

Valentina Della Corte

Associate Professor of Strategic Management

Department of Economics, Management, Institutions

Federico II University of Naples

Valentina.dellacorte@unina.it

“INNOVATION THROUGH COOPETITION: FUTURE DIRECTIONS AND NEW CHALLENGES”

Abstract: The paper, through an extended literature review, based on bibliometrics and conceptual reasoning, analyzes the main models of coopetition, in order to verify the link between coopetition and innovation, getting to a proposal that can be useful for further research.

Keywords: coopetition, innovation

1. Introduction: context and research questions

In the global and digital era, business models are significantly less stable and changing (Yun, 2017) and, consequently, the related competitive and collaborating dynamics difficult to analyze and even to forecast. In such framework, it is interesting and helpful to study the role of coopetition in fostering firm's innovation deeply as well as its relative implications.

Coopetition and competitive strategies are usually ascribed to the intuitive work of [Brandeburger and Nalebuff](#) (1986) who, in a very systematic way, start considering inter-firm relationships according to game theory. More specifically, these authors propose a framework where, even when partners are competitors, they may have some complementary opportunities rather than just threatening each other. This awareness of parties allows to avoid destructive strategic behaviors towards contexts of win-win conditions. In this logic, these scholars developed the PARTS model, in which every single player (P) can be both competitor and complement, producing Added Value (A) and thus getting a wider slice of the pie by being in the game, if behaving in respect of the rules (R) and using the right Tactics (T) when anticipating reactions to actions, according to the prisoner's dilemma. This latter implies that parties can maximize their profits when benefits from cooperation are higher than those from competition or defection ([Della Corte, Aria, 2016](#)). This successful process favors a “variable-plus-sum game” rather than a “zero-sum” one ([Rouse, 2005](#)). Coopetition can take to “win-win-win” situations when all parties earn from the relationships more than when they just compete (zero-sum game) or cooperate with separate behaviors (plus-sum game).

The main literature on the topic concentrates on:

- 1) the typologies of coopetitive situations (dyadic rather than multiple, like in business networks, or horizontal rather than vertical – [Bengsston & Kock, 2014](#));
- 2) the process (spontaneous rather than guided also through top-down initiatives of Institutional partners);
- 3) the types of firms (for example, with reference to small and medium enterprises – [Gnyawali & Park, 2009](#); [Levy, Loebbecke, & Powell, 2003](#));
- 4) the relative degree of competition and collaboration ([Damayanti, Scott, & Ruhanen, 2013](#), [Dagnino G., 2009](#));
- 5) the impacts of coopetition, both in terms of the nature of relationships (economic rather than social, for example) and with reference to the inter-firm relationship rather than the single participating actor ([Morris et al., 2007](#)). As regards the intangible effects of coopetition, there are still very interesting aspects, not adequately studied, especially in terms of ex-ante vs ex-post evaluations when engaging into a collaboration.

In spite of its undoubtful interest, the literature on coopetition seems not to catch up the rapidly changing dynamics in firms' strategic behaviors.

Mostly, a huge amount of papers deals with contexts characterized by dominant partners (focal firms – [Eikebrokk & Olsen, 2005](#)). Over time, there have been some even weak attempts to extend the spectrum of the unit of analysis as well as of the main reasons that push firms to adopt this kind of strategy. Such attempts have been adopted within different perspectives (mainly in the fields of strategic management, competitive dynamics and business networks).

However, there are still several limitations in the scientific work on the issue.

Firstly, there is an overall set of fragmented contributions ([Morris, Kocak, & Özer, 2007](#); [Padula & Dagnino, 2007](#); [Walley, 2007](#); [Yami et al., 2010](#); [Gnyawali, He, & Madhavan, 2008](#); [Bengsston & Kock, 2014](#)).

Secondly, most contributions refer to dyadic relationships between big firms or between a focal firm and its suppliers/clients.

Besides, the majority of contributions describes the process without explaining when and why to coopete, if coopetition really generates sustainable competitive advantage and, if yes, how to favor it!

From a theoretical point of view, it is interesting to examine the topic through double lenses, that are resource-based theory ([Barney, 1986; 1996](#)) and open innovation, considering also how the interaction of these two approaches in coopetition can foster innovation in a 4.0 industry perspective.

Both these theories are, in fact, consistent with coopetition, considering that “bunching together creates complementarities that develop the market even if there's sometimes more competition in dividing it up” ([Branderburger & Nalebuff, 1986](#), p. 34).

In this paper, the reaserch question is if the topic of innovation connected with coopetition is treated in the literature. To answer this research question, I propose a bibliometric analysis followed my a in deep study of the main papers on the topic, in order to examine the issue of innovation through coopetition as well as to outline the main future directions and new challenges on the issue.

2. Theoretical framework and literature review: methods.

Literature production on coopetition has developed extensively in latest years. I conducted a bibliometric analysis in order to focus the attention on the ongoing literature on the topic. This method is usually adopted to quantify literature production as well as to measure its main impact; however, it can be also very useful in studying conceptual topics of research, as well as their main dynamics (Glińska et al, 2018; Siderska et al, 2018).

As known bibliometrics aims to describe how scientific disciplines and research fields are structured and evolve over time, getting to systemic adequate results.

The analysis between 1996 and 2018 shows a concentrated production on more than 4 hundreds papers, written by 840 authors with an average citation per article of 18.11 (Table 1).

Table 1: Data on scientific production on the topic.

Documents	430
Sources (Journals, Books, etc.)	232
Keywords Plus (ID)	816
Author's Keywords (DE)	1204
Period	1996 – 2018
Average citations per documents	18.11
Authors	
Author Appearances	
Authors of single authored documents	54
Authors of multi authored documents	786
Documents per Author	0.512
Authors per Document	1.95
Co-Authors per Documents	2.44
Collaboration Index	2.21

The highest numbers of papers were registered between 2013 and 2018 (Fig. 1) thus confirming this is a rather new topic in its developments. The most cited papers are in Organization Science, Industrial Market Management, as well as International journals on small and medium enterprises, ICT, and venture capital (Table 2).

Fig. 1 – Annual scientific production

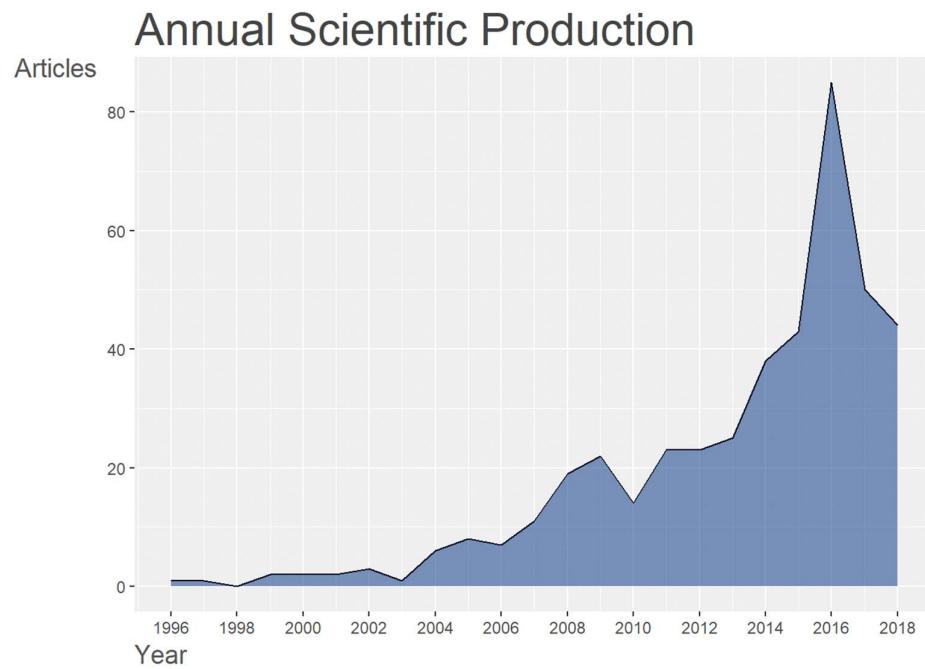
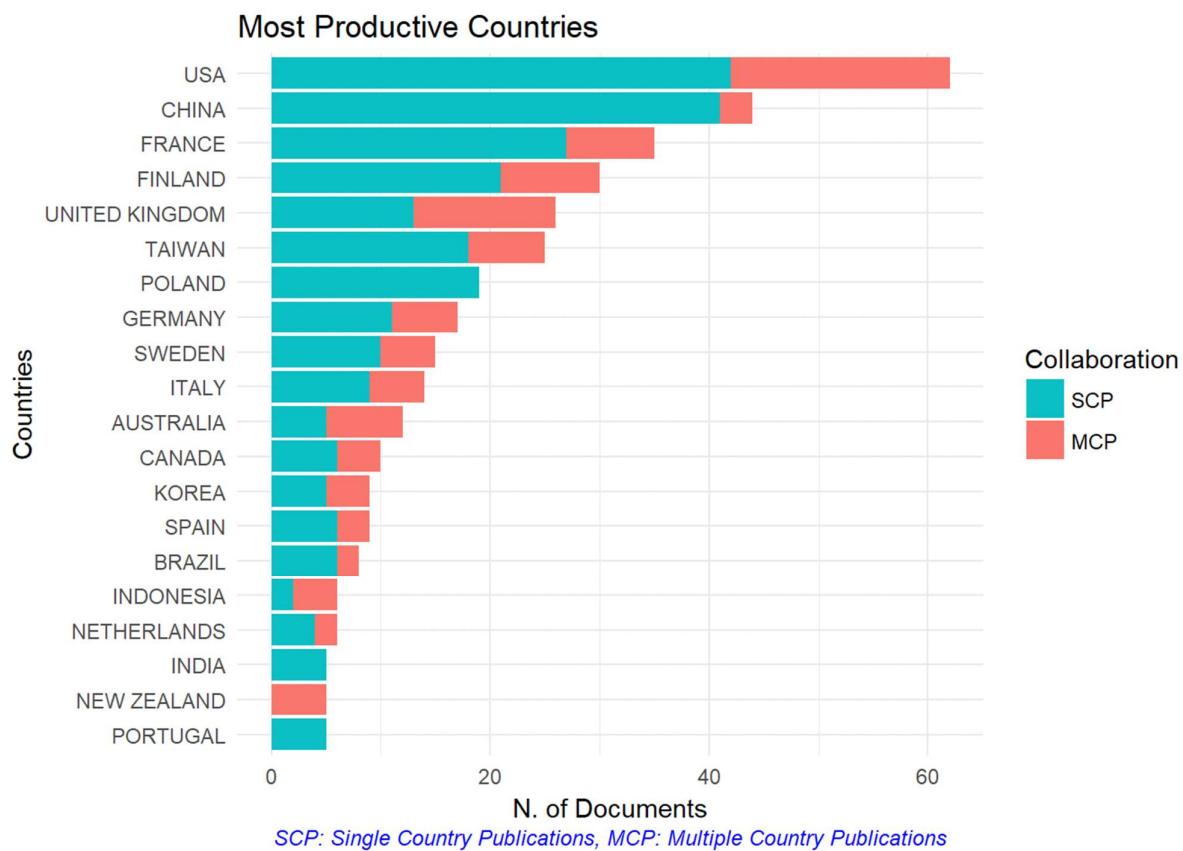


Table 2. – The most cited papers

Papers	Total cit.	TC per year
1 TSAI WP, 2002, ORGAN SCI	685	42.81
2 BENGTSSON M, 2000, IND MARKET MANAG	524	29.11
3 LECHNER C, 2003, ENTREP REGION DEV	310	20.67
4 CARAYANNIS EG, 2009, INT J TECHNOL MANAGE	207	23.00
5 GNYAWALI DR, 2011, RES POLICY	199	28.43
6 LECHNER C, 2006, J BUS VENTURING	188	15.67
7 GNYAWALI DR, 2009, J SMALL BUS MANAGE	176	19.56
8 LUO XM, 2006, J MARKETING	162	13.50
9 LUO YD, 2007, J WORLD BUS	151	13.73
10 RITALA P, 2009, TECHNOVATION	144	16.00
11 GNYAWALI DR, 2006, J MANAGE	138	11.50
12 LUO YD, 2009, ACAD MANAGE PERSPECT	131	14.56
13 QUINTANA-GARCIA C, 2004, TECHNOVATION	125	8.93
14 LUO YD, 2005, J WORLD BUS	121	9.31
15 CHEN MJ, 2008, J MANAGE INQUIRY	114	11.40
16 KETCHEN DJ, 2004, J MANAGE	109	7.79
17 MENTION AL, 2011, TECHNOVATION	108	15.43
18 BENGTSSON M, 2014, IND MARKET MANAG	103	25.75
19 WU ZH, 2010, J OPER MANAG	102	12.75
20 RITALA P, 2012, BRIT J MANAGE	95	15.83

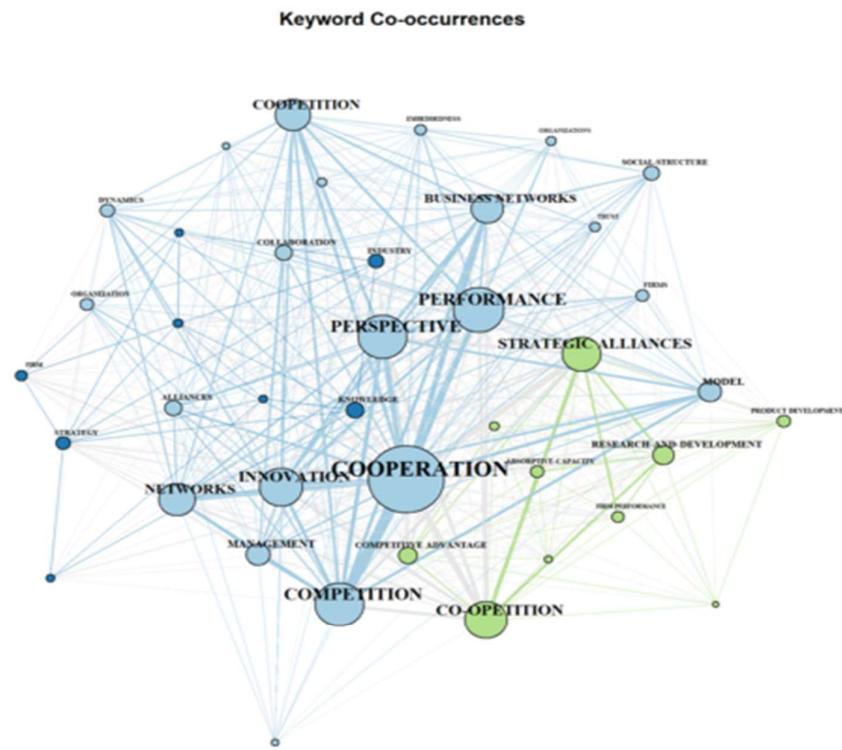
The most productive countries are West countries (USA, France, Finland, UK, with a huge increase of papers in China and Taiwan: the topic has therefore started to develop also in Eastern countries (Fig. 2).

Fig. 2 – The most productive countries



In order to pass to a content's analysis, the study of the co-word networks can be of extreme importance in order to better explore the main topics, both more important and more recent. This co-word analysis is conducted considering both the title and the abstract of the papers. Looking at the keywords' occurrences, I considered the association for 50 plots for the main references and got to a very interesting result, what among the main words associated to competition, beside cooperation and competition, there is also the term "innovation", proving that there is an interest, in the literature, on this relationship (fig. 3).

Fig. 3 – Co-word analysis through keyword co-occurrences



From a strictly strategic perspective, the main reasons that have always fostered firms to cooperate are connected with their need for new resources and competences they do not possess (also for innovation purposes). Starting from this need, firms use their capacities to identify relevant actors in their own industries (Brandenburger & Nalebuff, 1996) and to classify the most profitable relationships to activate even between competitors, in order to generate and maintain competitive advantage (Lado et al., 1997).

Stating that the concept of coopetition is still in the process of development, Bengsston and Kock (2014, p. 182) refine their definition of coopetition, distinguishing it from the other inter-firm relationships and asserting that it is “a paradoxical relationship between two or more actors simultaneously involved in

cooperative and competitive interactions, regardless of whether their relationship is horizontal or vertical".

As shown in table 3, Brandenburger and Nalebuff (1996) define firms' propensity to cooperate and compete simultaneously as coopetition. At this stage, coopetition is strictly related to internal knowledge management and information processes (Loebecke, Van Fanema, & Powell, 1999). In further contributions (Bengtsson & Kock, 2000; Levy et al., 2001; Padula & Dagnino, 2007) the focus is on interfirm relationships since authors stress the attention on the possibility that cooperation and competition activities between firms can increase knowledge sharing. According to the definition of Bengtsson and Kock (2000), coopetition is "the dyadic and paradoxical relationship that emerges when two firms cooperate in some activities, such as in a strategic alliance, and at the same time compete with each other in other activities". At this stage, literature mainly focuses on the nature as well as on the source of coopetition and gives little importance to the benefits these relationships create.

Table 3 – Main contributions on coopetition

<i>Main authors</i>		
Bradenburger and Nalebuff	1996	"Co-opetition is a new way of thinking about business. Some people see business entirely as competition. They think doing business is waging war and assume they can't win unless somebody else loses. Other people see business entirely as co-operation-teams and partnerships. But business is both co-operation and competition."
Bengtsson and Kock	1996	"In any specific relationship elements of both cooperation and competition can be found, but one or the other of these elements can in some cases be tacit. If both the elements of cooperation and competition are visible, the relationship between the competitors is named coopetition"
Lado, Boyd, and Hanlon	1997	"Firms can generate economic rents and achieve superior, long-run performance through simultaneous competition and cooperation."
Laine	2002	"When competitors cooperate there is a continuous tension between competition and cooperation... In practice this means that two firms can cooperate within for example purchasing and service, simultaneously as they compete within manufacturing and marketing... These firms are not solely competitors or rivals in a traditional sense, but they are also partners who cooperate."
Levy, Loebecke, Powell	2002	"Co-opetition entails sharing knowledge that may be a key source of competitive advantage. Yet, the knowledge gained by cooperation may also be used for competition. However, there is little investigation of how this problem may be modelled and, hence, managed. A game-theoretic framework for analyzing inter-organisational knowledge sharing under co-opetition and guidelines for the management of explicit knowledge predicated on coordination and control theory has been proposed but remains untested."
Tsai	2002	"Simultaneous(ly) cooperative and competitive behavior"
Dagnino, Padula	2002	"Coopetition is a matter of incomplete congruence of interests and goals concerning firms' interdependence".
Luo	2004	Coopetition is "to create a bigger business pie, while competing to divide it up".
Eikerkokk, Olsen	2005	"Simultaneous cooperation and competition"

Gnyawali, He and Madhavan	2006	“Coopetition affects firms’ competitive behavior, resource asymmetries in coopetitive networks may lead to different competitive actions”
Padula, Dagnino	2007	Coopetition is “the intrusion of competition in a cooperative game structure”
Luo	2007	“Coopetition is the simultaneous competition and cooperation between two or more rivals competing in global markets”
Bonel, Rocco	2007	“Coopetition emphasizes the mixed-motive nature of relationships in which two or more parties can create value by complementing each other’s activity.”
Wang and Krakover	2008	“Manage the relationship between cooperation and competition, individual benefits and common benefits in order to achieve success for tourism destination and their individual businesses”
Osarenkhoe	2010	“Coopetitive relationships offer the advantage of a combination of the need to innovate in new areas as a result of competition while accessing new resources as a consequence of cooperation”
Wilhelm	2011	Coopetition consists in managing dyadic and horizontal supply chain relations between suppliers “in order to avoid competitive forces from prevailing or diminishing”
Ritala	2012	Coopetition is “having a certain number of competitors in the total portfolio of alliance partners – and on the business environments in which such a strategy is successful.”
Hsieh et al.	2013	“Coopetition is a business strategy based on a combination of cooperation and competition, derived from an understanding that business competitors can benefit when they cooperate.”
Park, Srivastava, Gnyawali	2014	Coopetition and firms’ innovation performance, concept of balanced coopetition (when competition is moderately high and cooperation is high)
Dahl	2014	Coopetition as a process – how cooperative interactions change as competitors acquire new experiences from mutual cooperation and their external environment changes.
Wu	2014	Dynamics of cooperation between competitive actors in R&D development, that can foster both product innovation, concentrating of the implications of both firm specific capabilities and of external linkages (with universities and research institutes).
Ritala et al	2014	Coopetition-based business models are important to put coopetitive strategies into practice and how much value can be created and which portion can be captured by the firm.
<i>Other sources</i>		
EIASM	2004	“Coopetition highlights the need to overcome the oversimplified framework at the base of conventional approaches and proposes a description of more complex market structures where cooperation and competition merge together to form a new perspective. By widening the conventional boundaries of the two more familiar categories of competition and cooperation, coopetition challenges the traditional framework addressing the surge of complexity of actors’ roles, strategies, objectives, processes and rent

		seeking behaviours”
Global Diversity Wikipedia Institute	2006	A constructive tension where both competition and cooperation between agents are pursued, contributing to their mutual benefit. Coherent behavior within a system arises from the interplay of competition and cooperation among the agents.

Source: our elaboration.

Some works underline that coopetition shapes from changes in the business environment and advances in Information and Communication Technologies (ICT) that create new competitive scenarios (Loebecke, Van Fanema, & Powell, 1999). The challenges of globalization and the new competitive scenario have led authors to investigate on one side the sources of coopetition and on the other its effects on competitive advantage. The main contributions on coopetition highlight that firms can decide to establish short- or long-term relationships with their competitors, or to be a competitor and a partner for a firm at the same time. These reflections have opened the scenario to further contributions on the theme, focusing on the nature of the relationships between firms. There are, in fact, different situations that characterize actors' relationships on a territory.

The most recent contributions on coopetition highlight its importance as a business strategy according to which it is possible to generate superior performance (Ritala, 2012; Pike, Yang, & Roos, 2012; Hsieh et al., 2013). The previous reflections are extremely true for Small and Medium Enterprises (SMEs).

According to the degree of coopetition, several scholars have dealt with the different types of interfirm relationships. Recalling a previous work of Easton et al. (1993), Bengsston and Kock (1999) state that the degree of coopetition can be measured looking at the intensity of cooperation between competitors and the degree of distance (dependency) between competitors. This view recalls the type of relationships a firm can activate within a sector. Furthermore, they deal with horizontal and vertical relationships. In this sense, coopetition is an alternative to other types of relationships. Such contributions have led to some other reflections on the theme, identifying reciprocal and multipolar coopetition and analyzing the relationship between coopetition and collusion, stating that “where firms cooperate not just to their mutual benefit but also to the benefit of the consumer, the relationship is not collusive. In this instance, “coopetitive” collaboration has produced a “win-win-win” situation” (Walley, 2007).

The analyzed works show a certain attention to the relationships that can occur between large companies or between large and small firms, with particular reference to the studies on global competition contexts (Luo, 2007). The empirical research on this issue is not largely developed and merely referred to the high-tech industry (Slywotzky & Hoban, 2007; Yami & Nemeh, 2014; Ritala, Golham, & Wegmann, 2014). The most relevant examples in the field are the collaborative arrangements between Hewlett-Packard and Canon or the joint investments and the other collaborating activities between Sony and Samsung (Slywotzky & Hoban, 2007).

The field of study that concerns the network approach (Powell, Koput, & Smith-Doerr, 1996) directs some reflections on the possibility for small firms to obtain greater benefits from the interactions with other actors, here including competitors. Starting from these points of view, coopetition becomes an interesting field of study with reference to the Small and Medium Enterprises (Gnyawali & Park, 2009; Levy et al., 2001), which faces numerous challenges in the emerging markets where there are high R&D costs, disruptions in technological innovation and high risks (BarNir & Smith, 2002; Gomes-Casseres, 1997). Some scholars have analyzed coopetition in SMEs, identifying in the collaboration with competitors the possibility of creating economies of scale, of reducing risks, and of leveraging resources together (Morris, Kocak, & Özer, 2007). These reflections are extremely true with reference to the tourism industry and the systemic approach (Wang & Krakover, 2008; Soubeyran & Weber, 2002). For these reasons, it is interesting to analyze the dynamics of competition and cooperation that occur between SMEs and their attitudes in adopting coopetitive behaviors. The definition that, in this wide range of situations, we adopt in this research is the following (Della Corte & Sciarelli, 2012, p. 369; Della Corte, 2016, p. 525):

a firm which has some cooperation relationships with firms that are, at the same time, competitors in some other market (Dowling, Roering, Carlin & Wisnieski, 1996) or mainly in the same market.

Very interesting, in this reasoning, are the more recent contributions from Dahl, Wu and Ritala et al, that open new horizons in the research on coopetition. Dahl concentrates on the process and therefore on the dynamics of the relationship between as competitors acquire new experiences from mutual cooperation and their external environment changes. Wu studies the dynamics of cooperation between competitive actors in R&D development, that can foster both product innovation, concentrating on the implications of both firm specific capabilities and external linkages (with universities and research institutes). Ritala et al focus on the changes in business models and in their relative dynamics. These contributions better underline the implications of coopetition in firms' strategies and competitive settings. According to what has been underlined before, coopetitive dynamics should have a more positive impact on performance. The lack of empirical investigations (Gnyawali, He, & Madhavan, 2008) does not allow to provide enough evidences in order to measure these positive impacts, but the contributions on the theme highlight that firms engaged in coopetitive relationships can derive valuable resources and strengthen their competitive capabilities (Gnyawali & Madhavan, 2001). In terms of competitive strategies, cooperation between competitors can allow to create added value for the customers as the firms can provide integrated offerings (Mione, 2009) and can share risks and costs of new initiatives or new markets entries (Ritala, 2012). Sharing this optic, it seems interesting to investigate the effects of collaboration between competitors, for example, in terms of popularity (brand) and activation of commercial relations among firms. Furthermore, the literature on the impacts of coopetition is mainly addressed on the effects of coopetition on firms' behaviors (Gnyawali, He, & Madhavan, 2008). In this sense, scholars are mainly focused on the intangible effects of coopetition on firms' performance, studying them

in terms of mutual benefits, trust and commitment (Morris, Kocak, & Özer, 2007) and paying a little attention to the economic impacts of these behaviors on firms' performance. The reason can be traced in the fact that intangible effects of coopetition may produce greater value for the firms, according to the previous assumptions.

2.2. Research scope: coopetition and innovation.

Firms capacities of innovation are considered important factors in gaining and sustaining competitive advantage (Mc Grath et al, 1996). One of the aspects that seems to influence these dynamics a lot is coopetition intensity. There is a wide debate on the topic, since some studies (Gnyawali et al, 2008) assert that high levels of competition and cooperation enhance firm innovation performance, others (Bengtsson et al, 2010) show that the tension deriving from the contradictions and frictions in the relationships (Gnyawali et al, 2012). The specific aspect of the interplay between the two aspects and their impact on performance is starting to be studied. From this point of view, two main approaches have been developed.

On a side, there is the model described by Liu et al (2014), that outlines four situations with different outcome implications:

1. The partnering coopetition type takes place in contexts characterized by high cooperation – share of common goals and interests – and low competition – little disagreements in strategies and market to serve.
2. The adapting coopetition type occurs in front of high cooperation–high competition situations. There is substantial incongruence in their individual approaches, but they continue to cooperate because of their mutual interdependence and relationship-specific investments.
3. The isolating coopetition type corresponds to low cooperation–low competition situations in which the actors have unimportant exchange relationships with little or no interdependence (Wilkinson & Young, 1994).
4. The contending coopetition type corresponds to low cooperation–high competition situations, implying interest divergence, low interdependence, and substantial conflict and opportunistic behaviour (Luo, 2004, 2005).

This view, however, especially with reference to the third situation, appears as more characterized by a prevailing opportunistic view of firm's behavior, giving a negative interpretation to the relationships of high competition and high cooperation. This specific situation is in fact even defined as "adapting", taking into account just the constraints that push a firm to be in the relationships and not also the explicit strategic decision for an overall higher value creation.

Another interesting model is proposed by Park et al, 2014, concentrating on the impact of coopetition on innovation performance, trying to study the effects of simultaneous pursuits of competition and cooperation, as well as the effects deriving from the respective degrees.

These authors consider the possible combinations of coopetition and collaboration, singling out the following situations:

1. Weak levels of both competition and cooperation determine a weak coopetition; strong cooperation and competition generate cooperation-dominant coopetition; strong competition determines competition-dominant coopetition if the cooperation is weak and balanced strong coopetition if also cooperation is strong.
2. The intensity of cooperation of a focal firm with its partners has a positive relationship with the firm's coopetition-based innovation up to a certain level, after which the benefits of cooperation start declining;
3. The effect of balanced strong coopetition on the focal firm's coopetition-based innovation is greater than the competition-based innovation and the cooperation-based innovation.

In their analysis, these scholars consider coopetition-based innovation as dependent on both alliances, on the acquisition of partner's knowledge and on creating private benefits in the partner's knowledge domains.

A more recent study (Della Corte, Aria, 2014, 2016, 2018), gets to similar conclusions, even if with a wider theoretical model, since it encompasses an open resource-based perspective, in analyzing the impact of coopetition on sustainable competitive advantage. This is done by singling out specific variables, for each dimension and valuating also their linkages, through three main indexes: two complex indexes for coopetition and collaboration respectively and a complex index of coopetition that corresponds to the average mean of collaboration and competition indexes. This study reveals interesting for a number of reasons: 1. It considers not just dyadic relationships but network relationships without the necessary presence of a focal firm and this changes the unit of analysis significantly; 2. It takes into account numerous variables for each dimension – collaboration and competition; it links these aspects to competitive advantage, thus confirming that situations of high competition and high collaboration are more open to innovation and this impacts on both firm and network performance.

In all these studies then emerges that the balanced combination of competition and collaboration, especially if high, can generate innovation and therefore favor competitive advantage.

Thinking, more specifically, about open innovation (Della Corte, 2014, Yun, 2017) it is interesting to study in which aspects of open innovation coopetition can mainly impact: on this regard, open innovation has essentially a technological soul, an organizational one and a systemic one (which refers to the relationship between the firm and other external actors). The first two dimensions refer to firm specific capabilities and, therefore, to the more competitive side of the issue; the latter takes into account the possible cooperation a firm can set up and develop, thanks to its relational capabilities.

This view also implies the consideration of the individual versus relational capabilities that, in coopetitive contexts, can favour innovation and therefore competitive advantage. In this framework, however, the sources of competitive advantage are multiple and depend on the firm's capacity of managing all these factors around, not necessarily owned or controlled by the firm itself.

Today the firm is a core of a network of interactions with different actors at more levels, of different sizes and strategic approaches. This determines several possible paths of development in a very complex network of relationships of different nature. This also requires a total revision of the business model of the firm itself. In order to better clarify the actual ongoing process. The firm interacts with competitors and, in this case, innovation is fostered by competition and is linked to the intensity of the competition itself. On the other side, innovation can also be the output of interfirm collaboration, according to the relational view (Dyer, Singh, 1988) and thus generating rents through cooperation. The issue is if coopetition context can be more favorable to open innovation, since they imply a double perspective: firms compete using innovation as a determinant tool on a side and, on the other, cooperate when the level of desired innovation needs complementary resources and therefore requires a collaborative initiative. If, however, there are all these pushes in the overall set of relationships, then the open innovation business model, taking into account that the general framework can be different for large firms compared with small and medium enterprises: in the former case, the model is basically concentrated on the focal firm with its connections; in the latter, the model can also be more community-based and clan system-based. The key aspect is to study the process of knowledge sharing and exchange because the entire process is determined by the will/reluctance of the firm towards knowledge sharing with other actors.

Conclusions.

Coopetition and its relationship with innovation is still an under-explored issue. As underlined in a recent publication (Gnyawaly, Charleton, 2018), there is still a superficial conceptualization of the simultaneity of cooperation and competition processes as well as scares theory on the properties of coopetition and how this influences performance. However, there is a conceptual effort in reinforcing the path towards a theory on coopetition.

Such considerations bring the studies on innovation and of coopetition towards some areas of convergence and overlapping, since it is nowadays impossible not to think about the different types of relations of the firm in its competitive setting and general environment, through multiple interactions also favoured by the most recent advances in open innovation (industry 4.0, with all its connected tools – Umanchadram et al, 2017). This opens up the horizons, both of academics and decision makers, towards a new idea of doing business, much more unstructured but as simplest as possible and efficient. From this point of view, new competencies area required in the firms, new human resources profiles, new suggestions on if, when and how to share knowledge with others. Besides, the main result of this paper is also the relationship between coopetition and innovation: do we have to discuss about coopetition-based innovation or rather of innovation-based coopetition. The hint is that These are the real challenges for the very close future and I think our community has a great responsibility on the issue that, if well examined and studied, can really foster the entire economy towards new interesting and unthought opportunities.

References

- Barney, J. (1986). Strategic factor markets: expectations, luck, and business strategy. *Management Science*, 32(10), 1232e1241.
- Barney, J. B. (1996). The resource-based theory of the firm. *Organization science*, 7, 469-479.
- BarNir, A., & Smith, K. (2002). Interfirm alliances in the small business: the role of social networks. *Journal of Small Business Management*, 40(3), 219-232.
- Bengsston, M., & Kock, S. (1999). Cooperation and competition in relationships between competitors in business networks. *The Journal of Business and Industrial Marketing*, 3(14), 178-194.
- Bengsston, M., & Kock, S. (2000). "Coopetition" in business networks-to cooperate and compete simultaneously. *Industrial Marketing Management*, 29, 411-426.
- Bengsston, M., & Kock, S. (2014). CoopetitiondQuo vadis? Past accomplishments and future challenges. *Industrial Marketing Management*, 43, 180-188.
- Bengtsson, M., Eriksson, J., & Wincent, J. (2010). Co-opetition dynamics an outline for further inquiry. *Competitiveness Review: An International Business Journal*, 20(2), 194-214.
- Brandenburger, A., & Nalebuff, B. (1996). Coopetition. New York: Doubleday.
- Čirjevskis, A. (2016). Designing dynamically "signature business model" that support durable competitive advantage. *Journal of Open Innovation: Technology, Market, and Complexity*, 2(1), 15.
- Damayanti, M., Scott, N., & Ruhanen, L. (2013). A review of the concept of coopetition: application in tourism. In J. Fountain, & K. Moore (Eds.), *CAUTHE 2013: Tourism and global change: On the edge of something big* (pp. 135-145). Christ- church, N.Z.: Lincoln University.
- Della Corte V., Aria, M., (2016) Coopetition and sustainable competitive advantage. The case of tourist destinations, *Tourism Management* ,54 pp. 524 - 540 .
- Della Corte V., Aria, M., Del Gaudio G., (2018), Strategic governance in tourist destinations, *International Journal of Tourism Research*, 2018, pp: 1-13.
- Della Corte, V. (2014). Open, user and smart innovation in cultural firms", in *Management of Cultural Products: E-Relationship Marketing and Accessibility Perspective*, (edited by L. Aiello), IGI-Global.
- Della Corte, V., & Aria, M. (2014). Why strategic networks often fail: some empirical evidence from the area of Naples. *Tourism Management*, 45, 3-15.
- Della Corte, V., & Sciarelli, M. (2012). *Destination management e logica sistemica. Un confronto internazionale*. Torino: Giappichelli.
- Umachandran K., Ferdinand D.S., Jurčić I., Della Corte V. (2017), e-commerce: A Social Engagement Tool, *Journal of Economics and Finance*, vol 8, issue 5., pp. 60-64.
- Dyer J.H., Singh H. (1998), The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage, *The Academy of Management Review*, Vol. 23, No. 4 (Oct., 1998), pp. 660-679
- Easton, G., Burrell, G., Rothschild, R., & Shearman, C. (1993). *Managers and competition*. Oxford: Routledge.
- Eikebrokk, T. R., & Olsen, D. H. (2005, January). Co-opetition and e-business

success in SMEs: an empirical investigation of European SMEs. In System Sciences, 2005. HICSS'05. Proceedings of the 38th Annual Hawaii international conference on. IEEE, 162a-162a.

- Fong V., Wong I., Hong J., 2018, Developing institutional logics in the tourism industry through coopetition, *Tourism Management*, vol. 66, pp. 244-262.
- Glińska E., Siemieniako E., Binge drinking in relation to services – bibliometric analysis of scientific research directions, *Engineering Management in Production and Services*, 2018, Volume 10, Issue 1, pages: 45-54, doi: 10.1515/emj-2018-0004.
- Gnyawali, D. R., & Park, B. J. R. (2011). Co-opetition between giants: collaboration with competitors for technological innovation. *Research Policy*, 40(5), 650-663.
- Gnyawali, D. R., & Charleton, T. R. (2018). Nuances in the interplay of competition and cooperation: towards a theory of coopetition, 44(7), 2511-2534.
- Gnyawali, D. R., He, J., & Madhavan, R. (2008). Co-opetition: Promises and challenges. In *21st century management: A reference handbook* (pp. 386e398). Thousand Oaks, CA: Sage Publications.
- Gomes-Casseres, B. (1996). The alliance revolution: The new shape of business rivalry. Harvard University Press. Gomes-Casseres, B. (1997). Alliance strategies of small firms. *Small Business Economics*, 9(1), 33-44.
- Hosseini, A. S., Soltani, S., & Mehdizadeh, M. (2018). Competitive Advantage and Its Impact on New Product Development Strategy (Case Study: Toos Nirro Technical Firm). *Journal of Open Innovation: Technology, Market, and Complexity*, 4(2), 3.
- Hsieh, Y. H., Lin, Y. T., & Yuan, S. T. (2013). Expectation-based coopetition approach to service experience design. *Simulation Modelling Practice and Theory*, 34, 64-85.
- Kodama, F., & Shibata, T. (2015). Demand articulation in the open-innovation paradigm. *Journal of open innovation: Technology, Market, and Complexity*, 1(1), 2.
- Lado, A., Boyd, N., & Hanlon, S. (1997). Competition, cooperation, and the search for economic rents: a syncretic model. *Academy of Management Review*, 22(1), 110-141.
- Levy, M., Loebbecke, C., & Powell, P. (2003). SMEs, co-opetition and knowledge sharing: the role of information systems1. *European Journal of Information Systems*, 12(1), 3-17.
- Loebecke C., Van Fanema P.C., Powell P., Coopetition and knowledge-transfer, The data-base for advances in Information Systems, Spring 1999, Vol. 30, n.2.
- Luo Y., Toward coopetition within a multinational enterprise: a perspective from foreign subsidiaries, *Journal of world business*, 2005.
- Luo, Y. (2004). Coopetition in international business. Copenhagen: Copenhagen Business Press.
- Morris, M., Kocak, A., & Ozer, A. (2007). Coopetition as a small business strategy: implications for performance. *Journal of Small Business Strategy*, 18(1), 35-55.
- 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.
- Park B.R., Srivastava M.K., Gnyawaly D.R., Walking the right rope of coopetition: impact of competition and cooperation intensities and balance of innovation

performance, *Industrial Marketing Management*, 2014, vol. 43, pp. 210–221.

- Pike, T., Yang, J., & Roos, G. (2012). Is cooperation with competitors a good idea? an example in practice. *British Journal of Management*, 23, 532–560.
- Ritala P., Golnam A., Wegmann A., Coopetition-based business models: the case of Amazon, *Industrial Marketing Management*, 2014, vol. 43, pp. 236–249.
- Ritala, P. (2012). Coopetition strategy e when is it successful? empirical evidence on innovation and market performance. *British Journal of Management*, 23, 307–324.
- Siderska J., Jadaan K. S., Cloud manufacturing: a service-oriented manufacturing paradigm. A review paper, *Engineering Management in Production and Services*, 2018, Volume 10, Issue 1, pages: 22–31 doi: 10.1515/emj-2018-0002.
- Slywotzky A., Hoban C., (2007) "Stop competing yourself to death: strategic collaboration among rivals", *Journal of Business Strategy*, Vol. 28 Issue: 3, pp.45–55.
- Soubeyran, A., & Weber, S. (2002). District formation and local social capital: a (tacit) co-opetition approach. *Journal of Urban Economics*, 1–28.
- Umachadram K. et al, Linking Education technology and Industry 4.0, under review, *Journal of Open Innovation*.
- Walley, K. (2007). Coopetition: an introduction to the subject and an agenda for research. *International Studies of Management & Organization*, 37(2), 11–31.
- Wang, Y., & Krakover, S. (2008). Destination marketing: competition, cooperation or coopetition? *International Journal of Contemporary Hospitality Management*, vol. 20, n.2, 2008, pp. 126–141.
- Yamy S., Castaldo S., Dagnino G.B., Le Roy F., Coopetition winning strategies for the 21st future, Elgar Publishing, 2010.
- Yang S., Fang S., Fang S., Chou C., Knowledge exchange and knowledge protection in interorganizational learning: the ambidexterity perspective, *Industrial Marketing Management*, 2014, vol. 43, pp. 346–358.
- Yun, J.J, *Business Model Design Compass*, Springer, Singapore, 2017.