryu, Reuer and Brush, 2020). Overall, the relational view of competition makes a firm “walk in the shoes of its rivals or partners” (Chen and Miller, 2011, p. 12) and “see through the eyes” of its rivals (Tsai, Su, and Chen, 2011, p. 761). Nonetheless, we recognize that a clearer definition of the actions (action types
or actions and counteractions) that ideally define a coopetitive interaction would significantly enhance the added value of coopetition inquiry, and, more broadly, enlighten the *critical junction* between the body of competitive dynamics research and coopetition studies. Unfortunately, while coopetition literature has investigated certain kinds of interactional contexts (Gnyawali & Madhavan, 2001), it has hitherto fallen short of digging deeper into the coopetition action-response sequence.

**Linking “With whom” coopetition occurs with the relational view of cooperative advantage**

In parallel with competitive dynamics literature, coopetition inquiry has benefited from taking a relational view of cooperative advantage (Contractor and Lorange, 1988; Lado, Boyd and Hanlon, 1997; Dyer and Singh, 1998). Indeed, cooperation allows firms to obtain relational rents if they “combine, exchange, or invest in idiosyncratic assets, knowledge, and resources/capabilities, and/or they employ effective governance mechanisms that lower transaction costs” (Dyer and Singh, 1998, p. 662). The existence of complementary resources and the development of related advantages in terms of “relational capabilities” (Chung, Singh and Lee, 2000; Dyer and Singh, 1998; Shah and Swaminathan, 2008; Srivastava and Gnyawali, 2011) can motivate firms to cooperate (Dyer and Singh, 1998). Also the co-location of partners has an impact on the effectiveness of the relations (Ryu et al., 2018). However, such complementarity is assessed a priori. Therefore, it is quite difficult to know whether firms’ resource complementarity may actually turn into a concrete manifestation, and how this complementarity is going to evolve. In their revised relational-dynamic perspective, Dyer, Singh and Hesterly (2018) suggest that the features of complementary resources (i.e., tangible oriented resources or intangible oriented resources, such as knowledge) have an impact on the features of the investments (relation-specific assets or knowledge sharing routines) that firms need to develop in order to benefit from their mutual cooperation (Dyer, Singh and Hesterly, 2018). This condition will, in turn, affect the firms’
interdependence and the evolution of their relationship over time.

In such vein, coopetition studies acknowledge “the risks of knowledge misappropriation emanating from partner competition” (Ryu, McCann and Reuer, 2018, p. 945). Accordingly, they draw implicitly on the fact that several relational aspects impinge on firms’ ability to achieve relational rents, such as absorptive capacity issues (Cohen and Levinthal, 1990), contractual engagements, opportunistic behaviors (Khanna et al., 1998; Parkhe, 1993), and, more generally, “threats presented by partners’ abilities and incentives to appropriate knowledge” (Devarakonda and Reuer, 2018, p. 1914). Through inter-firm relationships, firms can, indeed, outcompete their rivals on resources and knowledge (Baum and Silverman, 2002; Devarakonda and Reuer, 2018; Diestre and Rajagopalan, 2014; Katila, Rosenberger, and Eisenhardt, 2008). Therefore, “a firm’s alliances not only enable it to withstand competition, but also to impose stronger competition on others” (Silverman and Baum, 2002, p. 792). Firms are, thus, in a continuous race, a ‘learning race’ (Hamel, 1991) and an ‘alliance race’ that “increase(s) a firm’s chance to win subsequent races for partners” (Silverman and Baum, 2002, p. 792).

“WHEN” COOPEITITION OCCURS

“When” represents the temporal context in which managers develop their firms’ strategic decisions. Parallel to the initial conceptualization of coopetition as a rational strategy (Brandenburger and Nalebuff 1996; Dagnino, 2009), coopetition literature has managed to capture how emergent and spontaneous aspects regarding partners in a cooperative agreement may allow them to compete while simultaneously cooperating. In addition, in the early days of coopetition discourse, the emergent aspect was considered as a benchmark for looking at coopetition as a ‘deliberate’ strategy (Mariani, 2007, 2009). Consequently, the initial interpretation of “When” coopetition occurs in strategic management finds it roots in Mintzberg and Waters (1985), according to whom “comparing
intended strategy with realized strategy [allows] us to distinguish deliberate strategies - realized as intended - from emergent strategies - patterns or consistencies realized despite, or in the absence of, intentions.” (p. 257). Nonetheless, the dichotomy between deliberate and emergent strategies seems to support no more than a merely descriptive approach. Therefore, to link research on “When” coopetition occurs in strategic management research, we ought to consider a shift from a static to a more dynamic view of coopetition, and to offer an inspection of the strategy process, namely “the mechanisms by which organizations formulate and implement strategy” (Bromiley and Rau, 2016, p. 174). As a consequence, our effort points in the direction of linking coopetition with strategic management research in relation to the key conventional parts of the strategy process: (a) strategy formulation; and (b) strategy implementation. In the next sub-section, we shall link coopetition inquiry with strategy formulation process studies.

**Linking “When” coopetition occurs with the strategy formulation process**

Hutzschenreuter and Kleindienst (2006) have argued that rationality and comprehensiveness represent the two key features associated with strategy formulation success. This stance appears to be dominant in coopetition studies. For instance, Quintana-García and Benavides-Velasco (2004) build on transaction-cost economics, game theory, and the resource-based view of firms to identify four alternative behaviors: unilateral cooperation, mutual cooperation, unilateral defection, and mutual defection. Additionally, studies on coopetition intended as an emergent strategy depict coopetition as a mix of intentional and emergent strategies, where emergent cooperation in a competitive setting is imposed by external forces (Mariani, 2007, 2009; Czakon, Klimas and Mariani, 2020). The underlying assumption is that “the decision object is already specified; i.e., how to find the best solution for a given issue has been explored” (Hutzschenreuter and Kleindienst, 2006, p. 708). Thus, while coopetition inquiry focuses on understanding the phenomenon as a deliberate versus
emergent strategy, coopetition is given to mean an “intentional strategy driven by a strategic rationale” (Czakon et al., 2020, p. 1).

**Linking “When” coopetition occurs with the strategy implementation process**

Shifting our attention to linking research on “When” coopetition occurs with strategy implementation, we, first of all, noticed that a small cluster of studies points to a disequilibrium in strategy process research (Hutzschenreuter and Kleindienst, 2006). In this regard, a key emerging construct is *equifinality*, which refers to the condition of achieving a specific outcome through various types of organizational configurations (Gresov and Drazin, 1997). As Gresov and Drazin (1997) have argued, equifinality crosses the strategic management domain horizontally, since firms may implement different strategies or employ different organizational structures, or may do both, to achieve good performance in an equal manner. Since a particular organizational structure may have several functions that are deemed as alternatives, in strategic management research, we see three types of equifinality: suboptimal equifinality, trade-off equifinality, and configuration equifinality (Gresov and Drazin, 1997). On the contrary, coopetition studies pay no attention to the fact that “implementing strategy means managing change” (Hutzschenreuter and Kleindienst, 2006). As a notable exception, Pattinson, Nicholson and Lindgreen (2018) have recently argued that the coopetition literature assumes a kind of “linear flow” from emergent coopetition to deliberate coopetition. Interestingly, Tidström and Rajala (2016) have identified a sequence of coopetition stages, namely: (1) pre-coopetition; (2) silent coopetition; (3) active coopetition; and (4) forced coopetition. In such an understanding, the pre-coopetition phase is represented by the *unintentional* condition in which firms find themselves competing and cooperating at the same time, that is, “unintentionally coopeting”. In addition, recent coopetition studies corroborate the existence of a “lifecycle of coopetition”, or, rather, a sequence of phases in which a shift back and forth from coopetition to pure forms of
cooperation or competition is observable (Park, Srivastava and Gnyawali, 2014; Zerbini and Castaldo, 2007).

“WHICH” LOGIC OF COOPETITION OCCURS

“Which” represents the rationale that managers need to consider in taking strategic decisions. In making such decisions, managers adopt a logic that “makes sense of what we see” (Webb and Weick, 1979). Logic represents the approach and the underlying lens that top managers adopt to tackle managerial actions. Since its beginnings, coopetition inquiry has implicitly followed the from/to logic, by which competition and cooperation are opposites located along a continuum (Bengtsson and Kock, 2000; Minà et al., 2020). More recently, coopetition inquiry has clarified that cooperation and competition act according to the both/and logic, for which competition and cooperation can be opposites and simultaneous (Chen, 2002, Fang, 2012; Bengtsson and Kock, 2014). In discussing the key strategic management questions relating to the “Which” logic, we have focused our attention to three streams of research in particular: (a) dominant logic; (b) paradoxical frames; and (c) dynamic managerial capabilities. Given that a firm’s strategy mirrors management beliefs, and how managers deal with paradoxes depending on how they interpret opposites and the capabilities they may develop, we argue that these aspects may inform coopetition studies. Indeed, linking coopetition with the abovementioned streams of investigation allows us to clarify when coopetition is considered an “additional” strategy vis-à-vis competition and cooperation, as well as the role of managers in addressing a shift from competition or cooperation to coopetition, or vice versa.

Linking “Which” logic of coopetition occurs with dominant logic

Prahalad and Bettis (1986) defined dominant logic as “the mental maps, beliefs, theories and propositions that have developed over time” (p. 489). Initially, such “dominant logic is very much a reflection of managerial dominant logic” (Kor and Mesko, 2013, p. 235).
Over time, as managers implement and make decisions, the “dominant logic extends beyond
the managerial level” (Kor and Mesko, 2013, p. 236), so as to affirm itself as an
organizational-level phenomenon, including firm routines and capabilities. Prahalad and
Bettis (1986) recognize that any reinforcement of positive outcomes may freeze a mindset
and preferred processes, which, in the long run, may become paradigmatic until a significant
shift occurs in the way the world appears and acts (Kuhn, 1970). Overall, the dominant logic
supports a firm resource and capabilities configuration and orchestration, allowing it to adapt,
simplify concepts, and speed-up decision-making processes (Bettis and Prahalad, 1995).

As discussed earlier, the concept of logic allows scholars to describe coopetition strategy, simplify concepts, and conceptualize factors that cause managerial capabilities to
think in a paradoxical fashion (e.g., managerial cognitions among them). Top managers may
progressively acknowledge that, over time, “the old logic must in a sense be unlearned by the
organization” (Bettis and Prahalad, 1995, p. 10), for the firm to see the relevance of novelty
and start to learn once more how to deal with complexity (Tripsas and Gavetti 2000). While
the firm’s logic condenses “underlying assumptions, deeply held, often unexamined, which
form a framework within which reasoning takes place” (Horn, 1983: 1), coopetition literature
falls short in shedding light on the mechanisms that identify what is to be “unlearned by the
organization”, in order to move away from sheer cooperation or competition towards
coopetition.

**Linking “Which” logic of coopetition occurs with paradoxical frames**

Studies concerning the concept of paradox have quite a long tradition in strategic
management (Dagnino and Minà, 2021; Minà and Dagnino, 2022). In fact, various paradoxes
lie at the heart of strategic management research (Keller and Sadler-Smith, 2019; Ford and
Ford, 1994; Van de Ven and Poole, 1995; Das and Teng, 2000), such as: differentiation vs.
integration (Smith and Tushman, 2005); stability vs. change (Farjoun, 2010); exploration vs.
exploitation (March, 1991; Gupta et al, 2006); global vs. local (Marquis and Battilana, 2009); static vs. dynamic (Ghemawat and Ricart 1993); and so on. This corpus of investigation includes the study of opposites that are contradictory yet inextricably interwoven, such as perspectives, demands, and interests (Ford and Backoff, 1988). Such opposites seem “logical in isolation but absurd and irrational when they appear simultaneously” (Lewis, 2000, p. 760). Accordingly, “organizing inherently involves contradictions” (Smith and Tushman, 2005, p. 526), and thus paradoxes have often depicted such countervailing situations.

Strategic management and coopetition inquiry concur that a paradox is “neither a compromise nor a split between competing tensions but is, rather, an awareness of both” (Eisenhardt, 2000, p. 703). Therefore, paradox implies “exploring, rather than suppressing tensions” (Lewis, 2000, p. 764), and paradoxical frames can help managers to develop mental maps based on recognizing and accepting the simultaneous occurrence of opposite forces, such as competition and cooperation (Crick and Crick, 2020; Keller and Lowenstein, 2011). However, concerning the concept of paradox, coopetition inquiry has, so far, paid no consideration to two key aspects that strategic management research has, instead, tackled. First, paradoxes can activate a “reinforcing cycle” that turns them into a double-edge sword (Lewis, 2000; Smith and Lewis, 2011; Niesten and Stefan, 2019). In particular, while tensions are triggers for change, they also make actors experiment with defensive actions that can, in turn, inhibit change. Ignoring such aspects leads coopetition discourse to miss an opportunity to dig deeper into the “dark side effects” of coopetition on the performance of firms. Second, by adopting the concept of paradox, coopetition inquiry has de facto wiped out the role of managers in adopting/rejecting a paradoxical frame. Thus, coopetition literature does not consider that exploring “what makes firms different” requires a preliminary answer to be found to the question of “what makes managers different” (Adner and Helfat, 2003, p. 1013). However, we do recognize that some insights on cultural cognitive frames have, in
fact, been included in coopetition literature. Specifically, coopetition studies have recently developed a stimulating juxtaposition of Western and Eastern views of paradox (Dagnino and Minà, 2021). While Aristotelian formal logic enhances the biased impression that, through separation, tensions are removed, Eastern thinking posits that simplistic distinctions are useless and should be avoided. Indeed, Eastern thinking is inclined to the holistic ideal by which elements of human life are inseparable, and hence “they need not be resolved as in a dialectical situation; rather, they may be integrated harmoniously” (Chen, 2002, p. 188). This implicitly rejects the idea that managers have identical views of paradoxical frames, and thus follow the same action-and-response strategies to deal with coopetition (Keller and Loewenstein, 2011).

**Linking “Which” logic of coopetition occurs with dynamic managerial capabilities**

As Adner and Helfat (2003) underscored, managers adopt different managerial decisions and perform differently because of their *dynamic managerial capabilities*; namely “the capabilities with which managers build, integrate, and reconfigure organizational resources and competences” (Adner and Helfat, 2003, p. 1012). This concept encompasses three main aspects: managerial human capital (e.g., skills, managerial career paths), managerial social capital (e.g., social relationships, friendships, and membership of clubs), and managerial cognition (e.g., managerial beliefs, maps, and mental models adopted in decision-making). While the first two aspects do not directly inform coopetition studies, some authors use managerial cognition to investigate coopetition (Bengtsson et al., 2020).

Top managers’ mental maps and beliefs tend to be based on past experiences rather than on current ones. Since mental maps frame the business and its critical resources, filter relevant data, and help managers develop problem-solving behaviors (Tripsas and Gavetti, 2000; Grant, 1988; Nadkarni and Barr, 2008), one might suppose that mental maps play an essential role in coopetition studies. On the contrary, while strategic management research
acknowledges the role of top managers as the “central element” within the broader framework of the firm’s ability to change (Rosenbloom, 2000) and take decisions, coopetition inquiry has heretofore failed to extract the reasons for which firms usually experiment with linear processes and adopt a range of strategic choices to develop coopetition paths.

Additionally, strategic management research has progressively given significant attention to managerial cognition (Cameron and Quinn, 1988; Smith and Tushman, 2005; Nadkarni and Barr, 2008), and managerial capabilities (Adner and Helfat, 2003). Indeed, managerial cognitions appear to be crucial for the development of capabilities (Felin et al., 2015; Gavetti and Rivkin, 2007). In such vein, Bengtsson et al. (2020) argue that managerial cognition represents a significant brick in the micro-foundations of a firm’s coopetition capabilities. Accordingly, coopetition capabilities emerge when managers independently develop such specialized capabilities that allow them to effectively manage “cooperation in different innovation projects or manage competitive moves and countermoves of a partner” (Bengtsson et al., 2020, p. 5). Notably, such managerial capabilities may be the groundwork for generating a coopetition capabilities portfolio that may vary over time and extend to TMTs, that is, top management teams.

**“HOW” COOPETITION IS DEALT WITH**

“How” represents the ways in which managers deal with a firm’s strategic decisions. Coopetition inquiry acknowledges that ways to tackle the simultaneous coexistence of competition and cooperation can be a challenging endeavor, since often the practice of coopetition produces ambivalence (Keller and Loewenstein, 2011; Luo and Rui, 2009; Stadtler and Van Wassenhove, 2016).

Ambivalence translates, in turn, into the emergence and management of coopetition tensions, and to the need to develop coopetition capabilities. Accordingly, over the last
decade, a relevant segment of coopetition inquiry has focused on investigating the tensions underlying coopetition (e.g., Bengtsson, Raza-Ullah and Vanyushyn, 2016; Chou and Zolkiewski, 2018; Gnyawali, Madhavan, He and Bengtsson, 2016; Raza-Ullah, Bengtsson and Kock, 2014). Among these studies, Tidström (2014) provided a specific taxonomy of three tensions prevailing in coopetition:

1) **Role tensions.** The “duality of coexisting tensions creates an edge of chaos, not a bland halfway point between one extreme and the other. The management of this duality hinges on exploring the tension in a creative way that captures both extremes” (Eisenhardt, 2000, p. 703), and copes with “positive and negative emotions as soon as the actors cognitively evaluate its consequences” (Raza-Ullah, Bengtsson and Kock, 2014, p. 196).

2) **Knowledge tensions.** Such tensions refer to the leakage of knowledge when rival partners are interdependent and have to share valuable knowledge-intensive resources (Krishnan, Martin and Noorderhaven, 2006; Ryu et al., 2018). Under this circumstance, they are exposed to a greater risk in dealing with cooperation and competition (Arslan, 2018; Hoffmann, Lavie, Reuer and Shipilov, 2018; Dyer et al. 2018; Kale et al, 2000; Fernandez and Chiambaretto, 2016). This condition may trigger the appearance of a knowledge sharing problem, and/or a knowledge protection or appropriation concern (Arslan, 2018; Gast, Gundolf, Harms and Collado, 2019; Ho and Ganesan, 2013; Ryu et al., 2018).

3) **Relational tensions.** These relate to two relevant features: a) the existence of *unbalanced power* (Tidström, 2014), i.e., a firm may leverage its power to pursue its own interests over the other firm(s) (Khanna, Gulati and Nohria, 1998); and b) the presence of *opportunism*, i.e., a firm attempts to pursue its own interest and exploit partner conditions through guile (Williamson, 1993).
In addition to the above three kinds of coopetition tensions, Ansari, Garud and Kumaraswamy (2016) recognize a fourth kind, which they termed *inter temporal tensions*, that is, when the firms may assume a different temporal orientation, such as short term versus long term, as concerns their way of looking at the coopetitive interrelationship.

Given the relevance of such tensions, coopetition literature has also explored the modalities of managing the interplay between competition and cooperation with a view to attenuating coopetition tensions (Dorn et al., 2016). In particular, three main strategic options of managing coopetition tensions are present in the literature (Gnyawali, He and Madhavan, 2008, p. 395): (a) *spatial separation* of competition and cooperation, whereby firms create one or more units, each devoted to competitive or cooperative activities respectively (Hoffmann, Lavie, Reuer and Shipilov, 2018); (b) *temporal separation* of competition and cooperation, namely, the temporal succession of competition and cooperation (or vice versa) in the same activities in which firms compete and cooperate (Poole and Van de Ven, 1989); and (c) *temporal co-location* of competition and cooperation activities, when the same business units are devoted to both competition and cooperation simultaneously with a rival-partner (Gnyawali et al., 2008; Gnyawali and Park, 2011).

Extant coopetition inquiry has also recognized the importance of *coopetition capabilities* in allowing “firms to moderate and reduce internal and external tensions” (Bengtsson et al, 2016, p. 1). It is worth noting that, in the above section labeled “Which” logic of coopetition occurs, we introduced the concept of dynamic managerial capabilities. This is consistent with the multilevel framework of dynamic capabilities proposed by Salvato and Vassolo (2018). Indeed, dynamic managerial capabilities represent a key antecedent of dynamic capabilities, since dynamic capabilities are rooted in managerial aptitude for recognizing “whether the specific action s/he is confronting requires ‘business as usual’ or ‘change’” (Salvato and Vassolo, 2018). Accordingly, in this section, we are concerned with
how a firm implements a dynamic approach to coopetition, namely how the firm tries to deal “with the specific strategic events, given current environmental dynamics” (Salvato and Vassolo, 2018) by combining cooperation and competition with a given partner. Arguably, coopetition literature distinguishes between two kinds of dynamic coopetition capabilities. Type I dynamic coopetition capabilities relate to the firm’s capacity to adapt its resources to those of the rival and proactively organize their cooperation activities to tackle rapid environmental changes (Zhou and Li, 2010). Type II dynamic coopetition capabilities relate to the firm’s capacity to leverage the joint resources and capabilities developed in cooperation and exploit them for its own needs and interests (Hamel, 1991; Khanna, Gulati and Nohria, 1998).

The blocks of the coopetition map indicated in Figure 1 (i.e., the classification of coopetition tensions, modalities of managing coopetition tensions, and dynamic coopetition capabilities) are stimulated by a significant amount of strategic management research. Specifically, we consider two streams of strategy investigation: a) tensions management; and b) dynamic capabilities. We selected these two streams because they can explain how firms usually experience changes due to internal tensions or market dynamics. We shall start with the literature on tensions management.

**Linking research on “How” to deal with coopetition tensions and tensions management**

Fundamental strategic management issues lead to fundamental tensions (Leiblein and Reuer, 2020). Such tensions emerge when “there is a steady state in which opposing forces hold each other in check until the build-up of tension turns the static relationship into dynamic interplay – the point when the steel cable snaps” (Chen, Su and Tsui, 2007, p. 101).

Tensions surround various aspects of organizational life (Smith and Lewis, 2011): control-collaboration (Sundaramurthy & Lewis, 2003), leadership-democracy and confrontation-compromise group work (Murnighan and ConIon, 1991), flexibility-efficiency
(Adler, Goldoftas and Levine, 1999), exploration-exploitation (Andriopoulos and Lewis, 2009), and profit-social responsibility (Margolis and Walsh, 2003). For instance, product innovation development requires “managing tensions - coping with fluctuating contingencies to foster innovation and efficiency” (Lewis, Welsh, Dehler and Green, 2002, p. 546). Additionally, the “firms’ simultaneous pursuit of exploration and exploitation causes organizational tensions that are difficult to resolve” (Zimmermann, Raisch and Cardinal, 2018, p. 739). This condition occurs since exploitation leverages the existing base of a firm’s capabilities that, if not well deployed, may lead to competency traps and inexorably weaken the firms’ ability to deal with change (Ahuja and Lampert, 2001). Conversely, exploration influences the creation of new-to-the-world capabilities that, if not properly managed, may lead to “an endless cycle of search and unrewarding change” (Zimmermann et al., 2018, p. 739).

Research on the categorization of tensions at the firm level has provided various insights on the types of tensions and the various consequences stemming from their intersections (Smith and Lewis, 2011). Other studies have enriched the debate by exploring inter-organizational tensions as they occur between partners in alliance (Das and Teng, 2000). In particular, research on managing tensions with a special focus on ambidexterity has partially informed coopetition inquiry (Smith and Lewis, 2011). Indeed, ambidexterity literature has provided several insights concerning the types of tensions (e.g., innovation tensions; Smith and Tushman, 2005), or structural solutions for resolving tensions (i.e., structural separation or dual integration of exploration and exploitation; Zimmermann et al., 2018), and has explored intersections among belonging, organizing, and performing tensions in organizational units (Smith and Lewis, 2011). Correspondingly, coopetition inquiry has delved into the inner tensions occurring between competition and cooperation activities. However, the types of tensions emerging at various organizational levels when a firm
competes with its rivals have not been fully explored. Additionally, the interactions between coopetition-driven learning processes and other organizational tensions remain uncharted. In fact, coopetition inquiry falls short in understanding “efforts to adjust, renew, change, and innovate to foster tensions” (Smith and Lewis, 2011, p. 384) between current coopetition practices and potential new ones. Finally, coopetition literature has broadly ignored the relevance for firms to “constantly adapt and align their initiatives’ organizational contexts” (Zimmermann et al., 2018, p. 739). In this perspective, the role of frontline managers supporting firms in managing persistent tensions and in driving change is missing in coopetition literature.

Notably, while strategic management research highlights the role of governance in cooperation (e.g., Dyer and Singh, 1998), with exception of a recent study on the architecture of coopetition (Seepana, Pulraj and Huq, 2020), there is a limited understanding of the governance mechanisms and coordination issues underlying coopetition (Bicen, Hunt and Madhavaran, 2020; Devakaronda and Reuer, 2020). In this regard, allied “firms that are direct competitors are more likely to choose an equity-based governance structure in order to mitigate exchange hazards, such as knowledge misappropriation, through carefully monitored knowledge sharing” (Lioukas and Reuer, 2020, p. 359). In this way, allied firms may introduce governance elements that safeguard their valuable knowledge base and avoid exchange hazards (Devakaronda and Reuer, 2020; Liuksas and Reuer, 2020).

Linking “How” to deal with coopetition with dynamic capabilities

Since their inception in late 1990s, dynamic capabilities studies have represented an extremely fertile ground of investigation for strategy scholars considering multiple intellectual foci (Zahra et al., 2006) in relation to the nature and typologies of dynamic capabilities (Eisenhardt and Martin, 2000; Winter, 2003), and their underlying drivers and processes (Helfat and Peteraf, 2009; Zahra and George, 2002; Zollo and Winter, 2002). As is
well-known, dynamic capabilities investigation extends the resource-based view of the firm (Teece, Pisano and Shuen 1997; Eisenhardt and Martin, 2000), and has its roots in Schumpeterian evolutionary economics (Nelson and Winter, 1982; Helfat and Peteraf, 2009; Winter, 2003). Accordingly, Nelson and Winter (1982) view the firm as a set of interdependent routines that inspire the building of dynamic capabilities intended as “routinized activities directed to the development and adaptation of operating routines” (Zollo and Winter, 2002, p. 339). Thus, dynamic capabilities emerge through learning, knowledge articulation, and codification processes (Lane and Lubatkin, 1998; Zollo and Winter, 2002), and can explained “how firms can achieve and maintain competitive advantage in contexts of rapid technological change” (Teece et al. 1997, p. 515). A “turbulent environment, however, is not necessarily a component or precondition of dynamic capabilities” (Schilke, 2014, p. 179), and it is recognized that firm competitive advantage is more difficult to achieve through dynamic capabilities than one might initially think (Helfat and Peteraf, 2009).

Studies on dynamic capabilities and coopetition have evolved in parallel, providing various definitions. First, dynamic capabilities allow a firm to generate and modify “its operating routines in pursuit of improved effectiveness” (Zollo and Winter, 2002, p. 340), as well as to dispose of the ones related to past learning if they are unused for long periods (Helfat and Peteraf, 2009). However, and quite surprisingly, coopetition studies have typically referred to relatively stable and standardized environments, with the main focus being the dynamism underlying coopetitive relationships, thereby ignoring the relevance of updating routines in order to face changing environments.

Second, strategic management research has examined the link between dynamic capabilities and operating routines, as Zollo and Winter (2002) and Winter (2003) suggested. Routines are recognized as the “building blocks of organizational capabilities” (Schreyogg
and Kliesch-Eberl, 2007, p. 915). However, the propensity of firms to reiterate good decisions/solutions can generate paradoxes and dilemmas stemming from capability-rigidity drivers that are path dependent, structurally inert, and committed, for which it is important to develop a monitoring capability (Schreyogg and Kliesch-Eberl, 2007). Arguably, coopetition inquiry first and foremost emphasizes a firms’ ability to manage coopetition, thereby overlooking the impact of developing routines for managing rivals in coopetition. Of note, routines have been shown to enhance learning (Cohen and Levinthal, 1990; Zahra and George, 2002), and to reduce uncertainty (Nelson and Winter, 1982), since they allow a standardized and more structured labor division in face of environmental uncertainty (Alvarez and Porac, 2020). In fact, studies on coopetition capabilities have heretofore fallen short in consistently considering the contingent role of stable versus turbulent environments for the development of dynamic coopetition capabilities (Helfat and Winter, 2011; Schilke, 2014; Salvato and Vassolo, 2018).

Third, coopeting firms may have a different “capacity to develop these capabilities, especially when the object of adaptation has to do with cognitive and relational elements” (Zollo, Bettinazzi, Neumann, and Snoeren, 2016, p. 227). Indeed, a hidden reference to learning theory informing coopetition lies in the adage: “the more you coopete, the more you will be able to manage the next round of coopetitive interaction.” This idea is grounded in the cognitive elements of coopetition capabilities (Bengtsson et al., 2016), while the relational elements have not been explored in full. In fact, coopetition capabilities studies have limited itself almost exclusively and extensively to Vassolo and Anand (2008)’s “dynamic alliance capability”, that is, the organization’s ability to select reliable partners and develop a relationship in a way that would enhance knowledge achieved through the alliance (Anand, Oriani and Vassolo, 2010).

“WHAT” THE PERFORMANCE EFFECTS OF COOPETITION ARE
“What” represents the key basic question concerning the consequences managers need to ponder in taking strategic decisions. Indeed, “What” is related to the quest for firm performance and for firm competitiveness/competitive advantage.

Studies exploring the performance effects of coopetition have considered essentially four key issues (see Figure 1). The first issue of the performance effects of coopetition refers to the achievement of innovation performance (Ang, 2008; Afuah, 2000; Quintana-García and Benavides-Velasco, 2004; Hamel, Doz and Prahalad, 1989; Ratzmann, Gudergan and Bouncken, 2016; Yami and Nemeh, 2014). Scholars generally agree on the positive effect of coopetition on stimulating innovation and hence on innovation performance. The latter effect occurs especially when competition is moderately high and cooperation is high (Chen, Yao, Zan and Carayannis, 2020). This condition occurs because, in the presence of higher levels of competition and lower levels of cooperation, innovation performance may suffer from intensified coopetition tensions (Park et al., 2014; Chai, Li, Tangpong and Clauß, 2019; Ritala, 2012). On another tack, Wu (2014) showed that cooperation with competitors forms an inverted U-shape in relation to product innovation. Interestingly, in such a way, coopetition experience may have a detrimental effect on R&D investment. However, firms may “counteract the ‘dark side’ of coopetition experience through substantial IT investment” (Estrada & Qi Dong, 2020, p. 1). Overall, coopetition innovation performance literature acknowledges firms’ role in combining and recombining knowledge, and absorptive capacity in attaining Schumpeterian rents.

The second issue of the performance effects of coopetition concerns the achievement of market performance (Ritala and Hurmelinna-Laukkanen; 2009). In this regard, Ritala (2018) acknowledges four main drivers of coopetition: (a) the sharing of tangible and intangible resources; (b) the growth and development of markets; (c) the creation of new markets (Garrette et al., 2009); and (d) competitive dynamics (Gnyawali and
Madhavan, 2001). Coopetition may, indeed, be instrumental in improving customer orientation and market entry, especially in the presence of multimarket competition (Klein, Semrau, Albers and Zajac, 2020). More generally, coopetition inquiry has drawn extensively on the resource-based view of the firm in order to shed light on the market performance effects of coopetition, since the resource-based view stems from the firms’ capacity to combine and recombine valuable resources, according to which (rival) partners may attain Ricardian rents.

The third issue of the performance effects of coopetition relates to the achievement of financial performance (Luo, Rindfleisch and Tse, 2007; Ritala, Hallikas and Sissonen, 2008). In this regard, coopetition studies acknowledge that coopetition allows the attainment of financial performance (Crick and Crick, 2021), even if this outcome depends on the number of coopetitors that are present (Ritala, Hallikas, Sissonen, 2008), and is mediated by market learning (Luo, Slotegraaf, Pan, 2006) and efficient consumer response.

The last issue of the performance effects of coopetition concerns environmental, social and governance performance (Stadtler, 2018; Volschenk, Ungerer and Smit, 2016), whose relevance has experienced exponential growth in recent years (Sodhi and Tang, 2020). Accordingly, some authors have started to explore the role of coopetition in the context of corporate social responsibility (Scandelius and Cohen, 2016), while others have considered some of the challenges stemming from the issue of environmental sustainability, as well as from how coopetitive practices may support sustainable development (Christ, Rubbitt, and Varsei, 2017). Nonetheless, despite the evident increasing interest in environmental, social, and sustainable performance, an adequate understanding of the link between coopetition and sustainability research and between coopetition and how managers balance the countervailing interests of various stakeholders in governing their firms is still lacking (O’Riordan and Fairbrass, 2013).
In addition to the analysis of the effect of coopetition on the four performance types, we observe that, though the amount of studies focusing on such an effect has increased rapidly over the last decade, they still provide a “rich but thus far inconclusive account of how coopetition affects firm performance” (Ritala, 2012, p. 307), as the outcomes they provide are still far from reaching unambiguous scholarly consensus (Knudsen, 2007; Ritala and Hurmelinna-Laukkanen, 2009, 2013). On one hand, coopetition has allowed “performance levels beyond what would otherwise have been possible, (...) [and] changed the timeframe, permitting earlier achievement of higher performance levels” (Peng Pike, Yang and Roos, 2012, p. 532). On the other hand, we recognize that coopetition has a “dark side” (Park and Russo, 1996), associated with partners’ similarity in competitive moves. This condition, in turn, relates to the co-learning processes developing between partners, since the start of coopetition (Peng, Yen and Bourne, 2018; Wang, Dolfsma and van der Bij, 2019), and the coopeting partner risk of clashing over the long-term appropriation of value (Chou and Zolkiewski 2018).

The abovementioned performance blocks of the coopetition research map (i.e., innovation performance, market performance, financial performance, and social, environmental and governance performance; see Figure 1) have been largely inspired by the bulk of mainstream strategic management research5. Specifically, in linking research on “What” the performance effects of coopetition are, one of the basic questions in strategy has always been what makes firms perform differently or heterogeneously (Rumelt et al., 1994; Leiblein and Reuer, 2020), as well as “what determines success or failure in (..) competition” (Leblein and Reuer, 2020, p. 6). Consequently, it is unsurprising that coopetition studies employ various dependent variables concerning the different types of performance measures that are present in strategic management research. In such regard, coopetition inquiry is, to a

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5 In this regard, Durand, Grant, and Madsen (2017) found that, among 421 articles published in the *Strategic Management Journal*, between 2009 and 2013, authors considered primarily financial performance, innovation performance, corporate social responsibility, stakeholder performance, and reputation.
large extent, a mirror image of strategic management research. Accordingly, rather than lingering on theories to explain the coopetition effect on a specific type of performance (for which the references are reported in Figure 2), we shall move on to explore why coopetition inquiry acknowledges a high variability in performance between rival partners. This aspect is deeply rooted in strategic management investigation on value creation and value appropriation. We will thus examine the role of extant strategic management research on value creation and value appropriation in the development of coopetition studies.

**Linking research on “What” the performance effects of coopetition are with value creation and value appropriation**

Coopetition inquiry has hitherto drawn mainly on studies emphasizing the benefits of cooperation in terms of reducing costs and sharing risks (Reuer and Zollo, 2005; Bouncken, Gast, Kraus and Bogers, 2015). However, the advantage of cooperation between competitors may be asymmetric as concerns the appropriation hazard between partners (Lioukas and Reuer, 2020). Accordingly, strategic management research has emphasized “the competitive tensions inherent in collaborations between direct rivals” (Ryu et al., 2018, p.945), and challenges stemming from the protection of knowledge between them. Coopetition inquiry has implicitly assumed that alliances between rivals have variable results (Hamel, 1991; Lado, Boyd and Hanlon, 1997), because of the interplay between value creation and value appropriation (Khanna et al. 1998). While “value creation has been typically tied to cooperation, (…) value appropriation has been ascribed to competition. But this need not be always the case” (Hoffmann, Lavie, Reuer and Shipilov, 2018, p. 19), since “we know little about what accounts for variance in performance of coopetitive alliances” (Makarevich, 2018, p. 3248). For instance, the firms’ specificities (such as the degree of product substitution and efficiency), industry factors (such as negotiation power), and external contingencies may have an impact on firm performance (Chen, Wang and Xia, 2019; Ritala,
2012; Yan, Qi Dong and Faems, 2020). Overall, “firms need a ‘balancing act’ between inputs to value creation and the relative share of value captured.” (Bouncken et al., 2020, p. 245), and between private and common benefits (Khanna, Gulati and Nohria, 1998).

Given the above, a common wisdom in coopetition literature is that “the company is capable of assimilating — and potentially misappropriating — the technology of the [rival partner] company” (Mason and Drakeman, 2014, p. 1564). Thus, coopetition literature implicitly refers to the potential problems of value misappropriation, often referred to as the “swimming with sharks dilemma” (Zhu and Liu, 2018, p. 2621). This aspect is relevant in order to “dynamically consider how cooperation (actions for value creation) and competition (actions for value capture) evolve over time” (Dyer et al. 2018, p. 3142). This is, furthermore, important when characteristics shaping value creation (such as trust, repeated ties, and customized assets) also bear the seeds for reducing the value created (Arslan, 2018; Belderbos, Cassiman, Faems, Leten and Van Looy, 2014; Dyer et al. 2018).

AN INFORMED PLATFORM FOR FUTURE RESEARCH ON COOPETITION

We have shown that, to a large extent, coopetition literature has hitherto developed, so to speak, “outside” of the inner core of the strategic management field. Accordingly, coopetition inquiry has possibly both benefitted and suffered from this condition. On the one hand, it has granted coopetition scholars some creative-exploratory space independent from the strategic management core. On the other hand, it has also led to the development of a partial, pre-theoretical, relatively narrow, and somewhat fragmented stream of intellectual inquiry. This reveals the need for stronger theoretical foundations and contextualization of the coopetition inquiry efforts. Table 2 summarizes emergent links and potential future research links between strategic management research and coopetition inquiry.

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6 We thank an anonymous reviewer for suggesting this point.
Notwithstanding the multiple advances that the understanding of coopetition has made in the last decade, we maintain that there exist various opportunities for pursuing conceptual and empirical developments in this relevant stream of the strategic management domain. By performing this study and linking coopetition with the body of strategic management research, we show that the next wave of development in coopetition studies should expect to be more suitably connected to current strategic management research if it wants to take significant steps forward and make considerable advancement in both coopetition theory and practice.

By taking into account strategic management theories that may be deemed the most promising starting points for future advancements in coopetition, in this section, we pull together and discuss a platform for future research on coopetition, organizing the platform for advancing a coopetition agenda with two main subsections. The first draws on existing theories that have been already adopted in coopetition studies, while the second encompasses theoretical opportunities that have not yet been adopted in coopetition inquiry. In such way, the work is expected to stimulate additional fruitful conversation on coopetition within the various domains of strategic management that we report below.

**Future coopetition research applying contingency theory**

Contingency theory applied to coopetition highlights an opportunity to consider industry characteristics in understanding the choice to implement a coopetitive strategy and its performance. For instance, the ability to generate cooperative advantage for firms competing in different industries is a significant and distinctive capability that supports firms’ building of a coopetitive advantage (Lavie, 2006; Cozzolino and Rothaermel, 2018). We believe that it would be helpful to carry out a series of empirical cross-industry analyses
exploring interactions across industries and countries in order to gain a better understanding of the specific conditions supporting the emergence and evolution of coopetition strategy. In such regard, one might suppose that initial cooperation between firms competing in different industries leads to efficiency that, in turn, increases their rivalry. This research may be conducted by accurately weighing these contexts alongside other contexts where coopetition strategy is not likely to happen.

Additionally, drawing on research that has employed contingency theory to explore the drivers of coopetition, we call for studies linking context-coopetition and strategy-performance. From such a perspective, we advance the following research question: how do the drivers of coopetition affect the coopetition pattern and, in turn, innovation performance?

**Future coopetition research applying competitive dynamics**

Despite competitive dynamics representing a relevant segment of the strategy groundwork in coopetition inquiry, we acknowledge opportunities are being missed in applying the insights and constructs developed in the competitive dynamics domain to coopetition. First, we call for the incorporation into coopetition literature of the awareness-motivation-capability framework (Chen et al., 2007). Such incorporation may offer interesting insights for “predicting a competitor’s response as to projecting a joint venture partner’s reaction, so long as one strives to understand a situation from the other party’s viewpoint” (Chen and Miller, 2012, p. 171). However, we also acknowledge that it is crucial to consider that it is frequently unclear in the beginning what kind of end-line might possibly spur the cooperative and competitive sequence of moves (and countermoves) that will likely be deployed by rival partners in coopetition. In addition, in the sequence of cooperative/competitive actions and cooperative/competitive responses, it would be interesting to identify the key relational features epitomizing the two phases of action and response (Chen and Miller, 2012).
Second, complementary to the previous line of research, we call for studies exploring whether the affirmation of a specific logic depends on the resource characteristics of competing partners that, in turn, may follow dissimilar logics. By delving into the connective fabric of coopetition logics, we are confident that future coopetition inquiry might show how it is possible to make the crucial transition not only from one logic to the other, but also from the study of competitive and cooperative dynamics to that of coopetition dynamics.

Third, coopetition studies largely overlook that, in the partner selection process, both players create value (Katila et al., 2008). Conversely, coopetition inquiry focuses more on the hidden consequences of the “swimming with sharks” dilemma, for which the rival partner may have incentives to use its ability to appropriate more value than it creates (Diestre and Rajagopalan, 2014). Thus, coopetition inquiry has hitherto referred more to rival partners’ value misappropriation rather than on balancing value creation and value appropriation. In addition, “any change that a partner makes is going to affect the other partner in unplanned ways” (Krishnan, Martin and Noorderhaven, 2006). Indeed, coopetition inquiry has overlooked studying the drawbacks stemming from mistaken rival-partner selection and misguided rival-partner actions. Here, the impact is even more severe and adverse in the case of intentional mistakes or unfair actions. In this regard, we call for qualitative and quantitative studies to examine the role of unfairness in coopetitive alliances (Sabri, Djedidi and Hani, 2020).

Fourth, we would like to draw attention to multimarket competition and coopetition. As Tsai et al. (2011, p. 761) note, “seeing through the eyes of a rival allows a focal firm to comprehend the rival’s competitive concerns and priorities and eventually increases the focal firm’s chances of outcompeting the rival.” Accordingly, firms may have different perceptions of their rivalry. Therefore, “uniqueness and asymmetry of perceptions among the parties is fundamentally fluid and involves a constant, intricate interplay between competitive and
cooperative forces” (Chen and Miller, 2012, p. 50). Arguably, “the competitive intensity a firm experiences generally increases with the number of alliances that its rivals form” (Silverman and Baum, 2002, p. 791-792). On the other hand, the “firms’ alliances weaken its rivals by denying them access to desirable partners and resources” (Silverman and Baum 2002, p. 791). Unfortunately, with a few exceptions (Gnyawali and Madhavan, 2001; Park et al., 2014; Bouncken et al., 2020), mainly relating to multimarket competition (Klein et al., 2020; Ryu, Reuer and Brush, 2020), alliance-based coopetitive dynamics (Silverman and Baum, 2002; Crick and Crick 2021) and the counteracting competitive effects of alliances for rivals has heretofore found little harbor in coopetition studies. Drawing on Ryu et al. (2015), we encourage scholars to examine whether and how multimarket competition fosters coopetition (Klein et al., 2020; Ryu et al., 2020).

**Future coopetition research applying the strategy-formulation and strategy-implementation perspective**

Extant coopetition inquiry has hitherto fallen short of tackling the question of how managers make the crucial decision to coopete (Ocasio, 1997). Indeed, while coopetition is usually sought in order to achieve “clearly defined benefits with fitting partners” (Czakon at al., 2020, p. 1), we tend to overlook the process underlying how this crucial decision is taken. In addition, coopetition inquiry has neglected to investigate the impact of strategists’ psychological attributes on the formulation of coopetition strategy (Hambrick and Mason, 1984; Hutzschenreuter and Kleindienst, 2006). Thus, we can be certain that a more inclusive understanding of the strategy formulation process leading to coopetition is lacking and calls for future investigation.

**Future coopetition research applying the dominant logic and management cognition**

According to Cyert and March (1963), strategic goals are linked to aspiration levels, and, more importantly, managerial attention focuses on the goals that the firm could not
achieve. However, non-achieved (or secondary) goals appear to affect the search process that firm decision makers (e.g., top managers and board members) engage in to identify the potential menu of their strategic actions, and, in such way, the firm’s capacity to achieve its main goal. Indeed, the “limited attention spans of decision makers lead them to array simultaneous goals in means-ends hierarchies” (Bromiley, Koumaknov, Rousseau and Starbuck, 2019, p. 1522).

However, with the notable exception of scholars that have “focused on behavioral (rather than structural) aspects of competition and cooperation among firms” (Lado et al., 1997, p. 1997), perspectives on the implications of cognition (Barr et al., 1992; Tripsas and Gavetti, 2000) and organizational learning (March, 1991; Levinthal and March, 1993) have not been incorporated in coopetition studies (for instance, in better grasping why coopetition occurs). As such, extant coopetition studies have fallen short in addressing the question of how decision makers define their agenda and how their attention is directed in the firm context (Hutzschenreuter and Kleindienst, 2006). Therefore, the issue of understanding the behaviors of coopetition-oriented decision makers (e.g., top managers and board members) and how and why it has an impact on firm performance would certainly be a fruitful terrain for future inquiry.

Finally, coopetition inquiry has fallen heretofore short in tackling the set of governance mechanisms underlying coopetition strategy as they are integrated in the beliefs, values, and actions of leaders and managers. These governance mechanisms may, in fact, be beneficial in generating a specific context that fosters both cooperation and competition (coopetition) between firms’ divisions or businesses (Bicen, Hunt and Madhavaram, 2020; Amata, Dagnino, Minà and Picone, 2021). In such a direction, future coopetition studies may focus on the mixed managerial motives that stimulate the emergence of coopetition, such as trust stemming from prior and repeated interactions with the same rival partner (Reuer and
Zollo, 2005), fairness, opportunism (Williamson, 1993), knowledge leakage or misappropriation (Ryu et al., 2018), and how these may ultimately affect firm performance.

**Future coopetition research applying the dynamic capabilities perspective**

This paper shows that coopetition inquiry has echoes of studies performed from the dynamic capabilities perspective. Specifically, we have singled out two types of dynamic coopetition capabilities. Type I dynamic coopetition capabilities represent *adaptive* coopetitive capabilities, i.e., through enhanced competition among partners allied firms may develop additional coopetition capabilities with the aim of being capable to tackle head-on competition that coopetitors may simultaneously face in the activities in which they are not cooperating. Type II dynamic coopetition capabilities have, instead, been labeled *proactive* coopetition capabilities. The greater the coopetition proactive capabilities, the more likely coopetitors will more rapidly exploit the acquired knowledge, spreading out from the coopetition alliance to, therefore, “keep ahead of industry trends” (Liao and Yu, 2013, p. 815). By discerning in more detail the specific features of the two types of dynamic coopetitive capabilities, we, therefore, expect future coopetition studies to reveal dynamic coopetitive capabilities antecedents and their development process, as well as to assess their consequences on firm performance.

Furthermore, while some debate has recently emerged on the contextual characteristics that guide competing firms to build cooperative, long-term relationships with one another (Klein, Bortolaso and Minà, 2020), what remains unclear is how firms’ coopetition *dynamically evolves* over time. Since the nature of cooperation and competition interaction is intrinsically complex, dynamic, and instable (Dagnino and Rocco, 2009), further research should consider the possibility of identifying typical paths and fallouts of coopetition strategies, and how a coopetition cycle, that has been earlier termed as “coopetition lifecycle,” is in play (Dagnino, 2009). In this vein, the development of
organizational-level, coopetition-oriented routines and dynamic coopetition capabilities is expected to be crucial in laying the groundwork for fostering the emergence and affirmation of the coopetition lifecycle. Thus, we encourage scholars to pay attention to the existence of coopetition dynamic capabilities and their related mechanisms of managing coopetition as crucial aspects that may ultimately lead to enhanced innovation performance from coopetition between and among firms. In this regard, we argue that, since the coopetition-performance relationship is highly context dependent, it might possibly assume different forms relating to different types of performance (e.g., innovation, market, financial, and environmental and social performances).

**Future coopetition research applying the organization tensions perspective**

While the identification of the antecedents of coopetition has been instrumental in opening up coopetition to scholarly inquiry, a more detailed, thorough, and precise understanding of the effect that each single coopetition driver/antecedent has on the ways in which firms are organized, and, in turn, on the emergence of specific tensions is lacking. We, therefore, encourage future coopetition inquiry to delve into this relevant aspect.

**Future coopetition research applying the competitive dynamics perspective**

First, as concerns the application of competitive dynamics to coopetition, we can suppose the existence of a “coopetition red queen effect,” with firms deciding to cooperate with rivals to generate innovations and develop new knowledge. However, the escalation of cooperative and competitive actions may conversely lead the same rival firms to “end up racing as fast as they can just to stand still relative to competitors” (Derfus, Maggitti, Grimm and Smith, 2008, p. 61). We, therefore, encourage future empirical investigations on the coopetition red queen effect that might show a “coopetition reverse outcome,” under which it would make it better to suspend or even discontinue the competition side of coopetition. This condition may also end up showing the need to increase, at least temporarily, the cooperation
side of coopetition to countervail the coopetitive red queen effect. Additionally, by exploring the short- and long-term implications of coopetition, this stream of research may contribute to describing the role of coopetition vis-à-vis temporary competitive advantage. How does coopetition contribute to generating a sequence of competitive (or coopetitive) advantages?

**Additional research opportunities**

In framing coopetition within strategic management research, we see that “*context and structure* matter in an integral and systemic way” (Mahoney and McGahan, 2007, p. 82). Coopetition studies, in fact, implicitly draw on research on organization-environment relations (Chung and Cheng, 2019), according to which “environments pose constraints and opportunities to organizational action” (Tushman and Anderson, 1986, p. 439). Specifically, consistent with extant coopetition literature, the presence of *uncertainty* defines a specific setting in which firms acknowledge the relevance of coopeting with rivals rather than cooperating with a partner (Chiambaretto and Fernandez, 2016; Galkina and Lundgren-Henriksson, 2017) in order to face environmental changes (Chai, Li, Clauß, and Tangpong, 2019). While coopetition is more likely to occur in the face of greater technological and market uncertainties (Bouncken and Kraus, 2013; Chai et al., 2019; Ritala, 2012), except one study on technological uncertainty (Chai et al., 2019), uncertainty literature (Knight, 1921; Milliken, 1987), as well as the link between uncertainty and firm coopetitive actions, can be deemed the “great absentee” in coopetition studies. Indeed, the literature takes a deterministic approach that defines the setting for why coopetition may occur (Chiambaretto and Fernandez, 2016), thereby missing the opportunity to investigate whether and under which conditions firms differ in coping with uncertainty.\(^7\) Thus, we suggest scholars investigate further the role of uncertainty in shaping the interplay of cooperation and competition. Additionally, since the presence of *behavioral uncertainty* plays a crucial role in the

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\(^7\) This is true for all but a few recent studies, such as Chai, Li, Clauß, and Tangpong (2019).
cooperation between and among rivals, we encourage future coopetition inquiry to give consideration to this relevant aspect of uncertainty.

Second, while the early cradle of coopetition inquiry was game theory (Brandenburger and Nalebuff, 1996), and, over time, it has taken into account other strategy theoretical perspectives (such as competitive dynamics, managerial cognitions, and dynamic capabilities), agency theory has heretofore fallen short of being an inspiration for coopetition scholars. Consequently, we suggest future coopetition studies dig deeper into how the adoption of agency theory may shed light in various coopetition issues, such as the mixed motives firms have to consider when they choose a coopetition strategy. As Lee and Zhong (2020) underscore, while extant coopetition studies mainly focus on within-dyad opportunism, they miss out on dealing with pro-relational opportunism, which occurs by transgressing societal norms that enhance the benefits of the coopetitive relationship. Future studies may, hence, look at the effects of the bright and dark sides of opportunism in coopetitive agreements.

Third, the coopetition literature map we have proposed recognizes the possibility that different coopetition patterns may affirm themselves over time. In this regard, we encourage strategy scholars to examine in depth the mechanisms linking the key questions underlying the coopetition body of inquiry. For instance, we may realize that the ‘Where’ coopetition occurs (i.e., the institutional setting), may interact with ‘With whom’, ‘When’, ‘Which’ (i.e., from/to logic), ‘How’, and ‘What’, in terms of the implications for coopetition. Future coopetition studies may be relevant in exploring questions such as: what are the performance effects of coopetition in connection with the coopetition logic adopted? Where is the coopetition locus located in connection with how coopetition may occur?

Fruitful conversation on coopetition promises to arise from productive trade between coopetition literature and theories developed in other important scholarly domains that are
traditionally germane or cognate to strategic management research. We refer, in particular, to the realms of “knowledge and innovation management”, “international business”, “strategic entrepreneurship”, “strategic leadership and corporate governance”, and “organizational design.” From this perspective, the kind of dialogue we have embarked upon in this paper is, in turn, likely to promote successive rounds of exchange and cross-fertilization within, between, and among these significant streams in management research.

Last but not least, since this paper focuses on coopetition at the dyadic inter-firm level, future studies may consider retracing the key constructs embedded in strategic management research that have informed the advancement of the coopetition stream at different levels of analysis. A summary of the main research lines is provided in Table 3.

Insert Table 3 here

**Insights for management practice**

Once coopetition has been accepted by a good proportion of managers in industry as a third strategic option, beyond sheer competition and sheer cooperation, that they may pursue even *pro tempore*, it becomes important for them to re-consider the motives (exogenous or endogenous) that lie at the very foundation of the strategic decision to coopete. This concerns the mutual advantages that competing firms may achieve over time and maintain by concurrently cooperating in certain activities. On the exogenous side, such coopetition-enhancing conditions have been highly amplified and accelerated by the onset of the Covid-19 pandemic and the higher level of uncertainty and ambiguity it has inevitably generated on a global scale. On the endogenous side, managers need to acknowledge that, while the use of a coopetitive strategy generates, between firms and inside the same firm, tensions that certainly need to be tackled and mitigated, it is also a way of infusing endogenous pressure to
innovate and to increase market and social performances by providing managers and employees with new benchmarks and new fruitful routines to deal with.

CONCLUSION

By providing an in-depth critical review of coopetition inquiry, this paper has offered a comprehensive map of coopetition literature, as well as a platform for a suite of new research opportunities in this important line of strategic management. By digging into the fundamental questions of strategic management research, we have clarified not only the main concepts that coopetition inquiry uses, but also the rewarding trade that it is possible to establish between coopetition and strategic management research. In such a way, we have managed to achieve a more profound understanding of the potential of coopetition inquiry, thereby re-positioning it within the strategic management domain. In short, we can say that we have found the key to unfastening the cage where coopetition has for too long been locked up like a “wild tiger.”

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Similarity and Multimarket Contact in Competitive De-escalation”. Organization Science 7(3): 322-341.


Figure 1: A comprehensive map of coopetition research

“Why” coopetition occurs
• market power
• institutional settings
• technological discontinuities
• inter-industry convergence
• environmental uncertainty

“With whom” coopetition occurs
• resource similarity
• market overlap
• trust
  • relational openness
  • mutual dependence
  • prior exchange history
  • expectations of continuity
• coopetition capabilities
  • emotional capabilities
  • analytical capabilities

“Which” logic of coopetition occurs
From/to
• balance of competition and cooperation

Cross-cultural aspects

Both/and
• competitive intensity
• cooperative intensity

“How” coopetition is dealt with
Coopetition Tensions
• roles
• knowledge leakages
• unbalanced power and opportunism
• intertemporal tensions

Modes of managing the interplay btw competition and cooperation
• temporal separation
• spatial separation
• spatial and temporal colocation

Dynamic coopetition capabilities

“Which” logic of coopetition occurs

“When” coopetition occurs
Strategy process
• deliberate vs emergent strategy

“What” the performance effects of coopetition are
Innovation performance

Financial Performance
• resource sharing
• market growth and development
• new markets creation
• competitive dynamics

Social, environmental, and governance performance

High variability of performance
Linking “Why” coopetition occurs with SM
Contingency Theory (Lawrence and Lorsch 1967; Woodward, 1965)
Resource-dependency theory (Dess and Beard, 1984)

Linking “With whom” coopetition occurs with SM
Competitive dynamics
action/response dyad (Chen, 1996; Grimm et al. 2006; Smith et al. 2001)
competitive asymmetry (Chen et al., 2007; Chen and Miller, 2012)
relational nature of competition (Kilduff, Elfenbein and Staw, 2010)
market overlap and resource similarity (Chen, 1996)
Relational view of cooperative advantage
relational rents and capabilities (Chung, Singh and Lee, 2000; Dyer and Singh, 1998; Shah and Swaminathan, 2008; Srivastava and Gnyawali, 2011)
Learning race (Hamel, 1991)

Linking “When” coopetition occurs with SM
strategy formulation (Hutzschenreuter and Kleindienst, 2006)
strategy-implementation (Gresov and Dracini, 1997; Hutzschenreuter and Kleindienst.

Linking “Which” logic of coopetition occurs with SM
Dominant logic
(Prahalad and Bettis, 1986; Bettis and Prahalad, 1995; Kor and Mesko, 2013)
Managerial cognition
(Adner and Helfat, 2003; Cameron and Quinn, 1988; Tripsas and Gavetti, 2000; Smith and Tushman, 2005; Nadkarni and Barr, 2008)
Paradoxical frames
(Keller and Sadler-Smith, 2019; Ford and Ford, 1994; Miron et al. 2018; Van de Ven and Poole, 1995; Das and Teng, 2000)

Linking “How” to deal with coopetition with SM
Managing Tensions
Instability of alliance due to divergence of partner’s capabilities, purposes, and interests (Das and Teng, 2000; Hamel, 1991; Kale et al., 2000; Khanna et al., 1998)
Modalties of managing the interplay between competition
Dynamic capabilities
organizational growth in turbulent environment (Teece et al., 1997; Eisenhardt and Martin, 2000)
organizational learning (Cohen and Levinthal, 1990; Helfat et al., 2007; Helfat and Winter, 2011; Lane and Lubatkin. 1998; Peteraf, 2009; Zahra and George, 2002)
organizational routines and capabilities (Chreyogg Kliesch-Eberl, 2007; Nelson
alliance capability to select partners (Vassolo and Anand, 2008)

Linking research on “What” the performance effects of coopetition are with SM
Types of performance
(Lao, Rindfleisch and Tse, 2007; Ritala, Hallikas and Sissonen, 2008; Stadler, 2018; Volschenk, Ungeer and Smit, 2016; Crick and Crick, 202; Reuer and Zollo, 2005; Bouncken, Gast, Kraus and Bogers, 2015)
Value creation vs. value appropriation
(Mason and Drakeman, 2014; Zollo and Reuer, 2005)
<table>
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<tr>
<th>Reference</th>
<th>Data base</th>
<th>Span of time</th>
<th>Book chapters</th>
<th>Criteria</th>
<th>Limitations</th>
<th>Sample</th>
<th>Level of analysis</th>
<th>Review approach</th>
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<tbody>
<tr>
<td>Bouncken, Gast, Kraus and Bogers (2015)</td>
<td>ABI Inform/ProQuest, EBSCO host/Business Source Premier, Ingenta Connect, JSTOR, Mendeley, Science Direct, Scopus, Springer Link, Web of Science, Google Scholar</td>
<td>Until 2014</td>
<td>NO</td>
<td>coopet*, co-opet*</td>
<td>Journal in British Association of Business Schools ranking with the cut-off ≥ 2; Journal in German Academic Association for Business Research ranking with the cut-off ≥ C; Journals with the Thomson Reuters’s impact factor cut-off ≥ 0.7</td>
<td>82 articles</td>
<td>Inter-firm</td>
<td>Descriptive analysis of literature, presentation of “coopetition as a strategy”, discussion on challenges of the management of coopetition</td>
</tr>
<tr>
<td>Dorn, Schweiger and Albers (2016)</td>
<td>ABI/INFORM, EBSCO, SSCI/Web of Science</td>
<td>1992-2014</td>
<td>YES</td>
<td>co(-)opet*, “co(-)oper*” and “compet*”</td>
<td>Journals ranked by the Web of Science (2014 JCR Social Science Edition) within the categories of business and management</td>
<td>169 articles</td>
<td>Inter-firm, intra-firm, network level</td>
<td>In-depth review to synthesize coopetition in a way that facilitates additional research and supports business practice</td>
</tr>
<tr>
<td>Bengtsson and Raza-Ullah, (2016)</td>
<td>ISI Web of Knowledge’s Social Sciences Citation Index and EBSCO</td>
<td>1996-2014</td>
<td>NO</td>
<td>“cooperat* and compet*” or “collaborat* and compet*” or coopet* or co-opet*</td>
<td>Journals with ISI impact factor above 0.5 and with 2 or above publications within the categories of management or business and management</td>
<td>142 articles</td>
<td>Intra-firm, dyadic, triadic, inter-firm, network level</td>
<td>Systematic review that summarizes major themes, drivers, processes, and outcomes (DPO)</td>
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<td>Devece, Ribeiro-Soriano and Palacios-Marqués (2019)</td>
<td>Web of Knowledge</td>
<td>1996-2015</td>
<td>NO</td>
<td>'coopet*” or &quot;co-opet*”</td>
<td>Articles published in peer-reviewed business and management journals, including “operations research and management science” journals</td>
<td>75 articles</td>
<td>Individual and team, organizational, inter-organizational, network and cluster</td>
<td>Trends and perspectives in coopetition research based on level, objectives, framework, firm size, method</td>
</tr>
</tbody>
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Table 2: A summary of the key emerging links and future research links between coopetition and strategic management research

<table>
<thead>
<tr>
<th>KEY QUESTIONS</th>
<th>THEORETICAL PERSPECTIVE</th>
<th>EMERGING LINKS</th>
<th>FUTURE RESEARCH LINKS</th>
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<td>“Why” coopetition occurs</td>
<td>Contingency theory and resources dependency</td>
<td>Environmental drives coopetition</td>
<td>Effect of uncertainties in coopetition</td>
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<tr>
<td>“With whom” coopetition occurs</td>
<td>Competitive dynamics</td>
<td>Action/response dyad</td>
<td>Coopetition action-response dyad</td>
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<td>Competitive asymmetry</td>
<td>Multipoint coopetition</td>
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<td>Relational nature of competition</td>
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<td>Market overlap and resource similarity</td>
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<td>The relational view of cooperative advantage</td>
<td>Relational rents and capabilities</td>
<td>Mistakes in partners selections</td>
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<td>Learning race</td>
<td>Unfairness in coopetition</td>
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<td>Value misappropriation</td>
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<td>“When” coopetition occurs</td>
<td>Strategy formulation</td>
<td>Rationality and comprehensiveness</td>
<td>CEO’s decision-making process</td>
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<td>Strategy implementation</td>
<td>process for coopetition</td>
<td>Strategy formulation</td>
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<td>“Which” logic of coopetition occurs</td>
<td>Dynamic managerial capabilities</td>
<td>Managerial cognition</td>
<td>Managerial human capital</td>
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<td>Paradoxical frames</td>
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<td>Managerial attention</td>
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<td>“How” coopetition is dealt with</td>
<td>Managing tensions</td>
<td>Role of governance on coopetition</td>
<td>Coopetition architecture</td>
</tr>
<tr>
<td></td>
<td>Dynamic capabilities</td>
<td>Organizational growth in a turbulent environment; organizational learning; organizational routines and capabilities; alliance capability to select partners</td>
<td>Link between learning mechanisms and coopetition dynamic capabilities</td>
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<tr>
<td></td>
<td>Modalities of managing the interplay</td>
<td>Paradox literature and organizational structures</td>
<td>Contingent role of stable vs. turbulent environments to build coopetition capabilities</td>
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<tr>
<td>“What” the implications of coopetition are</td>
<td>Firm performance</td>
<td>Multidimensionality of performance; Value creation vs. value destruction interplay</td>
<td>Co-evolution of different types of performance</td>
</tr>
<tr>
<td>Theory</td>
<td>Research questions</td>
<td>Position in the map</td>
<td>Research domain</td>
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<tr>
<td>Contingency theory</td>
<td>How do industry characteristics affect the choice to implement a coopetitive strategy and its performance?</td>
<td>“Why” coopetition occurs</td>
<td>Strategic management</td>
</tr>
<tr>
<td></td>
<td>How do drivers of coopetition affect coopetition patterns, and, in turn, innovation performance?</td>
<td>Linking “Why” coopetition occurs and the performance of coopetition</td>
<td>Innovation management</td>
</tr>
<tr>
<td>Competitive dynamics</td>
<td>How to distinguish the sequence between cooperative/competitive actions and cooperative/competitive responses? Does specific logic depend on the resource characteristics of competing partners, which, in turn, may follow dissimilar logics? How is it possible to make a crucial transition, not only from one logic to the other?</td>
<td>Linking “With whom” coopetition occurs and which logic of coopetition occurs</td>
<td>Strategic alliance</td>
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<td></td>
<td>Whether and how multimarket competition fosters coopetition?</td>
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<td></td>
<td>What is the impact of intentional mistakes or unfair actions on alliance formation and evolution?</td>
<td>“With whom” coopetition occurs</td>
<td>Strategic alliance</td>
</tr>
<tr>
<td>Strategy formulation and implementation</td>
<td>What is the impact of a strategy’s psychological attitude for the formulation of coopetition?</td>
<td>“When” coopetition occurs</td>
<td>Strategy formulation processes</td>
</tr>
<tr>
<td>Dominant Logic and Management Cognition</td>
<td>How do decision makers define their agenda and how is their attention addressed toward coopetition? How do beliefs, values, and actions of decision makers support governance mechanisms that encourage coopetition?</td>
<td>“Which” logic of coopetition occurs</td>
<td>Strategic leadership</td>
</tr>
<tr>
<td>Tension</td>
<td>What is the impact of each driver on the ways in which firms organize themselves, and, in turn, the emergence of specific tensions?</td>
<td>“How” to deal with coopetition</td>
<td>Organizational design</td>
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<tr>
<td>Dynamic Capabilities</td>
<td>How does coopetition dynamically evolve over time? How do development of organizational-level coopetition-oriented routines and dynamic coopetition capabilities lay the groundwork for the coopetition lifecycle?</td>
<td>“How” to deal with coopetition</td>
<td>Coopetition</td>
</tr>
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<td></td>
<td>How do firms enrich adaptive coopetitive capabilities? How do firms develop proactive coopetition capabilities? How can firms balance adaptive and proactive coopetitive capabilities?</td>
<td>“How” to deal with coopetition</td>
<td>Dynamic capabilities; Strategic alliance</td>
</tr>
<tr>
<td>Value creation and value appropriation</td>
<td>To what extent and under what conditions is it possible to observe the “coopetition red queen effect”?</td>
<td>“What” the performance effects of coopetition are</td>
<td>Innovation management</td>
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<td>What are the implications of coopetition in the short and long term? How does coopetition contribute to creating a sequence of competitive (coopetitive) advantages?</td>
<td>“What” the performance effects of coopetition are</td>
<td>Competitive advantage</td>
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<td></td>
<td>What is the relationship between the logic of coopetition and the emergence of firms’ specific rents?</td>
<td>Linking “Which” logic of coopetition occurs and “What” the performance effects of coopetition are</td>
<td>Competitive advantage</td>
</tr>
<tr>
<td>Uncertainty theory</td>
<td>To what extent and under what conditions do firms differ in coping with uncertainty through coopetition?</td>
<td>“Why” coopetition occurs</td>
<td>Strategic alliance</td>
</tr>
<tr>
<td>Agency theory</td>
<td>What are the bright and dark sides of opportunism in coopetitive agreements?</td>
<td>“With whom” coopetition occurs</td>
<td>Coopetition</td>
</tr>
<tr>
<td>Not Specified</td>
<td>What are the mechanisms linking the key questions underlying coopetition studies, thereby advancing the emergence of specific paths for coopetition evolution?</td>
<td>Not specified</td>
<td>Coopetition</td>
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