Chapter 1
Introduction

Contents: 1.1. Aim of this book. – 1.2. Value added of this book. – 1.3. Structure of this book.

1.1. Aim of this book

This book examines the conditions under which a firm chooses to implement a coopetition strategy (vis-à-vis other strategies) and disentangles the drivers, modes of management and dynamic capabilities underlying coopetition strategy.

As technology and market dynamism increase, firms may cooperate with one another to overcome the difficulties stemming from a hypercompetitive arena (D'Aveni, 1994; D'Aveni, Dagnino, & Smith, 2010). With increasing frequency, cooperation with rivals may be an effective solution to face environmental uncertainties [1] due to technological (Afuah, 2000, 2004; Gnyawali & Park, 2011; Park, Srivastava, & Gnyawali, 2014) or market changes (Kim & Parkhe, 2009). Accordingly, the issue of *how firms cope with coopetition strategy* – i.e., the simultaneous coexistence of competition and cooperation – has captured the interest of both scholars and practitioners.

Since coopetition is strictly intertwined with competition and cooperation, it is not surprising that, until the late 1980s, management scholars argued that "like water and oil, competition and cooperation do not mix" (Gomes-Casseres, 1996, p. 70-71) [2]. In fact, if we return to the core elements that shape coopetition, the paradoxical trait of coopetition is self-evident (Chen, 2002, 2008; Fang, 2012) [3].

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[1] By reviewing the literature, Milliken (1987, p. 134) summarizes three main conceptualizations of environmental uncertainties: (a) "An inability to assign probabilities as to the likelihood of future event"; (b) "A lack of information about cause-effect relationship"; (c) "An inability to predict accurately what the outcomes of a decision might be."

[2] The academic research has long considered the neologism "coopetition" to be a "quasi-illegitimate word" (Dagnino, 2007, p. 4).

[3] A paradox is "an idea involving two opposing thoughts or propositions that, however contra-

On the one hand, *competition* evokes that "business is war" (Brandenburger & Nalebuff, 1996)[4]. On the other hand, *cooperation* evokes the process through which two firms combine and recombine their resources to obtain common advantages (Anderson, 1990; Contractor & Lorange, 1988; Dyer & Singh, 1998; McGee, Dowling, & Megginson, 1995; Smith, Carroll, & Ashford, 1995). While two competing firms show opposite interests, cooperation is based on a full convergence of interests (Dagnino, 2009).

Interestingly, at present, the academic literature widely acknowledges that "rivals are also roommates" (Barnett, 2006, p. 1753) and that "the same structural conditions that seed competition also present opportunities for cooperation" (Ingram & Yue, 2008, p. 276). Therefore, firms that usually compete with one another may also cooperate to achieve advantages derived from their simultaneous cooperation and competition (Bidault, Laurent, & Segla, 1992; Park, Srivastava, & Gnyawali, 2014). Thus, the core idea is that competing firms might simultaneously compete and cooperate if performance were to improve by "mitigating some negative effects of competition and enhancing information exchange" (Wu, 2014, p. 200).

Over the last decade, the idea of integrating both the competition and cooperation phases has gradually paved the way for the formation of an entire theoretical body of research with regard to coopetition strategy (Bengtsson & Kock, 2000; Bouncken, Gast, Kraus, & Bogers, 2015; Czakon, Mucha-Kus, & Rogalski, 2014). However, we see pros and cons in this literature. The prior research has concentrated on extremely detailed questions, such as the creation and distribution of value in innovation-related coopetition (Bouncken & Kraus, 2013; Ritala & Hurmelinna-Laukkanen, 2009), the role of absorptive capacity (Ritala & Hurmelinna-Laukkanen, 2013), and the contribution of coopetition in SME's growth (Bengtsson & Johansson, 2014). On the one hand, this approach allows us to identify single features that lead to coopetition, but it also suppresses the debate on the central issues related to the selection of coopetition vis-à-vis other strategic alternatives (i.e., competition, collusion). On the other hand, the approach misses one of the main goals in the management research: to unveil the links among firm strategy, firm resources and knowledge, and the mode by which a firm manages coopetition (Wang & Ahmed, 2007).

Accordingly, this study intends to shed light on the characteristics of coopeti-

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dictory, are equally necessary to convey a more imposing, illuminating, life-related or provocative insight into truth than neither fact can muster in its own right. What the mind seemingly cannot think, it must think" (Slaatte, 1968, p. 4). Interestingly, as Cameron and Quinn (1988) argue, the concept of a paradox is different from other terms such as dilemma or conflict because "in a paradox no choice needs to be made between two or more contradictions or opposing voices" (Chen, 2002, p. 181). Further, the paradoxical coexistence of cooperation and competition implies "two countervailing tendencies: cooperative activities leading to the attainment of goals that advance the interests of both partners and competitive behaviors by one or both partners in pursuing their self-interests" (Park & Ungson, 2001, p. 37; Hamel, 1991; Parkhe, 1993).

[4] Therefore, firms in competition look for conditions leading to industry structural advantage (Porter, 1980; Schmalensee, 1985) or specific resources or capabilities that lead to competitive advantage (Barney, 1995; Dierickx & Cool, 1994; Peteraf, 1993; Teece, Pisano, & Shuen, 1997).

tion strategy vis-à-vis other strategic interfirm solutions that encompass the interplay between competition and cooperation. Then, we address three main issues: (1) the linkages between the drivers that motivate rival firms to cooperate and the modes of managing coopetition; (2) the required dynamic capabilities – in this book labeled "dynamic coopetition capabilities" – that firms must develop to effectively manage coopetition strategy; and (3) the linkages among the drivers that motivate rival firms to cooperate as well as the dynamic coopetition and development capabilities that are derived from coopetition.

1.2. Value added of this book

Although the coopetition literature has significantly grown over the last several decades, this research stream is still at a *younghood* phase of evolution (Dagnino & Minà, 2018; Minà & Dagnino, 2016)[5]. Accordingly, the structured analysis of coopetition drivers, modes of managing coopetition and dynamic coopetition capabilities that is advanced in this volume yield relevant insight for the strategic management literature. Specifically, we detect the key conditions that underlie a firm's choice to adopt coopetition strategy as well as the required capabilities to successfully formulate and implement it. The contribution of this book is six-fold. First, we grasp the landscapes of competition and cooperation and, interestingly, we underscore that competition is a *setting* while cooperation is a *choice* (Minà & Vagnani, 2015). Drawing on such reflections, we develop an integrative framework that clarifies which strategies are alternatives and how to choose between them. We extend the previous literature on interfirm relations by investigating the featured traits of the construct of coopetition strategy with regard to alternative strategies (Rai, 2016).

Second, we offer a systematic analysis of the coopetition debate through academic venues – such as professional development workshops and special conferences – as well as published books and articles. By identifying the topic themes and approaches that have been most prominent, we gain an advantageous position from which to appreciate the conceptualizations and topics related to coopetition strategy that have been affirmed over time.

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[5] In this regard, following Palich, Cardinal and Miller (2000) and Dagnino (2005), we explore aspects of the coopetition debate that confirm that this research stream has not yet reached adulthood:

1. while a shared consensus on the main aspects related to the construct of coopetition has been established (Minà & Dagnino, 2016), a limited number of quantitative empirical studies published on coopetition has been published, and they frequently do not provide robust and interpretable findings;
2. a critical mass of scholars and PhD students recognize themselves as coopetition scholars; and
3. a vivid debate in the top journals and an increasing amount of special issues have moved toward a deeper exploration of coopetition (such as, *Long Range Planning* in 2018, *Industrial and Marketing Management* in 2014 and 2016; *Management and Organization Review* in 2018).

Third, we offer a content analysis of the literature (Hsieh & Shannon, 2005; Holsti, 1969) and disentangle coopetition drivers. This analysis allows us to single out when coopetition emerges as a deliberate strategy rather than an emerging strategy (Mariani, 2007). We argue that when firms decide to cooperate with rivals through initiatives to capture more value from their value chains or to cultivate knowledge-dependencies, coopetition occurs as a *deliberate* strategy (Bengtsson & Kock, 2000; Dagnino, 2009). Conversely, when the imposed institutional requirements also impose cooperation with rivals (Mariani, 2007), coopetition occurs as an *emerging* strategy. Nonetheless, as Mintzberg and Waters (1985, p. 271) argue, "emergent strategy does not have to mean that management is out of control, only – in some cases at least – that it is open, flexible and responsive."

Fourth, this book bridges the gap between the literature on coopetition drivers and modes of coopetition management. Drawing on a content analysis of cases on coopetition, the book shows the links between the trigger events that may lead to cooperation with rival firms and how managing coopetition (through spatial separation, temporal separation, and the temporal co-location of competition and cooperation activities). When coopetition drives firm initiatives to capture value, the management of coopetition reasonably occurs through spatially separated units or temporally separated activities. When firm initiatives to manage knowledge dependencies push cooperation with a rival, the management of coopetition frequently occurs through spatially separated units. Finally, when coopetition originates from power sources that impose change on a field, it is likely that the management of coopetition occurs in temporally collocated activities.

Fifth, since coopetition has now achieved a more mature stage of evolution (Minà & Dagnino, 2016; Dagnino & Minà, 2018), what is missing in the extant debate on coopetition is to bridge it with other management literature streams, such as dynamic capabilities, to determine how such a merging might enrich studies on coopetition and dynamic capabilities. We begin with an important challenge in coopetition, which is to balance cooperation and competition actions. Accordingly, dynamic coopetition capabilities (Gnyawali & Park, 2011) are helpful for addressing the combination and recombination of resources and knowledge within a multifaceted, complex, and unstable coopetitive relationship. While the literature on dynamic capabilities acknowledges the role of learning processes underlying capability development (Makadok, 2001; Zahra, Sapienza, & Davidsson, 2006; Zollo & Winter, 2002), it has not as yet addressed the cumulative processes of capability development in interfirm relationships. We fill this gap by showing the "role of firm capabilities to deal with coopetition, which is rarely discussed in the coopetition literature" (Gnyawali & Park, 2011, p. 657).

Finally, while there is wide diffusion of coopetition in several industries [6] –

[6] For instance, channel distribution (Mocciaro Li Destri & Minà, 2009), high-tech (Gnyawali & Park, 2009), services (Asl, Bentahar, Mizouni, Khosravifar, & Otrok, 2014; Mention, 2011), and turism destination (Della Corte & Aria, 2016; Kylänen & Rusko, 2011).

which has motived the upsurge in interest in investigating how to engage in coopetition strategy – thus far, the literature has failed to facilitate an understanding of how firms orchestrate their own resources, knowledge and capabilities to manage coopetition strategy. This book contributes to the extant literature by juxtaposing a conceptual model that links coopetition drivers, modes of managing coopetition and dynamic coopetition capabilities with a single, but relevant, case study.

1.3. Structure of this book

This book is structured in six chapters in addition to this introduction. Chapter 2, titled "*From competitive strategy to coopetition strategy: A framework of analysis*", offers an informed overview to sharpen coopetition strategy vis-à-vis other interfirm strategies. As an initial approximation, exploring the concepts of competition and cooperation allows us to detect the peculiarities of the construct of coopetition. Then, we present a taxonomy of strategic interfirm alternatives that considers the following: arm's-length contracting strategies, supplier-buyer partnership, competitive strategy, collusive and mutual forbearance strategies, and coopetition strategy. The peculiarities of coopetition strategy vis-à-vis other interfirm strategies are discussed.

Chapter 3, titled "*Genesis and evolution of coopetition strategy*", aims to investigate the evolution of the coopetition constructs that have been adopted. As a premise, we consider the diffusion of coopetition in business practice. Then, we systematically grasp the role of academic conferences devoted to increasing the awareness of coopetition in management studies to build a scientific community (Minà & Dagnino, 2016; Whorf, 1956). We then appraise an extensive set of published studies on coopetition to illustrate the state of the art. Following the swinging pendulum metaphor (Hoskisson, Wan, Yiu, & Hitt, 1999), this organized picture of the literature considers four phases (Dagnino & Minà, 2018): the *birth* phase, i.e., the early development of coopetition (1996-2000); the *childhood* phase, i.e., grasping the balance between competition and cooperation (2001-2005); the *adolescence* phase, i.e., understanding the benefits and pitfalls of coopetitive strategies (2006-2010); and the *younghood* phase, i.e., managing coopetitive tensions (2011-2016).

Chapter 4, titled *"Drivers and management of coopetition strategy: a content analysis of the literature"* and coauthored by Roger L. M. Dunbar, aims to explore the links between drivers and the modes of managing coopetition strategy. Initially, we offer certain features of our methodological choices to present a content analysis and about its implementation (especially the sample construction and data coding). Then, through a content analysis of the research on coopetition, we identify the conditions that lead to coopetition strategy. We recognize three set of

coopetition drivers: (a) firm initiatives to capture value; (b) firm initiatives to address knowledge dependencies; and (c) the sources of power that impose cooperation with competitors.

Additionally, we identify three modes of managing coopetition, which are as follows: spatial separation, temporal separation and temporal co-location. The chapter concludes with the insight that, given the different underlying conditions that drive coopetition, the managing modes of coopetition support their coopetitive relationships in different ways.

Chapter 5, titled *"Dynamic coopetition capabilities: a conceptual model",* introduces the definition of coopetition dynamic capabilities in the strategic management literature. To be consistent with the previous literature (e.g., Di Stefano, Peteraf, & Verona, 2014; Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997), we summarize the debate on dynamic capabilities. Specifically, our literature review focuses on the following key questions: What are dynamic capabilities? What are the effects and consequences that stem from adopting dynamic capabilities? In light of the dynamic capabilities and coopetition literature (as reported in the previous chapters), we conceptualize dynamic coopetition capabilities.

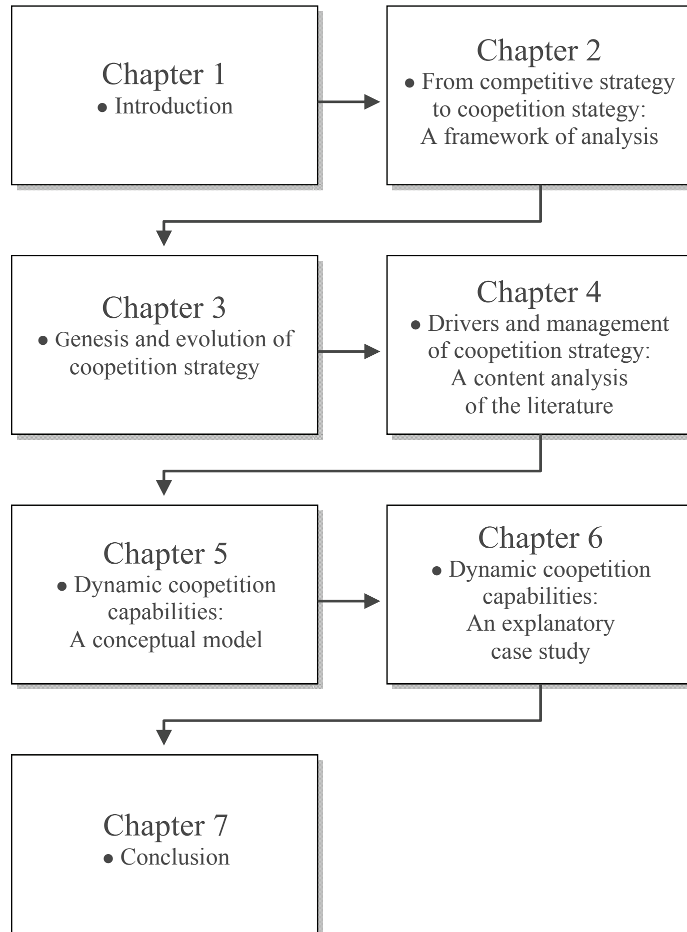
Interestingly, we disentangle two types of dynamic coopetition capabilities: the first-order dynamic coopetition capabilities (that focus the firm's knowledge that can attract rivals for future coopetitive alliances and the firm's learning capabilities stemming from previous coopetitive alliances) and second-order dynamic coopetition capabilities (i.e., the firm's capacity to continuously adapt its resources and capabilities to gain the benefits of cooperating with a rival while exploiting the developed resources and capabilities for private benefits).

Finally, building on the contribution of Wang and Ahmed (2007), we develop a conceptual model of dynamic coopetition capabilities that encompasses: (a) the pre-conditions for firms to use dynamic coopetition capabilities; (b) the impact of dynamic coopetition capabilities on capability development and firm performance; and (c) the link between dynamic coopetition capabilities and coopetition strategy.

Chapter 6, titled *"Dynamic coopetition capabilities at work: An explanatory case study",* offers an illustrative case that is helpful for understanding the strategic role of coopetition dynamic capabilities. The first part of this chapter presents and justifies our methodological choices: the implementation of an explanatory case study, the theoretical sampling, data sources, and data coding procedure. Then, in the second part of this chapter, we present our case analysis to explain the model proposed in chapter 5.

Finally, chapter 7 offers the conclusion. We summarize the insights that this book provides on the drivers and management of coopetition as well as dynamic coopetition capabilities. Finally, we offer a research agenda and distill a set of lessons for managers and practitioners so they may better assess how to manage both the competitive and cooperative elements of this "multifaceted relationship" (Dowling, Roering, Carlin, & Wisnieski, 1996).

Figure 1.1. – Structure of the book



Source: Author's elaboration.

Chapter 2

From competitive strategy to coopetition strategy: A framework of analysis

Contents: 2.1. Grasping competitive landscapes. – 2.1.1. An approach to competitor analysis and identification. – 2.2. Grasping cooperative choices. – 2.3. The interplay between competition and cooperation: A taxonomy of interfirm strategic alternatives. – 2.3.1. Arm's-length contracting strategies. – 2.3.2. Supplier-buyer partnership. – 2.3.3. Competitive strategy. – 2.3.4. Collusive and mutual forbearance strategies. – 2.3.5. Coopetition strategy. – 2.4. Juxtaposing coopetition strategy and other interfirm strategic alternatives.

2.1. Grasping competitive landscapes

To detect the essence of any phenomenon, we must determine its origin. Therefore, to explain what coopetition is, we must identify the core elements that comprise it: competition and cooperation. For an initial approximation, exploring the concepts of competition and cooperation allows us to detect the peculiarities of the construct of coopetition. Specifically, it will be interesting to investigate how and to what extent coopetition is different than the sum of cooperation and competition (Dagnino, 2007; 2009). Then, we should be able to identify under which conditions firms prefer to cooperate with rivals with regard to other strategies.

From an etymological perspective, the word *competition* draws from the Latin *cum-petere*. In turn, the word *cum* means "with, together", and the word *petere* means "to strive, seek, fall upon, rush at, attack" [1]. Accordingly, the term appears for the first time in the 1610s in the Middle French as "to enter or be put in rivalry with" [2]. Overall, the term competition recalls the fact that individuals in competition "fall together, coincide, come together, be fitting, be due" or "to strive after something, in company or together" (Oxford English Dictionary, 2017). Competi-

[1] https://www.etymonline.com/word/compete (data accessed: November 13, 2017).

[2] https://www.etymonline.com/word/compete (data accessed: November 13, 2017).

tion is thus intended as "the activity or condition of striving to gain or win something by defeating or establishing superiority over others" (Oxford English Dictionary, 2017)[3].

Drawing on etymological origin, competition is conceived both as the individual's *strategy* (as a set of actions through which the players attempt and impose their supremacy over the other) and the *setting* (defined as the set of conditions of striving to gain) in which competitive actions occur (Deutsch, 1949).

A captivating example may clarify the concept of competition. Assume the there are two campers who are enjoying camping in the mountains. Surprisingly, one of the two campers sees a bear going over the mountains. As is known, bears are huge and strong omnivores that are known to be dangerous. Seeing a bear in its natural habitat implies that the two campers are in a risky situation. Once the two campers see the bear, one starts to panic and runs away from their tent. Conversely, the other camper remains and comfortably puts on his running shoes. The panicked camper looks at him and asks, "What are you doing? You can't outrun that bear!" (Schlegel & Trent, 2014, p. xviii) The first camper replies, "I don't have to outrun that bear, I only have to outrun you!" (Schlegel & Trent, 2014, p. xviii). Interestingly, winning a competition does not mean outrunning anyone but your rival.

Basically, in a competitive *setting*, firms are motivated to achieve the same purpose. From this perspective, they fall together and coincide because their run is pushed by the fact that only one will win the competition. Even if firms have common purposes, they are in conflict. The main feature underlying competition is that firms want to pursue the same purpose (i.e., outrun their rival, increase their competitive position in the market, impose a technological standard); however, each firm will achieve its specific purpose only if the other firm does not achieve it. Firms' shareholders usually receive quarterly firm profit reports. These reports put managers under continuous pressure so far as firm profitability is concerned. This implies that firms operate in competitive settings in which they are opposed to one another in phases that are relative both to value creation and value appropriation (Mocciaro Li Destri & Dagnino, 2005).

We identify three main features that characterize a competitive setting (Dagnino, 2005; Mocciaro Li Destri & Minà, 2009):

1. firms have conflicting interests with one another;
2. firms are potentially interchangeable in their role, and;
3. firms' actions affect their ability to countervail the future actions taken by their rivals.

Below, we analyze in detail the main features that characterize a competitive setting. First, the presence of *conflicting interests* among players is assumed to be

[3] https://en.oxforddictionaries.com/definition/competition (data accessed: December 17, 2017).

a key element for competition to occur. Firms present conflicting interests when the purposes of two different parties are in conflict, meaning that such purposes are mutually conflicting. Thus firms face conflicting interests whereby they must "drive to win, or defeat one's opponents" (Kilduff, Elfenbein, & Staw, 2010, p. 943), and they are under continuous pressure to achieve higher performance over their rivals. Accordingly, competition is a win-lose game since the performance of each firm is negatively related, meaning that the higher performance of a firm comes at the expense of the other (Kilduff, Elfenbein, & Staw, 2010).

Second, firms are in competition if *they are conceived as interchangeable for customers*. Specifically, a firm's products are in competition with another firm's products if customers think the products of both firms could be exchanged with each other. This makes no difference for the customers because the change is not noticed. When they are in a state of non-competition, firms operate in a standalone manner (firms' actions are not primarily directed towards countering the other firms' future behavior), firms in competition continuously struggle with one another "over some stake or issue with a high degree of salience" (Valeriano, 2013, p. 5). Obviously, "the reaction can range from «warlike» to «gentlemanly»" (Porter, 1980, p. 129). As a consequence, rivals are mutually dependent. The higher the interchangeability between firms is, the more likely firms will be conceived as competitors.

Third, competition occurs between two agents whether *the actions of one firm affect the firm's ability to countervail future actions taken by the rival*. Studies on competitive dynamics extensively investigate the drivers and effects of interfirm rivalry (Chen & MacMillan, 1992; Ferrier, 2001) and recognize the *relational* nature of competition (Kildfuff, Elfenbein, & Staw, 2010). This implies that "the nature of competition may vary depending on the relationship between competitors" (Kildfuff, Elfenbein, & Staw, 2010, p. 944), and competitors are not defined *per* se based on the homogeneity of products, segments, technologies, and distributive channel, but on the perceived perspective of a defined focal firm (Chen, 1996).

Therefore, competitors are identified based on the awareness that a competitor develops a competitive maneuver to attack, the motivation of the competitor to act and respond, and the competitor's capacity to develop a competitive maneuver against the rival (Chen, Su, & Tsai, 2007; Smith, Ferrier, & Ndofor, 2001). From such point of view, studies consider rival identification (Clark & Montgomery, 1999; Hodgkinson & Johnson, 1994), competitor acumen (Tsai, Su, & Chen, 2011), the intensity of competition (Barnett, 1997) and threat (Mitchell, 1989), and competitive tension (Chen, Su, & Tsai, 2007).

The next sub-section deepens an approach to competitor analysis and identification. In section 2.2. we describe cooperative choices. Our goal is to present the taxonomy of interfirm strategic alternatives by juxtaposing competition and cooperation in the section 2.3. Finally, section 2.4. juxtaposes coopetition strategy with the other interfirm strategic alternatives.

2.1.1. An approach to competitor analysis and identification

Given the importance of understanding the elements surrounding the competitive setting, it is not surprisingly that strategic management studies pay great attention to the identification and analysis of competitors. Management studies traditionally draw on *Industrial Organization Economics* (Bain, 1956; Schmalensee, 1985; Porter, 1980) to analyze the structural conditions underlying firm competitive advantage. Specifically, the industrial organization economics framework explains how industry structures lead firms to achieve a competitive advantage over other firms (Porter, 1980)[4]. From this perspective, competition occurs because "one or more [firms] either feels the pressure or sees the opportunity to improve position" (Porter, 1980, p. 17). The underlying assumption is that firms are automatically competitors simply because they are in the same industry (Chen, Su, & Tsai, 2007).

Since "competitors can be identified not just by similarities among their products, but by similarities among their resources" (Peteraf & Bergen, 2003, p. 1027), some other studies emphasize the role of resources as key aspect for competitive advantage (Amit & Schoemaker, 1993; Barney, 1991, 1996; Peteraf, 1993; Wernerfelt, 1984). Heterogeneous resources and competences can also generate a competitive setting from which firms compete with rivals with the aim of building competitive advantages (Barney, 1991; Dierickx & Cool, 1989, 1994; Grant, 1999; Peteraf, 1993).

The underlying assumption is that resources allow firms to differentiate from competitors (Collis & Montgomery, 1995) since resources and capabilities are "heterogeneously distributed across firms and that each firm is idiosyncratic because of the different resources and assets it has acquired over time" (Chen, 1996, p. 101). Therefore, the greater the firm resource similarity, the greater the interchangeable positions among firms (for instance, they satisfy the same customers). Thus, the presence of more similar resources between competitors implies that firms are more likely are conceived as interchangeable for customers, and are thus competitors. Since firms may obtain advantages vis-à-vis rivals based on value, rarity, and inimitable resources (Barney, 1991, 1996; Peteraf, 1993; Teece, Pisano, & Shuen, 1997), firms with similar resources have conflicting interests in value appropriation. However, as noted by Peteraf and Bergen (2003, p. 1032), managers should not focus on homogeneous resources per se, but they should also

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[4] The competitive landscape in several of the world's industries changes over time and can be affected by the evolution of technologies and the continuous convergence among industries that blur the boundaries of entire industry segments. All these aspects create competitive contexts that become hypercompetitive (McNamara, Deephouse & Luce, 2003). Hypercompetition occurs when there is rapidly escalating competition to achieve price-quality position to define new know-how, establish first-mover advantages, and protect established products (D'Aveni, 1995). In doing so, firms may be embedded in a competitive setting in which they must fight for market share, for margins in negotiations and, more generally, to obtain higher performance.

consider "dissimilar resource bundles that can be directed to the same end".

Taken in isolation, both industrial organization economics and the resource-based view are frameworks that are *partially* useful to understand competitive behaviors among firms in their pursuit to achieve competitive positions in a specific industry (Caves, 1984; Hamel & Prahalad, 1990; Porac & Thomas, 1990; Porter, 1980) since they do not consider the fact that competition has a relational and a subjective aspect (Chen, 1996). Accordingly, competition is relational since not all competitors are the same, and "certain competitors, or rivals, can instill a motivation to performs that goes above and beyond an ordinary competitive spirit or the objective stakes of the context" (Kildfuff, Elfenbein, & Staw, 2010, p. 943). We argue that it is important to consider the fact that competition is strictly embedded in these relationships and depends on the features of the actors involved in the relationship (Baum & Korn, 1999; Chen & MacMillan, 1992; Chen, Su, & Tsai, 2007).

Second, competition is subjective, which means that it is important to "see through the eyes of the rival" (Tsai, Su, & Chen, 2011, p. 761) and to identify the firms that are considered to be rivals. Therefore, firms are not conceived as competitors because they operate in the same markets (Bothner, Kang, & Stuart, 2007) or because of the features underlying the competitive arena (Deutsch, 1949) but because of the perceived competition (Chen, Su, & Tsai, 2007). If firms are reciprocally dependent and perceived as competitors, their actions can have an impact on their rivals and performance. In this case, firms react to a rival's attack and promptly respond to defend their competitive position.

A more complete analysis to predict competition calls for an understanding of the driving conditions of rivalry and competitive attack [5] between two firms (Chen & Miller, 2012). First, similarity may be conceived as an antecedent of rivalry (Chen, 1996; Chen, Su, & Tsai, 2007). Accordingly, greater similarity among firms may lead to a greater rivalry since similar firms may perceive a higher degree of customer interchangeability with rivals and tend to compare themselves with one another in terms of performance (Kilduff, Elfenbein, & Staw, 2010).

Similarity among competitors can occur by considering the geographic proximity in which competitors operate and firm characteristics. For the location in which firms operate, the more geographical proximity there is among firms, the more perceived competition will occur (Chang & Xu, 2008; Yu & Cannella, 2007, 2013). In terms of firm characteristics, studies find that firm size (Baum & Mezias, 1992), firm value (Kildfuff, Elfenbein, & Staw, 2010) and resource and market similarity profile (Baum & Korn, 1996; Chen, Su, & Tsai, 2007) impact the perception of competitiveness among competitors.

In this study, we develop competitor analysis and identification drawing on

[5] Although some authors call for distinguishing between rivalry and competition (Kilduff, Elfenbein, & Staw, 2010), in this study, we draw on the prior research that uses the terms competition and rivalry as synonyms.

Chen (1996), and we consider the intersection between market commonality and resource similarity[6]. *Resource similarity* is related to the extent to which a firm's tangible and intangible resources are similar and, hence, *comparable* with the rival's in terms of type and amount (Chen, 1996). However, we suggest an extension of Chen's view (1996) of resource similarity. In fact, drawing on Peteraf and Bergen (2003 p. 1027), we argue that resource similarity should also consider similarities "in terms of their *use*." This means that two products are not necessarily similar in terms of their physical aspects, but they can be adopted by customers for similar use.

Market commonality is concerned with the number of markets in which firms find themselves against one another and the degree of importance of individual markets to each (Chen, 1996). Firms that show a high degree of market commonality should be de facto rivals (Chen, Su, & Tsai, 2007, p. 102). This condition leads to high competition since firms experience conflicts due to opposite interests in obtaining structural advantages at the industry or infra-industry levels (Porter, 1980; Schmalensee, 1985).

By juxtaposing the two dimensions of resource similarity and market commonality, Chen (1996) identifies four different competitive settings in which the focal firm interacts with a given competitor.

Figure 2.1. – The competitive settings

Market commonality		**Resource similarly: High**	**Resource similarly: Low**
	High	(I) Strong competition	(II) Weak competition
	Low	(III) Weak competition	(IV) No competition

Source: Adapted from Chen (1996, p. 108).

[6] According to Chen (1996), when that firm – here, a "focal firm" – interacts with a given competitor, the competitive relationships depends on the interaction between market commonality and resource similarity because they both contribute to shaping the set of the conditions under which firms face conflicting interests that "drive to win, or defeat one's opponents" (Kilduff, Elfenbein, & Staw, 2010, p. 943).

Quadrant I identifies the case of *strong competition* in which the relationship between the focal firm and its competitor is characterized by a high market commonality and high resource similarity. The high intensity of rivalry emerges because there is a significant similarity of the resources possessed by both competitors and because there is a substantial intersection in terms of the number and relevance of the markets in which both firms operate.

Quadrant II identifies a case of *weak competition* in which the relationship between the focal firm and its competitor is characterized by high market commonality and low resource similarity. In this case, while different resource endowments (and/or resource use) make firms different for customers, the commonality of markets leads to firm competition for customers.

Quadrant III identifies the case *weak competition* that is different from that of Quadrant II. In this case, the relationship between the focal firm and its competitors is characterized by high resource similarity and low market commonality (Peng, Pike, Yang, & Roos, 2012). On the one hand, the similarity of resources makes the firms competitors for customers; on the other hand, the fact that there is low intersection in terms of the number and relevance of markets in which both firms operate does not lead to firm competition for customers. Since both firms possess similar resources but operate in different markets (and/or assign different levels of importance to the individual markets), in this case, there is weak competition.

Finally, Quadrant IV identifies the case in which the relationship between the focal firm and its competitor is *not one of competition*. This condition is characterized by low market commonality and low resource similarity. In this case, the lack of significant similarity of the competitors' resources and the lack of substantial intersection in terms of the number and relevance of markets in which both firms operate, it is clear that the firms are not competitors.

In sum, drawing on Chen (1996), we identify a competitive setting in which firms do not share the market where they operate and use different resources. Conversely, a setting of strong competition emerges when firms share the same market and employ resources that are largely homogeneous. A setting of low competition emerges when firms operate in the same markets, even if they have a heterogeneous pool of resources or, alternatively, when firms possess the same resources but operate in different markets (Peteraf & Bergen, 2003).

2.2. Grasping cooperative choices

While the above section offers an overview of the competitive landscape in which firms must "win or defeat one's opponents" (Astley, 1984, p. 533), to understand coopetition we introduce the mechanisms underlying firms' choice to cooperate with one another to join their efforts and create shared value.

From an etymological perspective, the word *cooperation* emerges in ecclesial contexts during the late 16th century in Middle France. Specifically, the root of the term cooperation draws on the Latin *co-*, which means "together", and the term *cooperātiō(n) cooperari*, which means "work together." Overall, cooperation refers to the process of working together to achieve specific ends (Oxford English Dictionary, 2017) [7].

In the management world, cooperative interactions among firms implies that they are engaged in a win-win game with *fixed ex ante* positive results (Dagnino, 2009). Accordingly, two main features characterize cooperative choices:

1. firms have fully convergent interests with one another, and
2. firms have potential mutual benefits that stem from cooperation.

Below, we analyze each of the main features that characterize a cooperative choice in greater detail. The first characteristic of cooperation is the *full convergence of interests* among the firms involved in the cooperation. Firms present converging interests when the purposes of two different parties are not in contrast with each other. Cooperation is considered a win-win game because it is by cooperating with each other that both firms can achieve what they expect to achieve within the cooperative alliance.

The second characteristic of cooperation involves the *mutual benefits* that firms are able to achieve relative to the value creation phase. In other words, firms experience mutual benefit from the cooperation (Hamel, Doz, & Prahalad, 1989). While in competition, firms are expected to pursue the same purpose, and the achievement of one party implies that the other firm cannot also achieve, in cooperation, firms do not necessarily have the same purpose. However, they may reciprocally achieve their aims. For instance, two firms, A and B, decide to cooperate with each other. Firm A may want to enter into cooperation with firm B to gain access to its distributive channels and penetrate new market segments. Firm B may want to enter into cooperation with firm A to gain access some resources that are necessary for its manufacturing process.

Thus, it is important to answer the following question: "in situations where each individual has an incentive to be selfish, how can cooperation ever develop?" (Axelrod, 1981, p. 3). Historically, strategic management studies have paid attention to interfirm cooperation (Anderson, 1990; Contractor & Lorange, 1988; Gomes-Casseres, 1994; Smith, Carroll, & Ashford, 1995), especially after the "explosion in alliances" in the late 1980s (Dyer & Singh, 1998; McGee, Dowling, & Megginson, 1995) that has continued in more recent years (Lavie, Haunschild, & Khanna, 2012).

Studies on cooperation abound (Axelrod, 1997; Doz, 1996) that consider the different theoretical perspectives that are adopted in cooperation, such as transac-

[7] https://en.oxforddictionaries.com/definition/cooperation (Date accessed: December 22, 2017).

tion cost economics (McGee, Dowling, & Megginson, 1995), resource-based theory (Doz, 1996), and game theory (Axelrod, 1984). Furthermore, scholars have investigated the patterns that lead to alliance formation (Haklisch, 1986; Doz, 1992; Hergert & Morris, 1988; Fuller & Porter, 1986), the impact of the characteristics of the partners of alliances on alliance performance (e.g., Hagedoorn & Schakenraad, 1994; Sampson, 2007; Stuart, 2000), and the form of organizational governance (Osborn & Baughn, 1990; Thorelli, 1986).

In exploring why firms cooperate, scholars (Oliver, 1990; Park & Zhou, 2005; Ring & Van de Ven, 1992) have acknowledged that cooperation allows firms to strengthen their *market power* (Kogut, 1988; Gans & Stern, 2003) and gain market access at a low cost (Hamel, Doz, & Prahalad, 1989). Accordingly, the relational nature of cooperation underscores that firms may benefit from "above-normal returns" because "a firm's critical resources may extend beyond firm boundary" (Dyer & Singh, 1998, p. 660). Therefore, a firm does not necessarily need to possess all its resources in-house to increase its market power and competitive advantage.

Second, by cooperating with one another, firms in cooperation can benefit from *cost and risk sharing* (Hagedoorn, 1993; Hamel, Doz, & Prahalad, 1989; Fuller & Porter, 1986) so they can increase their efficiency (Ahuja, 2000).

Third, through cooperation, firms' partners can pool together *valuable and critical resources* (Rothaermel & Boeker, 2008). Thus, firms may "joint[ly] develop, manufacture, and/or distribute products" (Zollo, Reuer, & Singh, 2002, p. 701) and gain access to capabilities that are organizationally embedded (Kogut, 1989). With a specific focus on cooperation for sharing knowledge (Ahuja, 2000; Dyer & Singh, 1998), we note that technological change represents an industry force that drives cooperation (Gnyawali & Park, 2011). In fact, technological change pushes firms to cooperate, share market risks and combine technologies in ways that enable them to set and meet industry standards (Ghoshal, 1987; Harrigan, 1987; Ritala, 2012). This is particularly crucial in knowledge-intensive industries, where innovation is a crucial aspect for competitive advantage, and the continual need to implement knowledge may represent a significant driver of cooperation (Gnyawali, He, & Madhavan, 2008; Grant & Baden-Fuller, 2004; Padula & Dagnino, 2007; Ritala, 2012) to pool resources and knowledge with other firms.

2.3. The interplay between competition and cooperation: A taxonomy of interfirm strategic alternatives

Drawing on Chen (1996), sub-section 2.1.1. intersects market commonality and resource similarity to identify three different competitive *settings*: (1) strong competition; (2) weak competition; and (3) no competition. Interestingly, section

2.2. identifies the *choice* to enter into a cooperative relationship, which allows increased partner performance through the integration of heterogeneous resources, skills and capability endowments (Dyer & Singh, 1998), as a decision that is independent from the competitive setting.

Typically, the traditional language that has been used for business adopts military terms. For instance, "business is war: «outsmarting the competition, capturing market share, making a killing, fighting brands, beating up suppliers, locking up customers. Under business-as-war, there are the victors and the vanquished»" (Brandenburger & Nalebuff, 1996, p. 3). The main idea is that "competition is a fact of life; employees compete for promotions, groups of researchers vie for grants, and companies fight for market shares" (Kildfuff, Elfenbein, & Staw, 2010, p. 943).

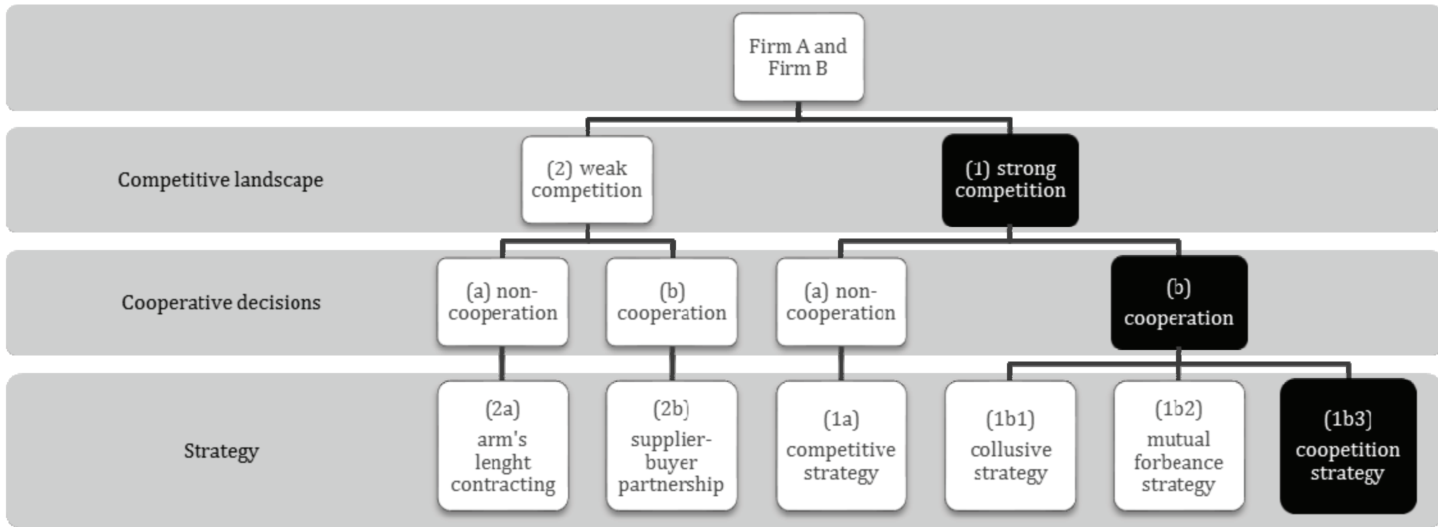
Consequently, even if the actual competitive arena "doesn't sound like war" (Brandenburger & Nalebuff, 1996, p. 3) and an increasing number of firms cooperate with one another, it is also true that "collaboration is competition in a different form" (Hamel, Doz, & Prahalad, 1989, p. 134), In fact, cooperation occurs if it allows firms to achieve higher performance than the case in which they do not cooperate with rivals.

Therefore, in this study, we focus on two competitive landscapes: (1) strong competition and (2) weak competition. Accordingly, we do not consider the setting in which firms do not compete with one another since, by design, the aim of this study is to develop a taxonomy of interfirm relationships that includes the interplay of competition and cooperation (Minà & Vagnani, 2015). Therefore, we include the settings of (1) strong competition and (2) weak competition, with two firm choices of (a) cooperation and (b) non-cooperation. By developing a conceptual map of a firm's alternative strategies (see figure 2.2.), we provide an appreciation of the main antecedents for each strategy.

Given two firms that operate in a *weak competitive landscape*, if both firms decide not to cooperate with each other, an arm's-length contracting strategy emerges. Conversely, if both firms decide to cooperate with each other, we observe a supplier-buyer partnership between firm A and firm B.

Assuming that two firms are operating in a *strong competitive landscape*, firm A can decide whether to cooperate with firm B. When firm A and firm B do not cooperate with each other, the firms will be competitors since they adopt a competitive strategy. While firm A and firm B cooperate with each other in a strong competitive landscape, we may have three different strategies: a collusive strategy, mutual forbearance, and a coopetition strategy. We analyze these scenarios, starting with the strategies that emerge in a weak competitive landscape. The next five subsections introduce the interfirm strategic alternatives in detail.

Figure 2.2. – A framework of interfirm strategies



Source: Adapted from Minà & Vagnani (2015).

2.3.1. Arm's-length contracting strategies

In a weak competitive setting, "purchases of an item can be spread among alternate suppliers in such a way so to improve the firms' bargaining power" (Porter, 1980, p. 123).

The core idea of this strategy, labeled *arm's-length contracting*, is that the transaction between two firms is made purely with the aim of maximizing their own advantage, so neither of them want to accommodate or favor the other in any case. According to Dyer and Singh (1998), an arm's-length contracting strategy is characterized by four main aspects. First, firms base their relationships on four main on nonspecific asset investments. In doing so, they take fewer risks because firms cannot be subjected to hold-up mechanisms by the other partner. Second, an arm's-length market strategy requires a minimal information exchange among firms that is often limited to the prices of products. Third, firms develop a technological and functional system to obtain a low level of interdependence among them. In doing so, they "have only a sales-to purchasing interface and do not jointly create new products" (Dyer & Singh, 1998, p. 661).

Finally, firms should minimize their dependence on suppliers and maximize their bargaining power (Dyer, Cho, & Chu, 1998). As a consequence, there will be low transaction costs (Williamson, 1985) since it might be easier for firms to switch the trading partner for another with no problem.

Basically, an arm's-length contracting strategy allows firms to develop a relationship that is not idiosyncratic and, hence, easy to imitate and replicate. Accordingly, because of the non-asset specificity of the investment required to build this strategy, firms will achieve not relational rents but differential advantages that stem from the bargaining power they can exert.

2.3.2. Supplier-buyer partnership

When firms operate in different markets and possess different resources (i.e., a weak competitive setting), they may need to interact with one another. Such *supplier-buyer relationships*, according to Williamson (1975), are characterized by three main features: (a) uncertainty [8]; (b) the number of transactions that may oc-

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[8] According to Milliken (1987), uncertainty is "an individual's perceived inability to predict something accurately" (p. 136). Specifically, uncertainty occurs when individuals acknowledge that they do not have sufficient information to forecast future events properly and estimate the potential impact that uncertainty might have on the expected outcome (Beckman, Haunschild, & Phillips, 2004; Duncan, 1972; Merton, 1998). Because of the multidimensional nature of the concept of uncertainty, we can have various types of uncertainty, such as exogenous and endogenous uncertainty (Folta, 1998), external and internal uncertainty (Duncan, 1972), subjective and objective uncertainty (Jauch & Kraft, 1986), primary or state uncertainty (Milliken, 1987), firm-specific or market based