What coopetition is and what it is not:

Defining the "hard core" and the "protective belt" of coopetition

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Abstract

While a growing number of contributions rely on the concept of coopetition, they adopt very different, and sometimes contradictory, perspectives. Our article aims to lay a foundation for future research on coopetition by defining what can and cannot be categorized as coopetition. Building on a Lakatosian approach, we identify three assumptions that compose the "hard core" of coopetition as a research program. We argue that coopetition requires (1) simultaneous competition and cooperation; (2) an intense competition between partnering firms in critical markets, and (3) an intense cooperation between competing firms in critical activities or markets. In addition to the hard core, the Lakatosian approach enables us to highlight eight key debates that compose the "protective belt" of coopetition and that are represented as many research avenues. As coopetition becomes a trending research topic, defining its nature to lay its foundation is now more important than ever. This research thus contributes to a clear definition of what coopetition is and what it is not.

Keywords: Coopetition; Hard Core; Protective Belt; Lakatos; Coopetition Boundaries

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1. Introduction

While research in strategic management has traditionally studied competitive and cooperative relationships separately, often in opposition (Leiblein and Reuer, 2020), interorganizational strategies have evolved over the years, with an increasing tendency for companies to combine competitive and cooperative strategies (Gnyawali and Park, 2009). Previous theories and frameworks have not been fully adapted to understand this growing phenomenon because they were designed to study either cooperative or competitive strategies but not the specificities arising from their simultaneity. Therefore, a different theoretical approach in

strategic management is needed to understand and explain the coopetition phenomenon (Bengtsson and Kock, 2000; Padula and Dagnino, 2007).

Over the past twenty years, increasing contributions in strategic management have relied on the concept of coopetition to investigate collaborative strategies between competing firms. The concept of coopetition offers a revolutionary view of relationships by studying competition and cooperation simultaneously (Lado et al., 1997; Bengtsson and Kock, 2000). Coopetition offers new insights into strategic management, as it shows how firms can articulate cooperative and competitive behaviors to generate higher performance, leading to new research avenues (Fernandez et al., 2018a). Several attempts have been made to summarizeand structure this debate with the publication of either literature reviews (Bengtsson and Kock, 2014; Bengtsson and Raza-Ullah, 2016; Bouncken et al., 2015; Dagnino and Minà, in press; Devece et al., 2019; Dorn et al., 2016; Della Corte, 2018; Köseoğlu et al., 2019; Shvindina, 2019; Gernsheimer et al., 2021;) or books dedicated to coopetition (Dagnino and Rocco, 2009; Yami et al., 2010; Fernandez et al., 2018a).

While these efforts have made important contributions to structuring the existing works, they have also highlighted the diverse, and sometimes contradictory, conceptualizations or perspectives on coopetition. For instance, while the vast majority of research articles examine coopetition at the interorganizational level (Bengtsson and Kock, 2000; Gnyawali and Park, 2011; Padula and Dagnino, 2007; Ritala and Hurmelinna-Laukkanen, 2013), others have considered coopetition at the intraorganizational or interpersonal level, generating new challenges for researchers (Bouncken et al., 2018b; Chiambaretto et al., 2019). Moreover, coopetition was recently investigated in situations in which cooperative and competitive behaviors were not perfectly simultaneous (Hoffmann et al., 2018) or in cases of alliances between firms that did not compete for the same customers (Lacoste, 2012).

Consequently, these recent literature reviews identify the need for a clearer conceptualization of coopetition, and they underline the importance of sharing a common definition to be able to develop future research on the topic (Bengtsson and Kock, 2014; Bengtsson et al., 2016; Bouncken et al., 2015; Devece et al., 2019; Dorn et al., 2016; Della Corte, 2018; Köseoğlu et al., 2019; Shvindina, 2019; Gernsheimer et al., 2021). Therefore, in line with their call for setting a common definition, this paper aims to define the scope of what coopetition is and what it is not.

To do so, we build upon Lakatos's (1969) perspective, which uses the concept of a research program to characterize the bases and evolution of a concept over time. The Lakatosian approach is relevant, as it provides an intermediary stance compared to Popper's falsificationism (which leads to the abandonment of a theory when it is empirically challenged) and Kuhn's paradigmatic approach (with models or theories that remain in use despite being empirically challenged). Indeed, according to Lakatos, a research program is defined by a "hard core", that is, a set of assumptions that are central and cannot be negated, and a "protective belt" that describes the debates surrounding a concept. This analysis of research programs thus allows us to combine Popper's adherence to empirical validity with Kuhn's appreciation for conventional consistency. The Lakatosian perspective has been used extensively to analyze various research programs (Kilduff et al., 2006; Veciana, 2007; Lecocq et al., 2010; Gold, 2014) but not the ever-growing literature on coopetition.

Using the Lakatosian approach, we identify three assumptions that compose the hard core of coopetition as a research program. The first one is that coopetition requires competition and cooperation to be simultaneous. The second one argues that coopetition requires intense competition in critical markets between partnering firms. Symmetrically, the thirdassumption states that coopetition requires intense cooperation in critical markets or activities between competing firms.

In addition to the hard core, the Lakatosian approach enables us to define the eight key debates grouped into three themes that compose the protective belt of coopetition. The first theme addresses the boundaries of coopetition (Is cooperating with potential competitors a coopetition situation? Can coopetition be extended to vertical relationships? Can coopetition be extended to situations in which actors compete for something other than customers?). The second theme questions its outcomes (Is coopetition truly beneficial and for whom? Is coopetition always the most relevant strategy for firms? How can coopetition be managed to reach higher performance levels?). The last theme investigates its societal impact (Is coopetition evolving to become a dominant strategy for industries and firms? Should students and executives be trained for coopetition? If so, how?).

Clarifying the hard core and the protective belt of coopetition as a research program is necessary to advance knowledge about coopetition in strategic management. Indeed, describing a relationship as competitive, cooperative, or coopetitive has different implications. By using the concept of coopetition to study interorganizational relationships, scholars are using specific lenses to focus on some aspects, benefits and risks of the relationship. To be understood but also to hold discussions and to advance the knowledge about a concept, it is important to share a common sense, to have common references and to agree on the meaning of the concept. Therefore, in management science, concept definition is an important first step before moving toward theorization. In defining what coopetition is and what it is not, we hope to avoid the risk of coopetition becoming a "zombie concept" (Hyrynsalmi and Hyrynslami, 2019), that is, characterized by an unclear nature and content.

2. Analyzing coopetition as a research program: A Lakatosian perspective

This research article intends to identify a set of criteria that allow researchers to determine whether a case can be characterized as coopetitive. To do so, we build upon Lakatos's (1969)

approach, which aims to characterize research programs. Several previous contributions to management have used a Lakatosian perspective to analyze various concepts or disciplines through the lens of research programs, e.g., social networks (Kilduff et al., 2006), entrepreneurship (Veciana, 2007), business models (Lecocq et al., 2010), and supply chain management (Gold, 2014). We believe that the Lakatosian approach might be particularly relevant for investigating coopetition for three reasons.

First, Lakatos's conceptualization of science is an attempt to resolve the apparent contradiction between two pre-existing approaches to science: the Popperian view based on falsificationism, which states that a theory should be abandoned when any evidence appears to challenge it,and Kuhn's analysis of scientific activity in which science is constructed with paradigms that remain popular despite observed anomalies. Lakatos's approach aims to combine Popper's adherence to empirical validity with Kuhn's appreciation for conventional consistency. Regarding coopetition, while the first scientific contributions mainly consisted of qualitative research to apprehend its empirical manifestation, one could have categorized coopetition research as the elaboration of a "new paradigm" (Bengtsson et al., 2010), following Kuhn's approach, to find the "shared theoretical beliefs, values, instruments and techniques, and even metaphysics" (Bird, 2013) associated with coopetition. Nevertheless, as the coopetition field has grown, more diverse and rigorous methods have been implemented to challenge the relevance or universality of the previous assumptions, following a Popperian approach (Gnyawali and Song, 2016). However, despite increasingly contradictory results (Fernandez et al., 2018a), the concept of coopetition continues to attract new researchers and to generate a growing number of publications, so the Lakatosian approach is particularly relevant to investigating the core concept of coopetition and its boundaries.

Second, Lakatos (1969) analyzes the evolution of science through the concept of a research program. A research program is not an isolated theory but a sequence of theories that

share the same hard core, i.e., key assumptions concerning an object (Musgrave and Pigden, 2016). As explained by Lecocq et al. (2010, p. 215), *"Within this program, some theories will be eliminated over time while others will become more empirically grounded,* i.e., *explain more empirical facts. The core is not falsifiable and is protected by a belt made up of auxiliary hypotheses which are falsifiable and are adjusted to suit the problems which are encountered and eventually solved or to suit the results of empirical investigations (Lakatos's experimentation phase)".* Thus,the hard core and the protective belt combine in a program that evolves over time, despite potential contradictions. This approach is particularly relevant to the concept of coopetition because it forces us to clearly define its hard core (the fundamental assumptions and key characteristics that cannot be questioned) and its protective belt. Thesedistinctions are an essential definitional step to ensure that the coopetition literature evolves on solid bases (Kilduff et al., 2006).

Finally, Lakatos considers science to be an ongoing competition among different research programs (Carrier, 2002). The competition works to generate scientific revolution in the fieldwhen a program has a higher predictive capacity or replaces another program. This approach is particularly interesting for coopetition,because it reveals how the concept can differentiate itself from other theories, concepts and approaches (such as alliances or competitive dynamics). It is thus crucial for us to clearly define not only the hard core of coopetition but also the boundaries that differentiate it from other competing research programs.

3. Defining the hard core of coopetition as a research program

Building upon Lakatos's (1969) approach, we define the hard core of the research program dedicated to coopetition strategies. Lakatos defines the hard core as a set of assumptions that theoretically characterize a pure case of a given phenomenon. Establishing the hard core of

coopetition entails identifying the assumptions that theoretically define its purest manifestation. As such, some empirical cases may perfectly fit this pure manifestation, while others may differ in some aspects. We thus build on the existing coopetition literature to identify the three main premises that theoretically define the hard core of coopetition.

3.1. Assumption #1: Coopetition requires that cooperation and competition occur simultaneously.

Our first assumption highlights the importance of simultaneity in the timing of cooperative and competitive behaviors in coopetition. Firms that simultaneously cooperate and compete with each other face specific challenges that differ from those arising when they compete and cooperate alternatively.

Firms rely on coopetition strategies to take advantage of the benefits of both cooperation and competition (Bengtsson et al., 2016; Fernandez et al., 2018a). The collaborative dimension allows firms to access key resources or technologies to launch new products or entry into new markets, while the competitive dimension of coopetitive agreements is essential to avoid complacency and maintain creative tension between organizations (Raza-Ullah et al., 2014). Thus, coopetition strategies can produce higher benefits than purely competitive or collaborative strategies such as strategic alliances between noncompetitors (Lado et al., 1997; Peng et al., 2012; Ritala, 2009).

However, this improved performance does not result simply from the combination of competition and cooperation; it is derived from their simultaneity. Some works contain ambiguity in their reliance on the concept of coopetition to describe situations in which firms alternate between phases of cooperation and competition (Ansari et al., 2016; Hoffmann et al., 2018). For instance, Hoffmann et al. (2018) describe how firms may adopt “sequential coopetition”, in which firms may compete during some periods and cooperate during others.

These contributions are usually in line with works in industrial organizations that can be characterized as "sequential games". Such models assume a sequential ordering of cooperation and competition: either an initial cooperative stage is followed by a competition stage (e.g., d'Aspremont and Jacquemin, 1988; Kamien and Zang, 2000, Grünfeld, 2003) or vice versa (Brandenburger and Stuart, 2007; Gans and Ryall, 2017; MacDonald and Ryall, 2004; Panico, 2017). However, by separating coopetition into two distinct stages, the trade-off is removed between competitive and cooperative behaviors associated with coopetition. These alternate sequences may generate specific dynamics in which competition may foster future cooperation (and vice versa), but the benefits and risks associated with these relationships are very different from those associated with coopetition (Dussauge et al., 2000; Jeunemaître et al., 2018).

In contrast, we argue that, for coopetition to occur, cooperation and competition should be operative at the same time. Following Chiambaretto et al. (2020b), we state that simultaneity can be understood in two main ways. First, it can be understood as the fact that two firms cooperate in some markets/projects while remaining competitors in other markets/projects. For instance, Le Roy and Fernandez (2015) emphasize how Airbus Group and Thales fully cooperated on a satellite program (Yahsat) while continuing to compete for other satellite markets. In this situation, each coopetitor makes continuous trade-offs between cooperative and competing activity.

Second, simultaneity can be understood as a situation in which two firms cooperate on a joint product while developing unique knowledge, features or competencies that will be used to improve the joint product so they will have a larger market share than their coopetitor. For example, Gnyawali and Park (2011) explain how Sony and Samsung allocated teams to develop, in cooperation, a new liquid crystal display (LCD) technology for televisions while having, in parallel, other teams that worked on specific features that would allow Sony to

develop a better final LCD product than Samsung. As highlighted by Ritala and Hurmelinna-Laukkanen (2018), in this configuration, even if the phases of cooperation and competition may initially seem asynchronous, the firms continuously make trade-offs on the amount of resources allocated to the teams dedicated to the cooperative and the competitive activities. Because partnering firms know they will soon compete, this "shadow of the future" forces them to anticipate appropriability issues and thus to behave as if cooperation and competition are simultaneous (Ritala and Tidström, 2014). Similarly, when firms frequently alternate phases of cooperation and competition, their moves in these regards tend to become intertwined, generating patterns that can be interpreted as a semblance of simultaneity.

According to our view, the simultaneity of cooperative and competitive behaviors is a key differentiating feature of coopetition, as it generates specific benefits and risks. In line with Lado et al. (1997) or Bengtsson and Kock (2000), we argue that simultaneity forces firms to outperform their coopetitors and to avoid being outperformed by their coopetitors. Simultaneity thus becomes a driver of the superior performance of coopetition.

The possibility of outperforming the coopetitor or being outperformed by the coopetitor comes from the paradoxical nature of coopetition. Indeed, the coopetitor is perceived simultaneously as a partner, providing benefits on the value creation side, and as a competitor, generating threats on the value appropriation side. Without the joint occurrence of these two behaviors and the benefits stemming from cooperation (mutuality and joint resource commitments) and competition (rivalrous spirit), coopetition could not provide higher benefits than competition or cooperation alone (Gnyawali and Ryan Charleton, 2018). The threat represented by potential competition forces a given coopetitor not only to create joint value but also to combine this joint value with its own resources more efficiently than the other coopetitor does (Fernandez et al., 2018b). Without simultaneous competition and

cooperation, the partnering firms would have less incentive to improve the joint product, would continue to develop their own products, and would overcome their partners.

Finally, the simultaneity of cooperation and competition creates high uncertainty in coopetition outcomes. Pure competition generates a win-lose outcome. Pure cooperation leads to a win-win outcome. However, the potential outcomes of coopetition are uncertain, as they depend on many factors, such as the coopetitors' strategic intent or involvement. Coopetition could lead to a win-win outcome in which the gains are symmetric or to a win-lose outcome in which one coopetitor captures more than the other (Dagnino and Minà, 2018; Minà et al., 2020). The risk of losing in coopetition is always present and cannot be reduced to zero. Coopetition is by nature a double-edged sword (Bouncken and Kraus, 2013), as it creates new opportunities for value creation while generating specific risks (Le Roy and Czakon, 2016).

3.2.Assumption #2: Coopetition requires intense competition in critical markets between partnering firms.

Our second assumption states that coopetition requires partnering firms to compete intensively in critical markets or activities. Coopetition is based on the idea that partners face a specific challenge: collaborating while acting as competitors. Without competition, the phenomenon could be assimilated as pure cooperation and would not require a specific theoretical lens for investigation. The presence of intense competition in critical markets between two partners generates specific challenges for them and thus a need for dedicated academic research.

The word competition is derived etymologically from *cum* (with) and *petere* (to attack, to target, or to pursue), so competition literally means pursuing a common objective against someone else. Applied to business, competition means a horizontal relationship in which economic actors struggle by targeting the same customers. It occurs when at least two

companies want to sell their products to the same customers. Thus, business competition is an indirect relationship between companies that are trying to establish a direct relationship with the same customers (Samuelson and Nordhaus, 2009).

Companies are often defined as competitors simply because they operate in the same industry. However, this fact does not always mean the companies are competitors. As markets become increasingly segmented, each segment is characterized by a set of customers with specific needs that are addressed by particular firms. For instance, in the video game industry, editors publishing sports or car video games do not target the same customers. While they operate in the same industry, these editors coexist much more than they compete, as they operate in different markets with different customers (Klimas and Czakon, 2018). Accordingly, the presence of two firms in the same industry does not mean that they are competitors. To be competitors, they need to act in the same market and target the same customers.

In parallel, competition can present different intensities (Chiambaretto et al., 2016, 2020a) and can occur in markets that are more or less critical for firms. For instance, the degree of competition may vary from "live and let live competition" (Porter, 1980) to "hypercompetition" (D'Aveni, 1995). Therefore, we argue that in a coopetitive relationship, when the competition in critical markets between the partnering firms is more intense, the situation better fits the requirements of coopetition as defined in the hard core. This assumption leads us to a major issue: characterizing and measuring both the criticality and the intensity of competition.

According to Pfeffer and Salancik (1978) or Baumard (2010), criticality can be defined as the extent to which an element is essential to the success of a project or an organization. Applied to markets, a market can be considered critical for a firm if it represents a significant share of its revenues or profits. Thus, if the firm loses revenues on this market,

the entire firm's future is threatened. Consequently, the positive stimulus generated by the competition between the two firms is more important if the firms compete on markets that are critical to them because their survival is at stake. The necessity to outperform the coopetitor is even more important when the markets on which the coopetitors meet are essential for the firms' current and future development. In contrast, if the markets in which firms compete are not critical for their survival, the stimulus stemming from the competition remains low, as the stakes remain quite limited. Thus, in a coopetitive relationship, competition must take place in critical markets to fit the requirements of coopetition as defined in the hard core.

In parallel, various approaches have been used to define and assess the intensity of competition between firms. First, a structural view of competition has been suggested by industrial organizations, using factors such as the number of competitors, the importance of fixed costs, and brand power (Porter, 1980) or the concentration ratio (Cool et al., 1989; Weitz, 1985). Focusing on the intensity of the competition between two firms, some authors argue that two companies are considered competitors if they operate in the same industry (Mason, 1957) or have a strong market overlap (Chen, 1996; Yan et al., 2020). For instance, when two firms have more Standard Industrial Classification (SIC) codes in common, the competition between them should be more intense (Wang and Zajac, 2007; Park et al., 2014a). Similarly, if two firms are referenced in the same brand categories (by industry and subindustry type) in the Nice World Intellectual Property Organization database, they target the same customers and are thus competitors (Mendonça et al., 2004; Chiambaretto et al., 2016).Competition also has a geographical nature. Operating in the same industry but not in the same geographical zone leads to a lower competition intensity than when the competition occurs in the same region or country (Klimas, 2014). Another structural way to measure competition is based on demand characteristics. According to this marketing view, competition is close to substitutability (Day et al., 1979). Competition should thus be

measured using interbrand transfer, cross elasticity, revealed preferences, etc. (Lehmann, 1972; Rao and Sabavala, 1981), and substitutability should be measured in terms of perceived similarities using substitutability, judgments, etc. (Day et al., 1979; Urban et al., 1984).

The structural approach has been criticized in strategic management considering that business competition is a behavioral phenomenon characterized as a set of competitive actions and reactions between rivals (Chen and Miller, 2012). In this view, competitive intensity can be apprehended through competitive aggressiveness—depending on the frequency, speed, diversity, etc.—of competitive actions and reactions (Ferrier, 2001). When the frequency, speed and diversity of competitive actions and reactions are higher, so is competitive aggressiveness (D'Aveni et al., 2010; Andrevski et al., 2016; Sanou et al., 2016). The behavioral approach can also be understood through the mental classification firms make when they try to categorize a firm as a competitor or noncompetitor (Cattani et al., 2017). Recent research by Mitsuhashi and Alcantara (2021) shows how researchers can use Form 10-k, on which listed firms are asked to list their rivals.Regardless of the indicators used to measure the competitive intensity, we assume that in a coopetitive relationship, the competitive intensity, while it might vary, must remain high,on average, throughout the duration of the relationship.

We thus conclude that one element of the hard core is thata relationship is coopetitive when the competition in critical markets between the partnering firms is intense.

3.3. Assumption #3: Coopetition requires intense cooperation in critical markets or activities between competing firms.

Our third assumption states that for coopetition to occur, competing firms must cooperate intensively in markets or activities that are critical to them. Without cooperation, the phenomenon could be assimilated into pure competition and would not require a specific

theoretical approach. In contrast, the presence of intense cooperation in critical markets or activities between the two competitors generates specific challenges for them and thus a specific need for dedicated academic research.

The word cooperation derives etymologically from *cum* (together) and *operare* (acting) and means acting or working together (Easley and Kleinberg, 2010). Organizations are not *de facto* in cooperative relationships; they must build cooperation by developing economic and social ties (Holländer, 1990; Axelrod, 1997). Contrary to competition, cooperation involves a direct relationship. Cooperation leads to not only economic but also social relationships, so it is not anonymous (Granovetter, 1973).

Several studies have explained that competitors could decide to collaborate for many reasons: to foster innovation (Bouncken and Kraus, 2013), to benefit from economies of scale (Dussauge et al., 2000), to improve resource utilization (Chiambaretto and Fernandez, 2016), to develop new standards (Gnyawali and Park, 2011), to share risks (Fernandez et al., 2018b), or to reduce the time to market (Nemeh, 2018). From a resource-based view, the benefits of coopetition result from the combination of heterogeneous resources that are not only complementary but also compatible (Gnyawali and Park, 2009; Mitsuhashi and Greve, 2009). Competitors act as unique partners, as their resources are complementary, but they also tend to be more similar (Chen, 1996) and thus more compatible, which increases potential value creation (Ritala, 2012; Chiambaretto et al., 2020b). In coopetition, firms can access a wide portfolio of complementary knowledge that can easily be combined with the firm's current knowledge to develop new capabilities (Ritala and Hurmelinna-Laukkanen, 2009).

We argue that coopetition requires intense cooperation on critical activities or markets between competing organizations. Indeed, Castañer and Oliveira (2020) have highlighted the different meanings of the terms collaboration, coordination and cooperation that are used to characterize interorganizational relationships and that present different levels of intensity. For

instance, a simple licensing agreement between companies can imply coordination but not necessarily cooperation (Le Roy and Chesbrough, 2018; Castañer and Oliveira, 2020). If only a limited number of resources, assets or knowledge are shared, the relationship should not be considered cooperative (Bengtsson and Kock, 2000; Bengtsson et al., 2016).

This view requires a consideration of how to characterize and measure the intensity of cooperation. Considerable attention has been given to the measurement of competition, but less attention has been given to the measurement of cooperation. Many contributions (especially those using pre-existing databases such as the CIS—Community Innovation Survey) measure cooperation as a dummy variable that takes a value of 1 when two firms acknowledge that they cooperate (Belderbos et al., 2004; Santamaria and Surroca, 2011). Accordingly, they note only the presence or absence of cooperation, but they do not assess its intensity. Other contributions have attempted to show that not all forms of cooperation have the same intensity. Yoshino and Rangan (1995) offer an interesting typology in which they differentiate limited partnerships (that involve a limited degree of cooperation) from strategic alliances (that require a strong degree of cooperation). Social networks are also an interesting approach to address the question of the intensity of cooperation. Edges between nodes can take different values according to the intensity of cooperation. For instance, Granovetter's (1973) seminal contribution distinguishes between weak and strong ties to account for different intensities of cooperation (based on the frequency and extent of the exchange of information or economic flows).

Beyond the intensity of cooperation, it is important to analyze its scope to assess whether competitors cooperate on critical activities and/or in key markets. The criticality of cooperation is, in our view, a defining element of the pure form of coopetition. Indeed, a growing number of coopetition contributions study cases in which competing firms cooperate on activities that are not central or critical to the firms' development (Stadtler and Van

Wassenhove, 2016; Wang and Krakover, 2008). If the resources shared with a coopetitor are central to the focal firm's survival, the benefits and risks associated with cooperation will be much more important (Fernandez and Chiambaretto, 2016; Peng et al., 2018). For instance, cooperating on information technology (IT) activities is less central for two competitors in the food industry than it is for two competitors in the IT industry (Fernandez and Chiambaretto, 2016; Ritala and Hurmelinna-Laukkanen, 2013).

We thus conclude that in a coopetitive relationship, when the cooperation in critical markets or activities between the competing firms is more intense, the situation better fits the requirements of coopetition as defined in the hard core.

In summary, defining the hard core of coopetition as a research program allowed us to identify the three key features characterizing the pure theoretical forms of coopetition: (1)simultaneous competition and cooperation between firms; (2) an intense competition in critical markets, and (3)an intense cooperation in critical activities or markets. If researchers can agree on these assumptions, many debates and research avenues remain regarding coopetition. These debates or questionings are part of what Lakatos calls the protective belt.

4. Setting the boundaries and identifying the protective belt for future research on coopetition

Beyond the hard core, several key debates animate the community of coopetition scholars. These discussions comprise what Lakatos calls the protective belt of a research program. We structure these debates around three themes, with different questions populating each theme.

4.1. Theme #1: Key debates regarding the boundaries of coopetition

4.1.1. Is cooperating with potential competitors a coopetition situation?

In some previous studies, scholars considered that firms could become competitors in the future, so it was relevant to study their relationships from a coopetition perspective (Rodrigues et al., 2011; Ansari et al., 2016; Rayna and Striukova, 2016); however, this view can be questioned. Cooperating with a firm that could become a competitor is an interesting phenomenon that raises multiple challenges, but we question whether this situation can be assimilated within the concept of coopetition. From our perspective, using coopetition to address relationships between potential competitors generates several issues.

One set of issues originates from the question of how to define a potential competitor. The lack of a clear definition leads to a vague approach that tends to consider any firm or partner as a potential competitor. When does a partner become a competitor? Should we look at the situation a few months or a few years after the end of the cooperation? In that case, no one would have categorized Amazon as a potential competitor of Airbus or Boeing even 10 years ago, while now it is a serious challenger with its rocket Blue Origin (Weinzierl, 2018). Furthermore, if a firm becomes an actual competitor after 5 or 10 years, can we say it is because of the resources, technologies, and know-how shared through the cooperation or is it completely independent? Going further, one could question whether potential competitors must be declared as such (i.e., a firm from industry A declares it will soon enter industry B) or if it depends on the interpretation of the researcher (whose perspective might be completely different from that of the firms or consumers).

Second, following this approach, some studies may risk misusing the concept of coopetition to investigate any type of cooperation, even that between noncompeting firms (Rodrigues et al., 2011; Rayna and Striukova, 2016; Bacon et al., in press). Such studies justify this choice by stating that cooperation between noncompeting firms could transform them into competitors, as they can learn from their partners to acquire and develop resources

that could ultimately be used to compete with each other. Because of this potential risk of competition at the end of the relationship, these researchers characterize the situation as coopetitive. However, not all alliances lead to market overlap and competition between partners. Some partnerships between initial noncompetitors may lead to the creation of new competitors, while others do not. For example, the company Gore-Tex developed a patented fabric that has become a quality label for North Face, Lafuma, Millet, etc. Following these agreements, Gore-Tex recently launched its own brand of clothes, Gore-Wear (using its patented fabric), thus creating competition with its current clients' brands. Thus, the concept of potential coopetition could have been relevant to study the relationships between Gore-Tex and these partners. However, when working with other partners (mostly for shoes), Gore-Tex decided not to enter this market and remained a supplier so these relationshipscould not be qualified as potential coopetition. It is thus very hard to analyze *ex ante* whether a relationship can be categorized as a case of potential coopetition.

Third, we underline that cooperation with current and potential competitors generates very different risks. When cooperating with potential competitors, the partnering companies know that they are not competing for the same customers, so the risks of opportunism and the resulting tensions are lower than they are in actual coopetition. In coopetitive relationships, firms are focused on short-term risks and continuously make trade-offs between benefits and risks with various time horizons (Fernandez and Chiambaretto, 2016; Chiambaretto et al., 2019). In contrast, in potential coopetitive relationships, short-term risks are significantly reduced, but potential long-term risks are increased, so the emphasis on the benefits is much higher (Fernandez et al., 2018b). Consequently, coopetition and potential coopetition should be analyzed as different phenomena.

4.1.2. Can coopetition be extended to vertical relationships?

In some previous studies, scholars have used the phrase “vertical coopetition” to investigate relationships between customers and suppliers, as the scholars have assumed that the relationshipsare both competitive and collaborative (Lacoste, 2012; Lechner et al., 2016). We analyze the implications of such a broad approach.

Contrary to traditional coopetition, companies in vertical relationships do not fight for the same customers but are in conflict for margins from a classical bargaining power perspective. Their relations are defined by conflict, not competition. The word conflict is etymologically derived from *con* (together) and *fligere* (to strike) and differs from competition. Conflicting organizations might have opposite interests without addressing the same customers (Vasudeva et al., 2020). From this perspective, vertical relationships between customers and suppliers do not combine cooperation and competition but rather cooperation and conflict. This phenomenon is well known in the marketing literature as “conflict in the distribution channel” (Brown and Day, 1981; Dant and Schul, 1992).

In contrast, we wonder if the use of vertical coopetition should not be restricted to the study of companies that cooperate vertically on adjacent segments of the value chain while competing for the same final customers (Chiambaretto and Dumez, 2016; Fernandez et al., 2018b; Robert et al., 2018). This situation is becoming increasingly common. For instance, in the enterprise resource planning (ERP) industry, Microsoft provides an operating system to SAP for its ERP, while Microsoft and SAP simultaneously compete to sell their own ERP to the same customers (Pellegrin-Boucher et al., 2013). Microsoft and SAP cooperate both vertically and compete horizontally since they target the same customers. From this perspective, we suggest restricting vertical coopetition to relationships in which two companies are vertically the buyer and the supplier, simultaneously competing for the same customers.

4.1.3. Can coopetition be extended to situations in which actors compete for something other than customers?

Some scholars have used the term coopetition to investigate relationships between actors (organizations, business units, individuals, etc.) that compete for resources instead of customers (Tsai, 2002; Dahl, 2014; Hu and Zheng, 2014; Strese et al., 2016; Bouncken et al., 2018b). The implications of such a broad view raise several questions.

As coopetition has attracted more scholars and research, different approaches toward it have emerged based on different conceptualizations of competition (Dagnino and Minà, 2018). These different conceptualizations build on the idea that competition takes place not onlyfor customers but also for resources, power, positions, etc. For instance, one of the most cited articles on coopetition, published by Tsai (2002), investigates a case in which business units do not compete for customers but for internal resources. Similarly, Gotsopoulos (2018) uses coopetition to investigate group dynamics with individuals who compete for resources and budgets.

This broad view of competition allows researchers to investigate different phenomena through the lens of coopetition. Nevertheless, adopting this very broad approach questions the very existence of coopetition. All organizations or individuals compete for resources and develop cooperative strategies to cope with such competitive environments (Axelrod, 1984). Accordingly, all organizations, by nature, rely on internal coopetition. Following this reasoning, if all organizations or individuals engage in coopetition strategies, coopetition becomes an empty strategy or a strategy without any specificity. To avoid this situation, considering the hard core we defined earlier, one must carefully check that the partnering actors (firms, business units, and individuals) compete for the same customers.

Considering this very broad potential scope of coopetition, we might wonder whether it is possible to design a coopetition theory that is relevant for each situation in which

economic actors are simultaneously involved in cooperative and competitive relationships. To date, various levels of analysis, from ecosystems to intrafirm relationships, have been studied, building upon specific theories and frameworks. Therefore, a challenge for future research could be to investigate the potential existence of a homogeneous coopetition theory that could be used for all levels of analysis. In the absence of such a homogeneous theory, using the same concept of coopetition to investigate different phenomena that are not ruled by the same mechanisms could lead to misleading predictions, generating issues for future knowledge accumulation.

4.2.Theme #2: Key debates regarding the outcomes of coopetition

4.2.1. Is coopetition truly beneficial and for whom?

From a theoretical standpoint, coopetition should be a highly performing strategy because it creates a virtuous circle in which firms not only access key resources or technologies to launch new products or enter new markets but also avoid complacency and maintain creative tension, as partnering firms are competitors (Quintana-García and Benavides-Velasco, 2004; Ritala, 2009; Raza-Ullah et al., 2014).

Despite these clear theoretical predictions, the empirical findings are contradictory. Although several empirical contributions find a positive impact of coopetition on innovation (Bouncken and Kraus, 2013), market (Robert et al., 2018) or stock-market performance (Wu et al., 2015), some recent reviews have underlined that coopetition has a mixed impact in terms of performance, either from an innovation (Gast et al., 2018) or a market performance perspective (Ritala, 2018). One possible explanation for these mixed results could be the moderating factors. For instance, the literature regarding the impact of coopetition on innovation performance has highlighted contingency factors, such as market uncertainty and network externalities (Ritala, 2012), the type of innovation (Bouncken and Kraus, 2013;

Bouncken et al., 2018a), the absorptive capacity and appropriability regime (Ritala and Hurmelinna-Laukkanen, 2013), geographical distance (Le Roy et al., 2016), andthe portfolio composition (Park et al., 2014b).

Beyond the question of whether coopetition generates superior performance is the more fundamental question of the coopetition strategies' potential losers and winners. For instance, if one firm learns much more from its partner than the other firm does, a win-lose situation could arise (Hamel, 1991; Fernandez and Chiambaretto, 2016). However, it is also important to address the question of the benefits of coopetitive strategies beyond the two coopetitors and to investigate their impacts on various stakeholders (Volschenk, 2018).

Among these stakeholders, customers play a key role in future investigations. Competition authorities authorize alliances between competing firms (i.e., coopetition) only if the benefits stemming from the cooperation are shared with the customers (even for R&D agreements). However, research investigating the impact of coopetition strategies on customers (and thus on their welfare) is lacking. For instance, Robert et al. (2018) show that coopetition strategies allow real estate agencies to sell apartments at a higher price, which is beneficial for these agencies (and for the seller) but not for their customers. Simultaneously, these coopetitive strategies reduce the time on the market and offer more choices to buyers (allowing them access to more potential apartments). For the customer, a trade-off exists between the price increase and access to a more diversified offer. In summary, the impact of coopetition on customers remains unclear and should be considered in future research.

Finally, any consideration of stakeholders must go beyond the traditional market, innovation or financial measures of performance to investigate the environmental implications of such strategies. Volschenk et al. (2016) and Volschenk (2018) are among the first to investigate the socioenvironmental impacts of coopetition strategies. By allowing competitors to share supply chains, to minimize unused resources in factories, to work together to reduce

their environmental impact (through recycling programs) and to reduce R&D costs, coopetition strategies generate important environmental and ecological benefits. In that vein, Christ et al. (2017) argue that coopetition strategies could play an increasing role in the future development of corporate social responsibility in the wine industry. Nevertheless, despite this intriguing finding, we lack empirical proof of its ecological impact. More recently, the COVID-19 pandemic has also revealed how coopetition strategies could be implemented between competing firms to accelerate their functioning and increase their agility in a context of high uncertainty. Crick and Crick (2020) underlined how competing retailers have shared information about stock levels to avoid shortages, while pharmaceutical organizations have worked together to accelerate the development of a vaccine, revealing the usefulness of coopetition strategies to achieve societal benefits.

4.2.2.Is coopetition always the most relevant strategy for firms?

Many empirical contributions aim to show that coopetition provides superior performance compared to other relational modes such as competition or cooperation (see Gast et al. (2018) or Ritala (2018) for recent reviews). At the same time, these empirical contributions reveal that, contrary to what was predicted by theoretical contributions, coopetition is not always the best solution for firms.

To date, most contributions have focused on specific coopetitive agreements separately (Fernandez et al., 2018a). However, almost all firms have more than one agreement (coopetitive or not); these agreements constitute coopetitive portfolios, that is, portfolios that include alliances with competitors (Chiambaretto and Fernandez, 2018). Only a limited number of contributions investigate coopetition at the portfolio level (Wu et al., 2010; Wassmer and Dussauge, 2012; Park et al., 2014b; Chiambaretto and Fernandez, 2016; Robert et al., 2018). Interestingly, these studies show that coopetition is not the universal solution to

firms' problems and that it should be used parsimoniously. For instance, Park et al. (2014b) highlight the existence of a bell-shaped relationship between the two variables, suggesting an optimal use of coopetition strategies. If firms do not rely enough on coopetition, they underperform; however, if they rely too much on coopetition, their performance is lower because coopetition is used in irrelevant situations. These references show that firms must proactively manage their coopetitive portfolio by adapting its configuration to the firm's and the environment's needs (Chiambaretto and Fernandez, 2018). Similarly, a recent study by Fernandez and colleagues (2021) investigated the circumstances under which it is more relevant for a firm to rely on internal development (make) or coopetition (coopete). Their contribution underlines that firms need to combine both *make* and *coopete* strategies at the corporate level to balance the short-and long-term benefits provided by each option.

Beyond the question of the circumstances under which coopetition is a relevant strategyis whether coopetition is always beneficial regardless of the firm or industry type. Indeed, most contributions have investigated large firms or high-tech industries (Gnyawali and Park, 2011; Estrada et al., 2016; Ritala et al., 2016). Regarding the firm type, many micro- and small firms extensively rely on coopetition strategies (Morris et al., 2007; Robert et al., 2009; Czakon and Czernek, 2016; Granata et al., 2018; Bagherzadeh et al., in press). Recent contributions have highlighted the specifics of coopetition strategies when adopted by small firms and show how the benefits and risks faced by small firms differ from those faced by large firms (Hora et al., 2018; Chiambaretto et al., 2020a). Considering the industry type, coopetition is increasingly used in so-called low-tech industries such as creative (Mariani, 2007; Pellegrin-Boucher and Roy, 2019), tourism (Kylänen and Rusko, 2011; Czakon and Czernek, 2016) or wine industries (Choi et al., 2009; Granata et al., 2018). The determinants and outcomes of coopetition in such a context have been shown to be specific compared to those in high-tech industries (Gnyawali and Park, 2011).

4.2.3.How can coopetition be managed to reach higher performance levels?

Although coopetition strategies can lead to higher benefits than cooperation or competition alone, these strategies are counterintuitive,filled with tensions generated by high risks of opportunism, cheating and spillovers (Tidström, 2009; Estrada et al., 2016). These tensions can transform a coopetition strategy into a win-lose or a lose-lose strategy (Fernandez et al., 2014; Tidström, 2014, 2018). Therefore, to achieve positive outcomes in coopetition, some authors argue that these tensions must be managed (Le Roy et al., 2018).Nevertheless, there is a debate in the literature regarding the type of management that should be implemented to reach higher performance levels.

Three main principles have been identified in the literature to manage coopetitive tensions: a separation principle that consists of a spatial or functional separation of cooperative and competitive activities (Bengtsson and Kock, 2000; Herzog, 2010; Poole and Van de Ven, 1989), a comanagement principle based on cogovernance and a duplication of key managerial positions within a project team (Le Roy and Fernandez, 2015), and an integration principle based on the idea that individuals should hold specific capabilities to be able to behave in a paradoxical context such as coopetition (Bengtsson et al., 2016; 2020). Recent contributions have underlined that these principles should be combined with specific governance mechanisms (Bouncken et al., 2016) and informal control mechanisms such as trust to efficiently manage the coopetition relationship (Czernek and Czakon, 2016; Czakon and Czernek, 2016; Raza-Ullah and Kostis, 2020). Furthermore, scholars have recently demonstrated the importance of project structures designed by competitors to achieve joint innovation projects (Fernandez et al., 2018b; Rouyre and Fernandez, 2019; Bérubé and Gauthier, 2020).

However, the question remains open of the successful management of coopetition. Several recent contributions underline that there is no unique way to manage coopetition and that many questions must be addressed. For instance, some contributions show that management principles and formal and informal mechanisms can be combined in different ways depending on the type of tension (Fernandez and Chiambaretto, 2016; Rouyre and Fernandez, 2019), such that coopetition management cannot be simplified to only one type of principle. Other contributions show that the principles and tools used to manage coopetitive relationships may differ according to the type of project or outcome (Fernandez et al., 2018b) or the size of the partnering firms (Granata et al., 2018).

Other research has investigated whether the traditional principles and tools used to manage coopetition are relevant in organizational settings that differ from the traditional dyadic approach. They show that management tools and principles differ when the number of competitors involved increases (Rouyre and Fernandez, 2019) or when coopetition occurs between business units in an intraorganizational setting (Tsai, 2002; Chiambaretto et al., 2019). From our perspective, previous research has only begun to investigate the management of coopetition. Future research should explore the specificities of the management of vertical coopetition, the management of coopetitive portfolios, the role of control mechanisms, the role of the third party, etc. We believe that the management of coopetition is a promising research avenue, and we encourage scholars to conduct further studies on this topic.

4.3.Theme #3: Key debates regarding the societal impact of coopetition

4.3.1. Is coopetition evolving to become a dominant strategy for industries and firms?

A growing debate is whether coopetition is becoming a dominant strategy for industries and firms, as coopetition strategies are increasingly adopted in various industries. Past research shows that coopetition is extensively used in various industrial settings such as space

(Fernandez et al., 2014; Rouyre and Fernandez, 2019), ERP (Pellegrin-Boucher et al., 2013), banking (Séran et al., 2016; Velu, 2016), airline (Chiambaretto and Fernandez, 2016), automotive (Akpinar and Vincze, 2016; Czakon et al., 2020), tourism (Kylänen and Rusko, 2011; Czakon and Czernek, 2016), telecommunication (Gueguen and Isckia, 2011; Sanou et al., 2016), video game (Klimas and Czakon, 2018; Chiambaretto et al., 2019), beer (Mathias et al., 2018; Kraus et al., 2019), real estate (Robert et al., 2018), wine (Choi et al., 2009; Granata et al., 2018), cultural (Mariani, 2007; Pellegrin-Boucher and Roy, 2019) and platform (Ritala et al., 2014). This pervasiveness raises several questions.

At the industry level, we need to ask whether coopetition is becoming a dominant strategy and, if so, how to explain such an evolution. Are coopetition strategies a mandatory phase in the industry lifecycle? Do they represent a transitional phase? Are coopetition strategies more likely to appear in early or mature stages of industry lifecycles? When are coopetition strategies more likely to appear at the industry level—after an intense phase of competition or of cooperation? Is the advantage provided by coopetition longlasting or only temporary (D'Aveni et al., 2010)? In addition, the growing presence of coopetition strategies forces us to investigate their industry-level consequences. Do coopetition strategies strengthen competition or cooperation between firms? What are the consequences of coopetition strategies on the structure of the industry? Do they create more barriers to entry and limit the emergence of future competitors? Do they lead to more concentration, to a more oligopolistic industry structure? Alternatively, can coopetition strategies lead to a more atomistic industry structure? Future research could address these issues to provide original knowledge, theories and frameworks of coopetition and industry dynamics.

At the firmlevel, the role of coopetition in companies' lifecycles can be questioned. In a company's history, are coopetition strategies one-time decisions made to address time-sensitive issues or repeated choices that address different issues over time? In this regard,

several contributions have underlined that alliance strategies differ along the phases of a firm's lifecycle (Rindova et al., 2012; Chiambaretto and Wassmer, 2019). The same question could be raised about coopetition: are coopetition strategies more likely to be observed in some phases of a firm's lifecycle? We can also question the timing of the introduction of coopetition strategies at the firm level. Are these strategies more likely to occur after an intense competitive or an intense cooperative phase? In addition, it seems essential to question the consequences of coopetition. Is coopetition a long-term strategy or a short-term transitory decision (Vasudeva et al., 2020)? How could coopetition strategies be used as for companies to gain knowledge of each other and assess the potential for future mergers or acquisitions? The temporality and dynamics of coopetition represent fascinating research avenues that could not only provide original knowledge to the strategic management literature but also recommendations for managers.

4.3.2. Should students and executives be trained for coopetition? If so, how?

A final challenge for coopetition scholars is to discuss whether students and executives should be trained for coopetition and, if so, to find the best way to train them. If coopetition is considered to be(come) a dominant strategy, then educating students and managers to engage in coopetition becomes essential. However, even if we admit that coopetition must be taught, we must investigate whether it can. For instance, to manage coopetition, specific managerial capabilities and mindsets are required (Bengtsson et al., 2016; Dorn and Albers, 2018; Raza-Ullah et al., 2018). Are these capabilities innate or acquired? Are individuals naturally able to manage coopetition strategies or is this a skill they learnover time?

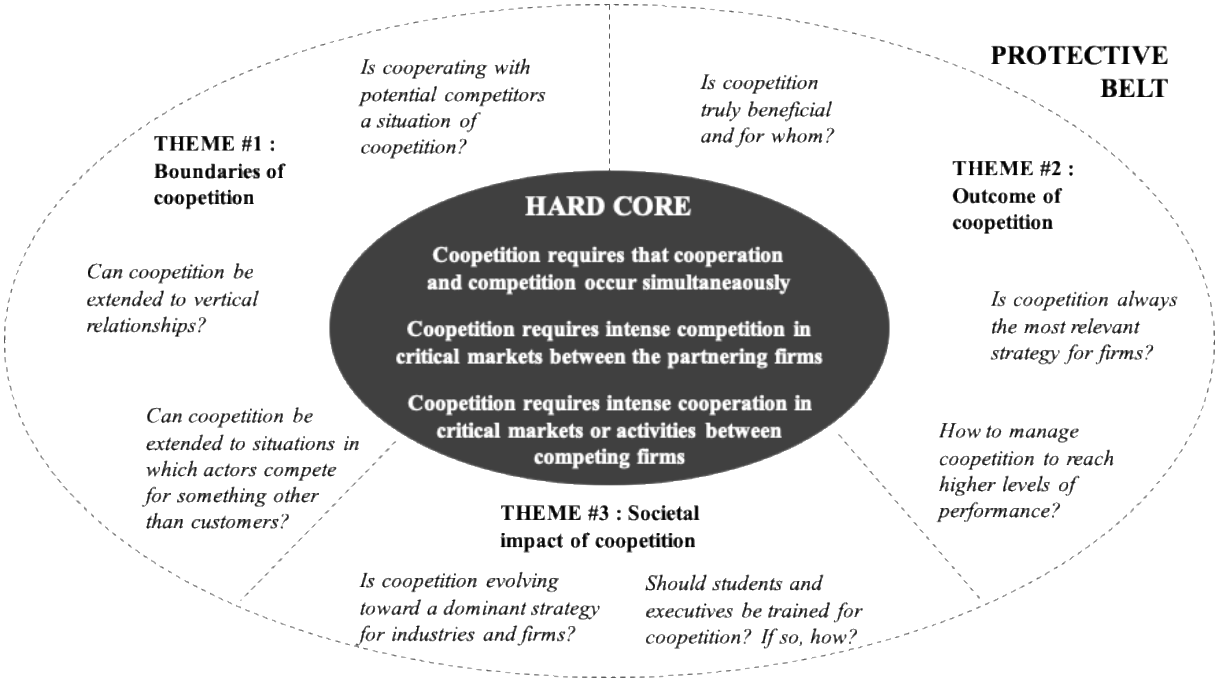
In the absence of a consensus, we must investigate these two options. A first perspective might consider these capabilities and mindsets innate. If so, how do we detect them among individuals, especially during recruitment processes? What kind of recruitment

tools (e.g., interviews, simulation exercises, case studies, etc.) should be used to reveal these coopetition capabilities and mindsets? In addition, is it possible to identify the profiles of individuals who are more likely to have developed these capabilities and mindsets? Finally, do some national cultures facilitate the individual integration of the coopetition paradox?

Another perspective might consider coopetition capabilities and mindsets as acquired skills. The question then becomes how to develop these skills. Can these capabilities and mindsets be developed through education, social ties, and professional experience? This is a major issue for academics as researchers and lecturers. As professors, how should we teach coopetition? How can we foster the development of coopetition capabilities and mindsets among our students? Future research could investigate how the growing importance of coopetition may impact our educational activities.

Figure 1 summarizes the three assumptions that define the hard core of coopetition as a research program and the 8 key debates we identified that form the protective belt.

Figure 1. The hard core and protective belt of coopetition as a research program



5. Conclusion

Because of the growing interest in and increasing perspectives about coopetition, this article aimed to build on previous contributions aboutcoopetition to define its boundaries. Using a Lakatosian approach, we identified three assumptions that characterize the hard core of coopetition. We argue that coopetition requires (1) simultaneous cooperation and competition between firms. We also claim that coopetition entails (2) intense competition in critical markets between partnering firms and (3) intense cooperation in critical markets or activities between competing firms. In addition, we discussed eight major debates that structure the protective belt of the research program on coopetition for which no consensus has yet been reached.

For researchers, defining coopetition theoretically and identifying these rich debates is an essential step at a moment in which an ever-increasing number of strategic management scholars use the word coopetition to characterize interorganizational relationships. Without this structuring work, the uncontrolled and anarchic use of the word coopetition would transform it into a zombie concept because scholars would not be able to have discussions or

interact with one another since they would not share a conceptual understanding. This unrestrained use of the word coopetition may paradoxically prevent the development of science (understood as the accumulation of knowledge) because scientific publications cannot build upon one another, as their understanding of coopetition may differ. Defining coopetition theoretically seems even more important, as coopetition has begun to expand beyond the strategic management field,into disciplines such as marketing management (Gurau et al., 2018), IT management (Wiener and Saunders, 2014), human resource management (Van de Broek et al., 2018) or management control (Grafton and Mundy, 2017). In this process, the definition gains distance from its traditional roots. Coopetition is now used in economics (Rey and Tirole, 2013), politics or geopolitics (Sack, 2011; Teece, 2020), psychology (Landkammer and Sassenberg, 2016), biology (Khoury et al., 2014) and even atomic physics (Fan et al., 2017). These recent extensions of coopetition demonstrate its explicative power for describing and theorizing various phenomena, not only in the business context. Nevertheless, they raise new questions about the definition of the concept of coopetition and its theorization. Should and could we have a universal definition of the concept and a universal theory of coopetition regardless of the scientific discipline?

While a theoretical contribution, this article also has important managerial implications. Whether the result of a fashion effect or a type of isomorphism (Abrahamson, 1991; DiMaggio and Powell, 1983), an increasing number of managers and firms state that they rely on coopetition strategies. Some of these firms do, but others do not. Confusing competition and conflict, some managers and firms use the term coopetition to talk about relationships with actors who are not competitors. On the other hand, while cooperating with competitors, some firms or managers refuse to use the term coopetition,disguising to themselves the duality of the relationship and focusing only on the cooperative side of the relationship. By clearly defining what coopetition is and what it is not, this research can help

managers clearly understand whether a given relationship is a case of coopetition. This categorization is important for them to apprehend the specific benefits and risks associated with coopetitive relationships. Beyond understanding the benefits and risks, being able to categorize a relationship as coopetitive or not allowsmanagers to implement the best tools and practices to obtain the most value from the relationship.

In summary, defining whether a relationship is coopetitive is an important question not only for researchers but also for practitioners to ensure they use the best tools to make their coopetition strategy a win-win.

6. References

Abrahamson E. 1991. Managerial Fads and Fashions: The Diffusion and Rejection of Innovations. *Academy of Management Review*. Academy of Management **16**(3): 586–612.

Akpinar M, Vincze Z. 2016. The dynamics of coopetition: A stakeholder view of the German automotive industry. *Industrial Marketing Management***57**: 53–63.

Andrevski G, Brass DJ, Ferrier WJ. 2016. Alliance Portfolio Configurations and Competitive Action Frequency. *Journal of Management***42**(4): 811–837.

Ansari S (Shaz), Garud R, Kumaraswamy A. 2016. The disruptor's dilemma: TiVo and the U.S. television ecosystem. *Strategic Management Journal***37**(9): 1829–1853.

Axelrod R. 1984. *The evolution of cooperation*. Basic Books: New York.

Axelrod RM. 1997. *The Complexity of Cooperation: Agent-based Models of Competition and Collaboration*. Princeton University Press.

Bagherzadeh M, Ghaderi M, Fernandez A-S. in press. Coopetition for innovation - the more, the better? An empirical study based on preference disaggregation analysis. *European Journal of Operational Research*.

Baumard P. 2010. Learning in Coopetitive Environments. In *Coopetition: winning strategies for the 21st century*, Yami S, Castaldo S, Dagnino GB, Le Roy F (eds). Edward Elgar: Cheltenham.

Belderbos R, Carree M, Lokshin B. 2004. Cooperative R&D and firm performance. *Research Policy***33**(10): 1477–1492.

Bengtsson M, Eriksson J, Wincent J. 2010. Co-opetition dynamics – an outline for further inquiry. *Competitiveness Review: An International Business Journal incorporating Journal of Global Competitiveness***20**(2): 194–214.

Bengtsson M, Kock S. 2000. "Coopetition" in Business Networks—to Cooperate and Compete Simultaneously. *Industrial Marketing Management***29**(5): 411–426.

Bengtsson M, Kock S. 2014. Coopetition—Quo vadis? Past accomplishments and future challenges. *Industrial Marketing Management***43**(2): 180–188.

Bengtsson M, Kock S, Lundgren-Henriksson E-L, Näsholm MH. 2016. Coopetition research in theory and practice: Growing new theoretical, empirical, and methodological domains. *Industrial Marketing Management***57**: 4–11.

Bengtsson M, Raza-Ullah T. 2016. A systematic review of research on coopetition: Toward a multilevel understanding. *Industrial Marketing Management***57**: 23–39.
Bengtsson M, Raza-Ullah T, Srivastava MK. 2020. Looking different vs thinking differently: Impact of TMT diversity on coopetition capability. *Long Range Planning*, Coopetition Strategies **53**(1): 101857.
Bengtsson M, Raza-Ullah T, Vanyushyn V. 2016. The coopetition paradox and tension: The moderating role of coopetition capability. *Industrial Marketing Management***53**: 19–30.
Bérubé J, Gauthier J-B. 2020. Coopetition in Projects in Cultural Industries. *The Journal of Modern Project Management***7**(4): 1–21.
Bird A. 2013. Thomas Kuhn. *Stanford Encyclopedia of Science*.
Bouncken RB, Clauß T, Fredrich V. 2016. Product innovation through coopetition in alliances: Singular or plural governance? *Industrial Marketing Management***53**: 77–90.
Bouncken RB, Fredrich V, Ritala P, Kraus S. 2018a. Coopetition in New Product Development Alliances: Advantages and Tensions for Incremental and Radical Innovation: Coopetition in New Product Development. *British Journal of Management***29**(3): 391–410.
Bouncken RB, Gast J, Kraus S, Bogers M. 2015. Coopetition: a systematic review, synthesis, and future research directions. *Review of Managerial Science***9**(3): 577–601.
Bouncken RB, Kraus S. 2013. Innovation in knowledge-intensive industries: The double-edged sword of coopetition. *Journal of Business Research***66**(10): 2060–2070.
Bouncken RB, Laudien SM, Fredrich V, Görmar L. 2018b. Coopetition in coworking-spaces: value creation and appropriation tensions in an entrepreneurial space. *Review of Managerial Science***12**(2): 385–410.
Brandenburger A, Stuart H. 2007. Biform Games. *Management Science***53**(4): 537–549.
Brown JR, Day RL. 1981. Measures of Manifest Conflict in Distribution Channels. *Journal of Marketing Research***18**(3): 263–274.
Carrier M. 2002. Explaining Scientific Progress: Lakatos' Methodological Account of Kuhnian Patterns of Theory Change. In *Appraising Lakatos: Mathematics, Methodology, and the Man*, Vienna Circle Institute Library, Kampis G, Kvasz L, Stöltzner M (eds). Springer Netherlands: Dordrecht: 53–71.
Castañer X, Oliveira N. 2020. Collaboration, Coordination, and Cooperation Among Organizations: Establishing the Distinctive Meanings of These Terms Through a Systematic Literature Review - Xavier Castañer, Nuno Oliveira, 2020. *Journal of Management***46**(6): 965–1001.
Cattani G, Porac JF, Thomas H. 2017. Categories and competition. *Strategic Management Journal***38**(1): 64–92.
Chen M-J. 1996. Competitor Analysis and Interfirm Rivalry: Toward A Theoretical Integration. *Academy of Management Review***21**(1): 100–134.
Chen M-J, Miller D. 2012. Competitive Dynamics: Themes, Trends, and a Prospective Research Platform. *The Academy of Management Annals***6**(1): 135–210.
Chiambaretto P, Bengtsson M, Fernandez A-S, Näsholm MH. 2020a. Small and large firms' trade-off between benefits and risks when choosing a coopetitor for innovation. *Long Range Planning*, Coopetition Strategies **53**(1): 101876.
Chiambaretto P, Dumez H. 2016. Toward a Typology of Coopetition: A Multilevel Approach. *International Studies of Management & Organization***46**(2–3): 110–129.
Chiambaretto P, Fernandez A-S. 2016. The evolution of coopetitive and collaborative alliances in an alliance portfolio: The Air France case. *Industrial Marketing Management***57**: 75–85.
Chiambaretto P, Fernandez A-S. 2018. Coopetitive portfolios: A review and research agenda. In *The Routledge Companion to Coopetition Strategies*, Fernandez A-S, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.

Chiambaretto P, Gurău C, Le Roy F. 2016. Coopetitive branding: Definition, typology, benefits and risks. *Industrial Marketing Management***57**: 86–96.
Chiambaretto P, Massé D, Mirc N. 2019. "All for One and One for All?" - Knowledge broker roles in managing tensions of internal coopetition: The Ubisoft case. *Research Policy***48**(3): 584–600.
Chiambaretto P, Maurice J, Willinger M. 2020b. Value Creation and Value Appropriation in Innovative Coopetition Projects. *M@n@gement* : 20–41.
Chiambaretto P, Wassmer U. 2019. Resource utilization as an internal driver of alliance portfolio evolution: The Qatar Airways case (1993–2010). *Long Range Planning***52**(1): 51–71.
Choi P, Garcia R, Friedrich C. 2009. The drivers for collective horizontal coopetition: a case study of screwcap initiatives in the international wine industry. *International Journal of Strategic Business Alliances*. Inderscience Publishers **1**(3): 271–290.
Christ KL, Burritt RL, Varsei M. 2017. Coopetition as a Potential Strategy for Corporate Sustainability. *Business Strategy and the Environment***26**(7): 1029–1040.
Cool K, Dierickx I, Jemison D. 1989. Business strategy, market structure and risk-return relationships: A structural approach. *Strategic Management Journal***10**(6): 507–522.
Crick JM, Crick D. 2020. Coopetition and COVID-19: Collaborative business-to-business marketing strategies in a pandemic crisis. *Industrial Marketing Management***88**: 206–213.
Czakon W, Czernek K. 2016. The role of trust-building mechanisms in entering into network coopetition: The case of tourism networks in Poland. *Industrial Marketing Management***57**: 64–74.
Czakon W, Niemand T, Gast J, Kraus S, Frühstück L. 2020. Designing coopetition for radical innovation: An experimental study of managers' preferences for developing self-driving electric cars. *Technological Forecasting and Social Change***155**: 119992.
Czernek K, Czakon W. 2016. Trust-building processes in tourist coopetition: The case of a Polish region. *Tourism Management***52**: 380–394.
Dagnino GB, Minà A. 2018. The swinging pendulum of coopetition inquiry. In *The Routledge Companion to Coopetition Strategies*, Fernandez A-S, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Dagnino GB, Minà A. in press. Unraveling the Philosophical Foundations of Co-opetition Strategy. *Management and Organization Review*. Cambridge University Press : 1–34.
Dagnino GB, Rocco E. 2009. *Coopetition Strategy: Theory, Experiments and Cases*. Routledge.
Dahl J. 2014. Conceptualizing coopetition as a process: An outline of change in cooperative and competitive interactions. *Industrial Marketing Management*, Special Issue on Co-opetition Cooperation and Competition **43**(2): 272–279.
Dant RP, Schul PL. 1992. Conflict Resolution Processes in Contractual Channels of Distribution. *Journal of Marketing***56**(1): 38–54.
D'Aspremont C, Jacquemin A. 1988. Cooperative and non cooperative R&D in duopoly with spillovers. *American Economic Review***78**: 1133–1137.
D'Aveni RA. 1995. Coping with hypercompetition: Utilizing the new 7S's framework. *Academy of Management Perspectives***9**(3): 45–57.
D'Aveni RA, Dagnino GB, Smith KG. 2010. The age of temporary advantage. *Strategic Management Journal***31**(13): 1371–1385.
Day GS, Shocker AD, Srivastava RK. 1979. Customer-Oriented Approaches to Identifying Product-Markets. *Journal of Marketing***43**(4): 8–19.
Della Corte V. 2018. Innovation through Coopetition: Future Directions and New Challenges. *Journal of Open Innovation: Technology, Market, and Complexity*. Multidisciplinary Digital Publishing Institute **4**(4): 47.

Devece C, Ribeiro-Soriano DE, Palacios-Marqués D. 2019. Coopetition as the new trend in inter-firm alliances: literature review and research patterns. *Review of Managerial Science***13**(2): 207–226.

DiMaggio PJ, Powell WW. 1983. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review***48**(2): 147.

Dorn S, Albers S. 2018. A multi-level perspective on managing coopetition. In *The Routledge Companion to Coopetition Strategies*, Fernandez A-S, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.

Dorn S, Schweiger B, Albers S. 2016. Levels, phases and themes of coopetition: A systematic literature review and research agenda. *European Management Journal***34**(5): 484–500.

Dussauge P, Garrette B, Mitchell W. 2000. Learning from competing partners: outcomes and durations of scale and link alliances in Europe, North America and Asia. *Strategic Management Journal***21**(2): 99–126.

Easley D, Kleinberg J. 2010. *Networks, crowds, and markets: reasoning about a highly connected world*. Cambridge University Press: New York.

Estrada I, Faems D, de Faria P. 2016. Coopetition and product innovation performance: The role of internal knowledge sharing mechanisms and formal knowledge protection mechanisms. *Industrial Marketing Management***53**: 56–65.

Fan C-H, Yan D, Liu Y-M, Wu J-H. 2017. Coopetition and manipulation of quantum correlations in Rydberg atoms. *Journal of Physics B: Atomic, Molecular and Optical Physics***50**(11): 115501.

Fernandez A, Chiambaretto P, Le Roy F, Czakon W. 2018a. *The Routledge Companion to Coopetition Strategies*. Routledge: Abingdon.

Fernandez A-S, Chiambaretto P. 2016. Managing tensions related to information in coopetition. *Industrial Marketing Management***53**: 66–76.

Fernandez A-S, Chiambaretto P, Chauvet M, Engsig J. 2021. Why do MNEs both make and coopete for innovation? *Technovation***106**: 102313.

Fernandez A-S, Le Roy F, Chiambaretto P. 2018b. Implementing the right project structure to achieve coopetitive innovation projects. *Long Range Planning***51**(2): 384–405.

Fernandez A-S, Le Roy F, Gnyawali DR. 2014. Sources and management of tension in co-opetition case evidence from telecommunications satellites manufacturing in Europe. *Industrial Marketing Management***43**(2): 222–235.

Ferrier WJ. 2001. Navigating the Competitive Landscape: The Drivers and Consequences of Competitive Aggressiveness. *Academy of Management Journal***44**(4): 858–877.

Gans J, Ryall MD. 2017. Value capture theory: A strategic management review. *Strategic Management Journal***38**(1): 17–41.

Gast J, Hora W, Bouncken RB, Kraus S. 2018. Challenges and merits of coopetitive innovation. In *The Routledge Companion to Coopetition Strategies*, Fernandez A, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.

Gernsheimer O, Kanbach DK, Gast J. 2021. Coopetition research - A systematic literature review on recent accomplishments and trajectories. *Industrial Marketing Management***96**: 113–134.

Gnyawali DR, Park B-J. 2009. Co-opetition and Technological Innovation in Small and Medium-Sized Enterprises: A Multilevel Conceptual Model. *Journal of Small Business Management***47**(3): 308–330.

Gnyawali DR, Park B-J. 2011. Co-opetition between giants: Collaboration with competitors for technological innovation. *Research Policy***40**(5): 650–663.

Gnyawali DR, Ryan Charleton T. 2018. Nuances in the Interplay of Competition and Cooperation: Towards a Theory of Coopetition. *Journal of Management***44**(7): 2511–2534.

Gnyawali DR, Song Y. 2016. Pursuit of rigor in research: Illustration from coopetition literature. *Industrial Marketing Management***57**: 12–22.
Gold S. 2014. Supply chain management as Lakatosian research program. *Supply Chain Management: An International Journal*.
Gotsopoulos A. 2018. Coopetition and Group Dynamics. In *The Routledge Companion to Coopetition Strategies*, Fernandez A, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Grafton J, Mundy J. 2017. Relational contracting and the myth of trust: Control in a co-opetitive setting. *Management Accounting Research***36**: 24–42.
Granata J, Lasch F, Le Roy F, Dana L-P. 2018. How do micro-firms manage coopetition? A study of the wine sector in France. *International Small Business Journal***36**(3): 331–355.
Granovetter MS. 1973. The strength of weak ties. *American journal of sociology***78**(6): 1360–1380.
Grünfeld LA. 2003. Meet me halfway but don't rush: absorptive capacity and strategic R&D investment revisited. *International Journal of Industrial Organization***21**(8): 1091–1109.
Gueguen G, Isckia T. 2011. The borders of mobile handset ecosystems: Is coopetition inevitable? *Telematics and Informatics*, Mobile Service Architecture and Middleware **28**(1): 5–11.
Gurau C, Chiambaretto P, Le Roy F. 2018. The emergence of coopetitive marketing. In *The Routledge Companion to Coopetition Strategies*, Fernandez A-S, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Hamel G. 1991. Competition for competence and interpartner learning within international strategic alliances. *Strategic Management Journal***12**(S1): 83–103.
Herzog T. 2010. Strategic management of coopetitive relationships in CoPS-related industries. In *Coopetition: winning strategies for the 21st century*, Yami S, Castaldo S, Dagnino GB, Le Roy F (eds). Edward Elgar: Cheltenham.
Hoffmann W, Lavie D, Reuer JJ, Shipilov A. 2018. The interplay of competition and cooperation. *Strategic Management Journal***39**(12): 3033–3052.
Holländer H. 1990. A Social Exchange Approach to Voluntary Cooperation. *The American Economic Review***80**(5): 1157–1167.
Hora W, Gast J, Kailer N, Rey-Marti A, Mas-Tur A. 2018. David and Goliath: causes and effects of coopetition between start-ups and corporates. *Review of Managerial Science***12**(2): 411–439.
Hu J, Zheng WX. 2014. Emergent collective behaviors on coopetition networks. *Physics Letters A***378**(26): 1787–1796.
Hyrynsalmi S, Hyrynsalmi SM. 2019. Ecosystem: A Zombie Category? In *2019 IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC)*: 1–8.
Jeunemaître A, Dumez H, Lehiany B. 2018. Visualising coopetition: multidimensional sequence analysis. In *The Routledge Companion to Coopetition Strategies*, Fernandez A-S, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Kamien MI, Zang I. 2000. Meet me halfway: research joint ventures and absorptive capacity. *International Journal of Industrial Organization***18**(7): 995–1012.
Khoury GA *et al.* 2014. WeFold: A coopetition for protein structure prediction. *Proteins: Structure, Function, and Bioinformatics***82**(9): 1850–1868.
Kilduff M, Tsai W, Hanke R. 2006. A Paradigm Too Far? A Dynamic Stability Reconsideration of the Social Network Research Program. *Academy of Management Review***31**(4): 1031–1048.
Klimas P. 2014. Multifaceted nature of coopetition inside an aviation supply chain–the case of the aviation valley. *Journal of Economics and Management***17**: 99–115.

Klimas P, Czakon W. 2018. Organizational innovativeness and coopetition: a study of video game developers. *Review of Managerial Science***12**(2): 469–497.
Köseoğlu MA, Yildiz M, Okumus F, Barca M. 2018. The intellectual structure of coopetition: past, present and future. *Journal of Strategy and Management*. Emerald Publishing Limited **12**(1): 2–29.
Kraus S, Klimas P, Gast J, Stephan T. 2019. Sleeping with competitors: Forms, antecedents and outcomes of coopetition of small and medium-sized craft beer breweries. *International Journal of Entrepreneurial Behavior & Research***25**(1): 50–66.
Kylänen M, Rusko R. 2011. Unintentional coopetition in the service industries: The case of Pyhä-Luosto tourism destination in the Finnish Lapland. *European Management Journal***29**(3): 193–205.
Lacoste S. 2012. "Vertical coopetition": The key account perspective. *Industrial Marketing Management***41**(4): 649–658.
Lado AA, Boyd NG, Hanlon SC. 1997. Competition, cooperation, and the search for economic rents: A syncretic model. *Academy of Management Review***22**(1): 110–141.
Lakatos I. 1969. Criticism and the Methodology of Scientific Research Programmes. *New Series***69**: 149–186.
Landkammer F, Sassenberg K. 2016. Competing while cooperating with the same others: The consequences of conflicting demands in co-opetition. *Journal of Experimental Psychology: General***145**(12): 1670–1686.
Le Roy F, Chesbrough H. 2018. Open Coopetition. In *The Routledge Companion to Coopetition Strategies*, Fernandez A, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Le Roy F, Czakon W. 2016. Managing coopetition: the missing link between strategy and performance. *Industrial Marketing Management***53**: 3–6.
Le Roy F, Fernandez A-S. 2015. Managing Coopetitive Tensions at the Working-group Level: The Rise of the Coopetitive Project Team. *British Journal of Management***26**(4): 671–688.
Le Roy F, Fernandez A-S, Chiambaretto P. 2018. From Strategizing Coopetition to Managing Coopetition. In *The Routledge Companion to Coopetition Strategies*, Fernandez A, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Le Roy F, Robert M, Lasch F. 2016. Choosing the best partner for product innovation: Talking to the enemy or to a friend? *International Studies of Management and Organization***46**(2): 136–158.
Lechner C, Soppe B, Dowling M. 2016. Vertical Coopetition and the Sales Growth of Young and Small Firms. *Journal of Small Business Management***54**(1): 67–84.
Lecocq X, Demil B, Ventura J. 2010. Business Models as a Research Program in Strategic Management: An Appraisal based on Lakatos. *M@n@gement***Vol. 13**(4): 214–225.
Lehmann DR. 1972. Judged Similarity and Brand-Switching Data as Similarity Measures. *Journal of Marketing Research***9**(3): 331–334.
Leiblein MJ, Reuer JJ. 2020. Foundations and Futures of Strategic Management. *Strategic Management Review*. now publishers **1**(1): 1–33.
MacDonald G, Ryall MD. 2004. How Do Value Creation and Competition Determine Whether a Firm Appropriates Value? *Management Science***50**(10): 1319–1333.
Mariani M. 2007. Coopetition as an Emergent Strategy: Empirical Evidence from an Italian Consortium of Opera Houses. *International Studies of Management and Organization***37**(2): 97–126.
Mason E. 1957. *Economic Concentration and the Monopoly Problem*. Harvard University Press: Cambridge, Mass.

Mathias BD, Huyghe A, Frid CJ, Galloway TL. 2018. An identity perspective on coopetition in the craft beer industry. *Strategic Management Journal***39**(12): 3086–3115.
Mendonça S, Pereira TS, Godinho MM. 2004. Trademarks as an indicator of innovation and industrial change. *Research Policy*, What do we know Innovation? Selected papers from an International Conference in honour of Keith Pavitt **33**(9): 1385–1404.
Minà A, Dagnino GB, Vagnani G. 2020. An interpretive framework of the interplay of competition and cooperation. *Journal of Management and Governance***24**(1): 1–35.
Mitsuhashi H, Alcantara LL. 2021. Off the rivals' radar in emerging market segments: Non-mutual rival recognition between new firms and incumbents. *Long Range Planning***54**(2): 101888.
Mitsuhashi H, Greve H. 2009. A Matching Theory of Alliance Formation and Organizational Success: Complementarity and Compatibility. *The Academy of Management Journal***52**(5): 975–995.
Morris M, Koçak A, Özer A. 2007. Coopetition as a small business strategy: implications for performance. *Journal of Small Business Strategy***19**(1): 35–55.
Musgrave A, Pigden C. 2016. Imre Lakatos. In *The Stanford Encyclopedia of Philosophy*, Winter 2016., Zalta EN (ed). Metaphysics Research Lab, Stanford University.
Nemeh A. 2018. Building a first-mover advantage from coopetition. In *The Routledge Companion to Coopetition Strategies*, Fernandez A, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Padula G, Dagnino G. 2007. Untangling the Rise of Coopetition: The Intrusion of Competition in a Cooperative Game Structure. *International Studies of Management and Organization***37**(2): 32–52.
Panico C. 2017. Strategic interaction in alliances. *Strategic Management Journal***38**(8): 1646–1667.
Park B-J (Robert), Srivastava MK, Gnyawali DR. 2014a. Walking the tight rope of coopetition: Impact of competition and cooperation intensities and balance on firm innovation performance. *Industrial Marketing Management***43**(2): 210–221.
Park B-J (Robert), Srivastava MK, Gnyawali DR. 2014b. Impact of coopetition in the alliance portfolio and coopetition experience on firm innovation. *Technology Analysis & Strategic Management***26**(8): 893–907.
Pellegrin-Boucher E, Le Roy F, Gurău C. 2013. Coopetitive strategies in the ICT sector: typology and stability. *Technology Analysis & Strategic Management***25**(1): 71–89.
Pellegrin-Boucher E, Roy P. 2019. Coopetition Between Architects: Designing Innovative Projects with Competitors. In *Innovation in the Cultural and Creative Industries*. John Wiley & Sons, Ltd: 159–178.
Peng J-TA, Yen M-H, Bourne M. 2018. How rival partners compete based on cooperation? *Long Range Planning***51**(2): 351–383.
Peng T-JA, Pike S, Yang JC-H, Roos G. 2012. Is Cooperation with Competitors a Good Idea? An Example in Practice. *British Journal of Management***23**(4): 532–560.
Pfeffer J, Salancik G. 1978. *The external control of organizations: A resource dependence perspective*. Harper & Row: New York.
Poole MS, Van de Ven AH. 1989. Using Paradox to Build Management and Organization Theories. *The Academy of Management Review***14**(4): 562.
Porter M. 1980. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. The Free Press: New York.
Quintana-García C, Benavides-Velasco CA. 2004. Cooperation, competition, and innovative capability: a panel data of European dedicated biotechnology firms. *Technovation***24**(12): 927–938.

Rao VR, Sabavala DJ. 1981. Inference of Hierarchical Choice Processes from Panel Data. *Journal of Consumer Research***8**(1): 85–96.
Rayna T, Striukova L. 2016. Involving Consumers: The Role of Digital Technologies in Promoting 'Prosumption' and User Innovation. *Journal of the Knowledge Economy*.
Raza-Ullah T, Bengtsson M, Kock S. 2014. The coopetition paradox and tension in coopetition at multiple levels. *Industrial Marketing Management***43**(2): 189–198.
Raza-Ullah T, Bengtsson M, Vanyushyn V. 2018. Coopetition capability: what is it? In *The Routledge Companion to Coopetition Strategies*, Fernandez A-S, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Raza-Ullah T, Kostis A. 2020. Do trust and distrust in coopetition matter to performance? *European Management Journal***38**(3): 367–376.
Rey P, Tirole J. 2013. Cooperation vs. Collusion: How Essentiality Shapes Co-opetition. *Working Paper* : 59.
Rindova VP, Yeow A, Martins LL, Faraj S. 2012. Partnering portfolios, value-creation logics, and growth trajectories: A comparison of Yahoo and Google (1995 to 2007). *Strategic Entrepreneurship Journal***6**(2): 133–151.
Ritala P. 2009. Is coopetition different from cooperation? The impact of market rivalry on value creation in alliances. *International Journal of Intellectual Property Management***3**(1): 39–55.
Ritala P. 2012. Coopetition Strategy – When is it Successful? Empirical Evidence on Innovation and Market Performance. *British Journal of Management***23**(3): 307–324.
Ritala P. 2018. Coopetition and market performance. In *The Routledge Companion to Coopetition Strategies*, Fernandez A, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Ritala P, Golnam A, Wegmann A. 2014. Coopetition-based business models: The case of Amazon.com. *Industrial Marketing Management*, Special Issue on Co-opetition Cooperation and Competition **43**(2): 236–249.
Ritala P, Hurmelinna-Laukkanen P. 2009. What's in it for me? Creating and appropriating value in innovation-related coopetition. *Technovation***29**(12): 819–828.
Ritala P, Hurmelinna-Laukkanen P. 2013. Incremental and Radical Innovation in Coopetition—The Role of Absorptive Capacity and Appropriability. *Journal of Product Innovation Management***30**(1): 154–169.
Ritala P, Hurmelinna-Laukkanen P. 2018. Dynamics of coopetitive value creation and appropriation. In *The Routledge Companion to Coopetition Strategies*, Fernandez A-S, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Ritala P, Kraus S, Bouncken RB. 2016. Introduction to coopetition and innovation: contemporary topics and future research opportunities. *International Journal of Technology Management***71**(1–2): 1–9.
Ritala P, Tidström A. 2014. Untangling the value-creation and value-appropriation elements of coopetition strategy: A longitudinal analysis on the firm and relational levels. *Scandinavian Journal of Management***30**(4): 498–515.
Robert F, Marques P, Le Roy F. 2009. Coopetition between SMEs: an empirical study of French professional football. *International Journal of Entrepreneurship and Small Business*. Inderscience Publishers **8**(1): 23–43.
Robert M, Chiambaretto P, Mira B, Le Roy F. 2018. Better, Faster, Stronger: The impact of market-oriented coopetition on product commercial performance. *M@n@gement***21**(1): 574–610.
Rodrigues F, Souza V, Leitão J. 2011. Strategic coopetition of global brands: a game theory approach to 'Nike + iPod Sport Kit' co-branding. *International Journal of Entrepreneurial Venturing***3**(4): 435–455.

Rouyre A, Fernandez A-S. 2019. Managing Knowledge Sharing-Protecting Tensions in Coupled Innovation Projects among Several Competitors. *California Management Review***62**(1): 95–120.
Sack D. 2011. Governance Failures in Integrated Transport Policy - On the Mismatch of 'Co-opetition' in Multi-Level Systems. *German Policy Studies***7**(2): 43-70,141.
Samuelson PA, Nordhaus WD. 2009. *Economics*, 19 edition. McGraw-Hill Higher Education: Boston.
Sanou FH, Le Roy F, Gnyawali DR. 2016. How Does Centrality in Coopetition Networks Matter? An Empirical Investigation in the Mobile Telephone Industry. *British Journal of Management***27**(1): 143–160.
Santamaria Llu, Surroca J. 2011. Matching the Goals and Impacts of R&D Collaboration. *European Management Review***8**(2): 95–109.
Seran T, Pellegrin-Boucher E, Gurau C. 2016. The management of coopetitive tensions within multi-unit organizations. *Industrial Marketing Management***53**: 31–41.
Shvindina H. 2019. Coopetition as an Emerging Trend in Research: Perspectives for Safety & Security. *Safety*. Multidisciplinary Digital Publishing Institute **5**(3): 61.
Stadtler L, Van Wassenhove LN. 2016. Coopetition as a Paradox: Integrative Approaches in a Multi-Company, Cross-Sector Partnership. *Organization Studies***37**(5): 655–685.
Strese S, Meuer MW, Flatten TC, Brettel M. 2016. Organizational antecedents of cross-functional coopetition: The impact of leadership and organizational structure on cross-functional coopetition. *Industrial Marketing Management***53**: 42–55.
Teece DJ. 2020. Fundamental Issues in Strategy: Time to Reassess? *Strategic Management Review*. Now Publishers, Inc. **1**(1): 103–144.
Tidström A. 2009. Causes of conflict in intercompetitor cooperation. *The Journal of Business and Industrial Marketing***24**(7): 506–518.
Tidström A. 2014. Managing tensions in coopetition. *Industrial Marketing Management***43**(2): 261–271.
Tidström A. 2018. Coopetitive tensions. In *The Routledge Companion to Coopetition Strategies*, Fernandez A-S, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.
Tsai W. 2002. Social Structure of "Coopetition" Within a Multiunit Organization: Coordination, Competition, and Intraorganizational Knowledge Sharing. *Organization Science***13**(2): 179–190.
Urban GL, Johnson PL, Hauser JR. 1984. Testing Competitive Market Structures. *Marketing Science***3**(2): 83–112.
Van den Broek J, Boselie P, Paauwe J. 2018. Cooperative innovation through a talent management pool: A qualitative study on coopetition in healthcare. *European Management Journal***36**(1): 135–144.
Vasudeva G, Leiponen A, Jones S. 2020. Dear Enemy: The Dynamics of Conflict and Cooperation in Open Innovation Ecosystems. *Strategic Management Review*. Now Publishers, Inc. **1**(2): 355–379.
Veciana JM. 2007. Entrepreneurship as a Scientific Research Programme. In *Entrepreneurship: Concepts, Theory and Perspective*, Cuervo Á, Ribeiro D, Roig S (eds). Springer Berlin Heidelberg: Berlin, Heidelberg: 23–71.
Velu C. 2016. Evolutionary or revolutionary business model innovation through coopetition? The role of dominance in network markets. *Industrial Marketing Management***53**: 124–135.
Volschenk J. 2018. The value implications of coopetition. In *The Routledge Companion to Coopetition Strategies*, Fernandez A, Chiambaretto P, Le Roy F, Czakon W (eds). Routledge: Abingdon.

Volschenk J, Ungerer M, Smit E. 2016. Creation and appropriation of socio-environmental value in coopetition. *Industrial Marketing Management***57**: 109–118.
Wang L, Zajac EJ. 2007. Alliance or acquisition? a dyadic perspective on interfirm resource combinations. *Strategic Management Journal***28**(13): 1291–1317.
Wang Y, Krakover S. 2008. Destination marketing: competition, cooperation or coopetition? *International Journal of Contemporary Hospitality Management***20**(2): 126–141.
Wassmer U, Dussauge P. 2012. Network resource stocks and flows: how do alliance portfolios affect the value of new alliance formations? *Strategic Management Journal***33**(7): 871–883.
Weinzierl M. 2018. Space, the Final Economic Frontier. *Journal of Economic Perspectives***32**(2): 173–192.
Weitz BA. 1985. Introduction to Special Issue on Competition in Marketing. *Journal of Marketing Research***22**(3): 229–236.
Wiener M, Saunders C. 2014. Forced coopetition in IT multi-sourcing. *The Journal of Strategic Information Systems***23**(3): 210–225.
Wu Q, Luo X, Slotegraaf RJ, Aspara J. 2015. Sleeping with competitors: the impact of NPD phases on stock market reactions to horizontal collaboration. *Journal of the Academy of Marketing Science***43**(4): 490–511.
Wu Z, Choi TY, Rungtusanatham MJ. 2010. Supplier–supplier relationships in buyer–supplier–supplier triads: Implications for supplier performance. *Journal of Operations Management***28**(2): 115–123.
Yami S, Castaldo S, Dagnino GB, Le Roy F. 2010. *Coopetition winning strategies for the 21st century*. Edward Elgar: Cheltenham, UK; Northampton, MA.
Yan Y, Dong JQ, Faems D. 2020. Not every coopetitor is the same: The impact of technological, market and geographical overlap with coopetitors on firms' breakthrough inventions. *Long Range Planning*, Coopetition Strategies **53**(1): 101873.
Yoshino MY, Rangan US. 1995. *Strategic alliances: an entrepreneurial approach to globalization*. Harvard Business Press: Cambridge.