

Coopetition, Value Co-Creation, and Knowledge-Enhancement in the UK Alpaca Industry:

A multi-level mechanism

Myropi Garri, University of Portsmouth

Abstract:

Notwithstanding the increasing interest in coopetition, relevant research is still composed of loosely connected themes with little contextual focus. Little attention has been paid to explain coopetition at multiple stages and levels, in various industries, and between micro-firms. This paper addresses these gaps by proposing a multi-level mechanism, unravelling the relationship between coopetition management, value co-creation, knowledge-enhancement, and superior performance achievement in micro-businesses. Using qualitative methods, we look at the non-high tech alpaca industry. Results reveal that the successful coopetition management in various coopetition stages, at an individual, organizational, and industry level, leads to value co-creation, knowledge-enhancement, and to the VRIO resources development, and thus drive positive outcomes for the individuals and organizations engaged and for the industry as a whole. This mechanism is influenced by industrial, market, and institutional factors.

Keywords: coopetition in micro-firms, value co-creation, knowledge-enhancement, UK alpaca industry

1. Introduction:

Coopetition is defined as “*a strategic and dynamic process in which economic actors jointly create value through cooperative interaction, while they simultaneously compete to capture part of that value*” (Bouncken et al, 2015: 591). Coopetition is conceived as value-net (Brandenburger & Nalebuff, 1996), dyadic relationship (Bengtsson & Kock, 2000), paradox (Raza-Ullah et al, 2014), business model (Ritala et al, 2014) and

ecosystem (Bengtsson & Raza-Ullah, 2016; 23). Literature explored cooperation's foundations (Dahl et al, 2016), the conditions of its creation (Mariani, 2007), its related processes (Bengtsson & Kock, 1999) and its outcomes (Luo et al, 2006, 2007; Dorn et al, 2016). However, cooperation research is still composed of loosely connected themes (Dorn et al, 2016), reflecting a high fragmentation level (Gast et al, 2015) with little contextual focus (Bouncken et al, 2015). Little attention has been paid to explain cooperation at multiple levels (Bengtsson & Raza-Ullah, 2016). This paper contributes to the cooperation strategy understanding by addressing some of the main field limitations.

Firstly, limited studies explored the essential resources and capabilities for successful cooperation (Bouncken et al, 2015). This paper bridges resource-based view (RBV) with network theory to unravel the relationship between the development of a cooperation network, the development of VRIO resources through value co-creation and knowledge-enhancement, and the achievement of superior performance and competitive advantage in micro-businesses.

Secondly, the literature is scarce of integrative models, including multiple levels of analysis (Bengtsson & Raza-Ullah, 2016). A bridging theory to interconnect the activities and outcomes of cooperation at multiple levels is needed (Bengtsson & Raza-Ullah, 2016), as these levels are integrated and affect each other, shaping the phenomenon overall. This paper fills this gap by illustrating the mechanism that interconnects the management and outcomes of competition, considering the moderators of this relationship, spanning multiple levels of analysis. Thus: *“How does cooperation take place at multiple levels of analysis, and how does it evolve through time?”* and, more specifically, *“How does the cooperation management at different stages of the cooperative relationship affect the cooperation outcomes and at individual,*

organizational and industry level; and what are the environmental forces that influence this link?”

Thirdly, in coopetition literature, limited studies examined coopetition and value co-creation between small-and medium-sized enterprises (SMEs) (Thomason et al, 2013; Bouncken et al, 2015). Coopetition can offer a viable solution for SMEs’ limited resources and market share, and assist them mitigate risks and costs (Morris et al, 2007), improve their competitive position (Lechner et al, 2014), improve their financial performance, as well as develop the overall market (Tidstrom, 2014). This paper contributes to the development of our understanding on the coopetition management and outcomes between SMEs by bringing evidence from cooperative micro-businesses. We aim to find out *“How does the mechanism between coopetition management, value co-creation and knowledge-enhancement, and performance outcomes operate in the context of micro-businesses?”*

Fourthly, coopetition literature has not been extended to multiple research contexts, a fact that limits its generalizability (Bouncken et al, 2015). The majority of coopetition studies focused in high-tech, information-based sectors (Bouncken & Kraus, 2013), biotechnology (Lai et al, 2007) and similar knowledge-intensive, dynamic, and complex industries. These industries are characterized by uncertainty, turbulence, rapid changes, and increasing need for investment, composing a framework that can drive coopetition by offering a strategic alternative and by creating risk-sharing opportunities (Bouncken & Kraus, 2014). As a result, these studies have been influenced by the specific industry characteristics, leading many researchers to agree that the understanding of coopetition should expand beyond high-tech, dynamic, knowledge-intensive industries (Bouncken & Kraus, 2013). This paper addresses this gap as it brings evidence from a different kind of industry; livestock farming. We chose the

alpaca industry as it fits the criteria of a non-high-tech industry, composed by micro-businesses, extensively using coopetition strategies. Hence, *“How does the mechanism of coopetition management-value co-creation and knowledge-enhancement outcomes operate in the context of micro-businesses in the non high-tech alpaca industry?”*

Because of the nature of the industry and of the phenomenon explored, we used qualitative research methods. The findings of this research contribute to the examination and demystification of the coopetition architecture in micro-businesses, at multiple levels of analysis, in a non-high tech, non-knowledge-intensive industry.

Next, the paper explores coopetition’s theoretical background that leads to propositions development. Methods discuss the methodology chosen and explain its implementation. Thematic analysis’ results and their discussion occupy the last part of the paper, accompanied with the implications and the limitations of the research, and useful conclusions.

2. Literature Review

2.1 Networks, resource-based view (RBV), value co-creation, and knowledge-enhancement: The foundations of growth and competitive advantage in cooperative SMEs

Various theories explain growth and competitive advantage in firms. Environmental turbulence and volatility (Wu, 2010), competitive rivalry and internal influences are among the major driving forces of the strategies development leading to competitive advantage (Wu, 2010). The UK alpaca industry, being in the introduction phase of its life cycle, is dominated by micro-firms, with low profits, limited resources and knowledge, and low competitive rivalry. The industry is rather stable, compared with knowledge/tech-intensive industries. Thus, growth is driven by the internal forces of

the firm, the ones these companies aim to develop through cooperation. Therefore, RBV can act as a convincing theory of the firm's growth.

RBV suggests that organizations holding valuable, rare, inimitable resources, and are organized to capture the resources' value (VRIO), have high chances of achieving competitive advantages (Barney, 1995). RBV identifies the crucial role of the company's capabilities (intangible assets, such as knowledge and innovation), differentiating them from resources (tangible assets, such as cash and premises), to illustrate how the first contribute to achieving higher levels of organizational performance (Lavie, 2006). Cooperation occurs within lateral business networks, where companies are competitors (Pathak et al, 2014). The combination of RBV and network theory provides a unique lens for the study of firm behavior. It enhances our understanding of the relationships that develop through interactive processes (Bengtsson and Kock, 2000). Moreover, it frames the analysis of the interconnections between the strategic resources and capabilities between companies, identifying them as the driving forces of the firm's growth (Wills-Johnson, 2006).

Kay (1993) early linked RBV with cooperation networks. Later, Gnyawali and Park (2009) adopted an RBV lens (including a knowledge-based view) to examine cooperation between SMEs (Sirmon & Hitt, 2003). Instead of investing time and funds to organically develop resources and capabilities, SMEs can turn to their network members for partnerships or for cooperation (Bounchen et al, 2015). Collaborating competitors integrate resources, develop information synergies, and transfers between different people within the network, to co-create value (Lavie, 2006). The value-creation potential of cooperative networks is greater than the one of non-competitive interfirm collaboration (Granata et al, 2018), as cooperative networks are significant channels for knowledge acquisition and flow (Alves and Meneses, 2015). Despite

creating value from the shared resources, they still compete and gain competitive advantage through their firm-specific uniqueness (Ritala & Sainio, 2014). Competitors also share the risk and the development cost of resources and capabilities, while increasing their utilization through coopetition (Dussage et al, 2009). Moreover, firms seek to use fewer resources or to increase the resources allocation efficiency (Dussage et al, 2000). The ability to cooperate is becoming increasingly important for SMEs (VanGils & Zwart, 2009) to gain access to complementary competences and other unique resources (Bengtsson & Kock, 2000) and to improve their overall efficiency and competitiveness through the combined strategic activities development (Gnyawali et al, 2009). Accessing these resources through coopetition, while nurturing their uniqueness, enables companies to mitigate the competitive pressure, acquire new knowledge, and achieve economies of scale and scope (Granata et al, 2018). Summarizing, cooperation between SMEs contributes to competitiveness, growth, profitability, and survival (Lee et al, 2012; Granata et al, 2018).

2.2. Coopetition Management

Fruitful coopetition has to be carefully managed to balance the interplay between cooperation and competition (Park et al, 2014; Bouncken et al, 2015). Coopetition is an interconnected activity where individual and organizational perceptions and experience influence organizational operations, the interconnections between competitors and the coopetition outcome (Bengtsson and Kock, 2000).

2.2.1 Coopetition management at an individual level

At an individual level, when coopetition initiates, managers should decide who to cooperate with. As relationships in coopetitive networks are built on trust and mutuality

(Bengtsson and Kock, 1999), previous personal connections between decision-makers and successful prior association; trust between top managers; strong commitment; similar status, and ease of communication are among the *partner selection* criteria managers use at an individual level (Das & He, 2006), setting the basis for coopetition success (Alves & Meneses, 2015).

When coopetition is established, managers should use *relational capabilities* and *management leadership* (Chin et al, 2008) to enable knowledge sharing and value co-creation among the company's network (Ngugi et al, 2010). Leading the coopetitive process is not easy, as managers simultaneously seek private and common benefits (Khanna et al, 1998; Park et al, 2014), share information, and resources while protecting knowledge leakages (Ho & Ganesan, 2013), learn from each other (Ding et al, 2012).

Coopetition managers have to *predict and control tensions*. Managing cultural differences (Bengtsson & Johansson, 2014), tensions, and conflicts emerging from seeking contradictory goals, and resolving disputes contributes to trust and a social context development between the coopetitors (Eriksson, 2008), and therefore to coopetition success (Lacomba et al, 2011). Hence, communication, engagement, openness, coordination and trust between the coopetition managers have to be developed to set the framework for value co-creation and knowledge-enhancement between the partners.

Thus,

Proposition 1a: *To successfully manage coopetition at an individual level, managers will select their partners based on personal connections, and successful prior associations, ease of communication, and personal chemistry, setting the foundations*

of trust. After the establishment of coopetition, managers will have to develop and use relational capabilities, such as communication, engagement, commitment and openness to establish real trust.

2.2.2 Coopetition management at an organizational level

At an organizational level, when coopetition initiates, *partner selection*, along with the project's content and its governance structure, guarantee balance in a cooperative relationship (Cassiman et al, 2009). Partner selection is a complicated process affected by fit, trust, and strategic expediency (Bierly & Galagher, 2007). Complementary products or skills; financial resources; technology capabilities or uniqueness; location; marketing or distribution systems or established customer base; reputation and image; government relationship; help in faster entry into the target market; and industry attractiveness, strategic fit or interdependence or compatible goals; compatible or cooperative culture and ethics; and reciprocal relationship (Das & He, 2006) are the main criteria for partner selection at an organizational level.

Coopetitors should develop a *coopetitive mind-set* (Gnyawali & Park, 2011) taking into account that their cooperative partner should enjoy part of the value that will be created. When an opportunistic mind-set is adopted, hostility emerges between partners, as each part aims to maximize its own benefit at the expense of the other (Bengtsson & Kock, 2000). To avoid such tensions and protect themselves from competition, companies should define clearly "what to share, with whom, when and under which conditions" (Levy et al, 2003: 642).

Coopetitive companies benefit from competition, because each company has to differentiate their position, products, and services and to outperform its partner (Alves and Meneses, 2015). The company's ability to benefit from coopetition depends on the

degree to which a firm can *differentiate and protect its uniqueness* against imitation (Ritala & Hurmelinna-Laukkanen, 2013) from the beginning of coopetition. Therefore, when coopetition is established, the information flow, knowledge and competences have to be *controlled*, to achieve the right *balance* between sharing for value co-creation, and unintended sharing of core elements that can be copied by the rival (Bengtsson & Kock, 2000). *Control mechanisms* inhibit damaging information leakages and trigger the necessary sharing and integration of resources and capabilities between the partners (Bouncken et al, 2015). Additionally, the company's absorptive capacity will enable the acquisition and capitalization of information, knowledge and resources coming from the coopetitive partner (Ritala & Hurmelinna-Laukkanen, 2013). Hence, it is important to choose coopetitive partners with complementary resources and capabilities portfolios (Gnyawali & Park, 2011).

Therefore:

Proposition 1b: *At an organizational level, companies will have to choose partners based on their profile, expected contribution and trustworthiness. They will have to protect themselves from their coopetitors and set the foundations for a fruitful relationship, through a differentiation strategy and through the establishment of control mechanisms aiming to inhibit damaging information leakages and enable the rational, fair and balanced sharing and integration of resources and capabilities.*

2.2.3 Coopetition Management at an industry level

At an industry level, especially in the case of industries in early or late stages of their life cycle, managing coopetitive relationships in a way that is going to produce value for the industry, is of utmost importance for the industry's survival (Harfield, 1999), for the establishment of its reputation, and for rapid standard-setting (Gnyawali & Park,

2011). In new industries composed by micro-firms, companies can face the liability of newness and smallness by joining forces and integrating resources through cooperative activities, *strengthening the whole industry* (Flanagan et al, 2018). Thus, cooperation management should include the pursuit of economic rent-gaining resources as well as strengthening the market viability overall (Geraudel and Salvetat, 2014). The management and sharing of the financial risks of various activities, that could include *educational* activities related to the design and launching of new products and services, *diffuses knowledge, builds awareness*, boosts the quality offered by the cooperation network, and by the industry overall (Eriksson and Westerberg, 2011), promoting industry growth (Gnyawali and Park, 2009). Thus,

Proposition 1c: *In a newly established industry occupied by micro-firms, companies will prioritize the industry's development, engaging in activities aiming to educate, build interest and awareness, to improve the average product quality and to promote industry growth.*

2.3 Cooperation outcomes and performance effects

2.3.1 Cooperation outcomes and performance effects at an individual level

Engaging in cooperation requires managers to cooperate to set up structures and mechanisms to enable knowledge-enhancement and value co-creation through resources' and knowledge sharing (Dorn et al, 2016). Through this process, managers enable effective communication, set joint objectives, exchange information and ideas, resolve conflicts (Eriksson, 2008), control and adjust the cooperative relationship (Bengtsson & Kock, 2000; Ding et al, 2012), and ultimately *learn* and absorb the *diffused knowledge*. According to the social embeddedness framework, a successful cooperation management at an individual level, not only leads to *social network*

development, but also strengthens the *managers' portfolio of skills and knowledge*, leading to stronger ties between the involved parts, directly affecting the company's performance (Luo et al, 2006). Thus,

Proposition 2a: *Coopetition managers will strengthen the portfolio of their management skills, will enhance their knowledge through the absorptions of ideas and information exchanged, and they will develop a social network between the parts involved in the coopetition activity.*

2.3.2 Coopetition outcomes and performance effects at an organizational level

Coopetition boosts performance as firms achieve their goals faster (Peng et al, 2012). Coopetition is a *financial gain* and value-creating mechanism (Ritala, 2012) that promotes *innovation* (Quintana-Garcia and Benavides-Velasco, 2004), increases *sales and market share* (Gnyawali et al, 2009), promotes international *brand recognition* and *market penetration* (Rodrigues et al, 2011), and improves firm's *performance* (Robert et al, 2009).

Coopetition drives network synergies (Zineldin, 2004) through granting access to economic rent-gaining resources and to *economies of scale* while *reducing the risk* of pursuing these strategies (Cygler et al, 2014). Risk reduction produces mutual benefits as risk is shared (Dittrich and Duysters, 2007; Akdoğan et al, 2015). The pursuit of economic rent gain is spread between partners, enabling an increase in potential performance while spreading both the financial risk and the innovation success risk (Chen et al, 2013). Sharing information unique to a firm allows coopetitors to *gain knowledge* that improves their position and helps them acquire new skills (Schiaivone & Simoni, 2016) and access *rare and complementary resources* (Akdogan et al, 2015).

Moreover, coopetition can alter the firm's internal processes and structures (Bouncken et al, 2018). Except for *product innovation* (Gnyawali et al, 2009), companies can be led to radical business model innovation, as they seek differentiation from their coopetitors (Ritala & Sainio, 2014).

Therefore,

Proposition 2b: *We expect to find that the coopetition outcomes for micro-firms at an organizational level will include their financial performance improvement in terms of sales, profits, economies of scale, and cost reduction. It will improve the companies access to rare and complementary resources, mitigating the risk of their acquisition. It will drive the companies to network development, increased recognition, market development and innovation related to their products, services, and operations, consequently improving their overall performance.*

2.3.3 Coopetition outcomes and performance effects at industry and market levels

Sharing the financial risk of activities, including new product development, increases the *quality level* produced by the industry (Eriksson and Westerberg, 2011), promoting *industry growth* (Gnyawali and Park, 2009). SMEs and younger industries can gain similar benefits (Morris et al, 2007) as coopetition acts as a key strategy to reduce risk and to increase performance and efficiency (Czakon and Rogalski, 2014). Access to resources, knowledge-flows and the development of companies' skills (Schiavone and Simoni, 2016) are particularly effective for an industry at the beginning of its life cycle, with mutual benefits gained from *strengthening the industry* (Padula and Dagnino, 2007). Complementing one another rather than competing will aid market growth rather than diminish it, because firms will mutually contribute to expanding the industry rather than undercutting one another's business (Brandenburger & Nalebuff, 1996).

Furthermore, cooperation influences the structure and the dynamics of the industry, as cooperation drives other actors to evolve or to engage in cooperation to reinforce their strategic position (Thomason et al, 2013).

At a market level, a successful cooperation can increase the market size or create a new market, because it improves the product range offered (Beldebros et al, 2004), and subsequently improves the industry's reputation in markets (Rodrigues et al, 2011). By improving the current market position to compete with foreign markets, cooperation is a viable strategic option that provides mutual benefit for SMEs and benefits the market, increasing consumer value (Kotzab & Teller, 2003).

Proposition 2c: *We expect that cooperation between micro-firms will result in improving the quality standardization and the industry itself, at an industry level. Also, cooperation between micro-firms will result in an increased market size, at a market level.*

Moreover,

Proposition 3. *We expect that the management practices and decisions made at an individual, organizational, and industry level, will relate to the cooperation outcomes at an individual, organizational, and industry level.*

2.4 Factors affecting the management and cooperation outcomes at all levels

Despite the advantages, the cooperation outcomes can be negative for the companies due to knowledge leakages, or the partner's opportunistic behavior. Cooperation outcomes will depend primarily on the cooperative relationship management. Still, the outcomes' intensity will also depend on factors beyond the company's control.

Opportunities and threats emerging from the external environment affect the strategic decisions companies make (Padula & Dagnino, 2007). Elements like *the competitive environment's evolution*, along with the growing *customer demands* for high-quality, integrated, unstandardized, and also affordable products and services, drive companies to cope by shaping and reshaping their interactions with other companies (Bengtsson & Raza-Ullah, 2016). As the level of these external influences fluctuates, the outcome of the interactions shaped between firms will be affected (Pathak et al, 2014).

Market uncertainty drives firms to reshape their strategic behavior and therefore affect competition outcomes for firms looking to reduce their risk, and to improve the market environment (Ritala, 2012). Cooperation outcomes depend on the *market structure*; this includes the abundance of complementary resources that are transferable between competitors and common goals (Bengtsson and Kock, 2000).

The *institutional environment* also affects the cooperation outcomes through the imposition or the withdrawal of cooperation incentives by *policy makers* (Mariani, 2007).

Proposition 4: *We expect that the structure and nature of the market in terms of demand conditions, product specifications and price-related pressures, the institutional environment in terms of stability, legislation and government support and the competitive environment in relation to the competitive rivalry's intensity, risk surge, and the newness and smallness of the industry, will boost or weaken the outcome of the link between cooperation management and outcomes.*

[Table 1](#) gathers the propositions together to present the developed framework of thought.

	Individual Level	Organizational Level	Industry Level
Management of Coopetition	Proposition 1a: To successfully manage coopetition at an individual level, managers will select their cooperative partners based on personal connections, and successful prior associations, ease of communication, and personal chemistry, setting the foundations of trust. After the establishment of coopetition, managers will have to develop and use relational capabilities, such as communication, engagement, commitment, and openness to establish real trust.	Proposition 1b: At an organizational level, companies will have to choose partners based on their profile, expected contribution, and trustworthiness. They will have to protect themselves from their competitors and set the foundations for a fruitful relationship, through a differentiation strategy and through the establishment of control mechanisms aiming to inhibit damaging leakages of information and enable the rational, fair and balanced sharing, and integration of resources and capabilities.	Proposition 1c: In a newly established industry occupied by micro-firms, companies will prioritize the development of the industry, engaging in activities aiming to educate, build interest and awareness, to improve the average product quality, and to promote industry growth.
Outcomes of Coopetition	Proposition 2a: Coopetition managers will strengthen the portfolio of their management skills, will enhance their knowledge through the absorptions of ideas and information exchanged, and they will develop a social network between the parts involved in the coopetition activity.	Proposition 2b: We expect to find that the main outcomes of coopetition for micro-firms at an organizational level will include the improvement of their financial performance in terms of sales, profits, economies of scale, and cost reduction. It will improve the companies' access to rare and complementary resources, mitigating the risk of their acquisition. It will drive the companies to network development, increased recognition, market development, and innovation related to their products, services, and operations, consequently improving their overall performance	Proposition 2c: We expect that coopetition between micro-firms will result in improving the quality standardization and the industry itself, at an industry level. Also, coopetition between micro-firms will result in an increased size of the market, at a market level.
Relationship	Proposition 3. We expect that the management practices and decisions made at an individual, organizational, and industry level will relate to the outcomes of coopetition at an individual, organizational, and industry level.		
External Influences	Proposition 4: We expect that the structure and nature of the market in terms of demand conditions, product specifications and price-related pressures, the institutional environment in terms of stability, legislation and government support, and the competitive environment in relation to the level of competitive rivalry, risk surge, and the newness and smallness of the industry will boost or weaken the outcome of the link between the management and the results of coopetition.		
Table 1: The framework of thought			

3. Methodology

3.1 Research Design

Adopting a qualitative positivism approach (Yin, 2014), this paper aims to unravel the link between the coopetition management and outcomes, illustrating the moderating

factors of this relationship. Due to the lack of extensive research on cooperative SMEs, qualitative research, applied through in-depth semi-structured interviews, is appropriate to examine the phenomenon in-depth (Hyde, 2000) and unraveled evidence on our propositions (Turner, 2010). They encouraged more data and new intelligence to be extracted on aspects that may not have been covered by more structured and restricted questions, for example, questionnaire-style questions (Hyde, 2000). Interview questions followed themes pre-determined by the literature. Firstly, the profile of the organization was explored, then the extent to which cooperation is evident. Detailed questioning followed to understand how the organizations manage cooperation (decision-making mechanism), and to monitor cooperation outcomes. Then, questions explored the competitive environment of the UK alpaca industry, and the cooperation outcomes for the industry. Next, questions examined the influences affecting the link between the management and the outcomes of cooperation.

3.2 The UK Alpaca Industry

The UK alpaca is a young industry, occupied by micro-firms, in an early life cycle stage, where cooperation is regularly observed (Gnyawali & Park, 2011). Cooperation has been studied mainly on large-scale, information-based organizations. The alpaca industry allows us to understand cooperation outside of the framework traditional cooperation literature has set. The case of the UK alpaca industry is unique, as the growth of the UK market follows a different pattern compared with other well-established markets, such as Australia and the USA (McGregor, 2006). Investigating cooperation in this industry offers the opportunity to research the suitability of cooperation both for the micro-firms that occupy the industry, and for the young,

growing industry itself. It is also beneficial to explore this industry due to the vivid evidence of coepetition initiatives between the companies.

3.3 Data collection and sample

We conducted both face-to-face and telephone interviews because of the location of the interviewees (Stephens, 2007). Telephone interviews allowed for more spread. Those located closer were interviewed face-to-face. Both interview types followed the same questions, structure, and analysis process. To establish trust with respondents and increase the likelihood of accurate responses, the motives behind the topic were discussed (Orb et al, 2001) and confidentiality was guaranteed (Tolich, 2004).

The “UK Alpaca Breeders” directory lists 123 companies. Sixty-eight of them own less than 50 alpacas. Most of these companies were excluded, because they do not cooperate much with other breeders and/or alpacas is more like a hobby rather than a business activity. Fifty-five of them own more than 50 alpacas. This is our main focus group. We contacted 57 companies in total. We conducted 29 interviews. Twenty-eight companies were either not interested in participating or not cooperating with other breeders. The sample represents more than 24% of the industry.

[Table 2](#) presents the companies’ of the sample profile

Company	Location	Establishment year	Employees	Alpacas	Market entered	Main market of turnover	Type of coepetitive relationship
1	Buchinghamshire	2003	5	1000	Europe/ International	Europe/ UK 50/50	Competition-dominated
2	Buchinghamshire	2004	4	1000	Europe/ International	Europe/ UK 50/50	Competition-dominated

3	Buchinghamshire	2014	0	80	National	National	Equal-relationship
4	Cardiganshire	2003	0	70	National	National	Cooperation-dominated
5	Cornwall	2004	0	29	National	National	Equal-relationship
6	Dorset	2006	3	300	International	National	Equal-relationship
7	Dorset	2010	4	600	International (Europe)	National	Equal-relationship
8	Dorset	2000	0	56	National	National	Competition-dominated
9	East Sussex	2000	4	120	Local	Local	Coopetition-dominated
10	Essex	2016	0	50	National	National	Equal-relationship
11	Essex	2014	0	34	National	National	Equal-relationship
12	Gloucestershire	2004	0	32	Local	Local	Equal-relationship
13	Gloucestershire	2004	4	87	International	National	Competition-dominated
14	Gloucestershire	2012	1	80	International	National	Competition-dominated
15	Gloucestershire	2002	9	280	International (Europe)	National	Equal-relationship
16	Hampshire	1998	1	50	International (Europe)	National	Competition-dominated
17	Hampshire	2010	2PT	64	Local	Local	Equal-relationship

18	Hampshire	2011	0	107	Local	Local	Competition-dominated
19	Isle of Wight	2010	11	89	National	National	Equal-relationship
20	Kent	2015	1	36	National	National	Coopetition-dominated
21	Lancashire	2009	1PT	140	International	International (Europe)	Coopetition-dominated
22	North Yorkshire	2009	4PT	60	National	National	Equal-relationship
23	Northumberland	2000	0	30	Local	Local	Equal-relationship
24	Nottinghamshire	2016	0	20	National	National	Coopetition-dominated
25	Somerset	2007	0	67	International (Europe)	National	Coopetition-dominated
26	Suffolk	2012	2	50	International (Europe)	National	Coopetition-dominated
27	West Dorset	2006	3	300	International (Europe)	Europe/ UK 50/50	Equal-relationship
28	West Sussex	2005	5	56	National	National	Equal-relationship
29	West Sussex	2005	8	925	International (Europe)	Europe/ UK 50/50	Equal-relationship

Table 2: The profile of companies

Companies were established between 1998 and 2017. Herd sizes vary from 20 to 1000 alpacas. The average number of full time and part time staff is 2.45 (micro-firms). All companies are located in rural areas. Five out of 29 companies trade within Europe. All

companies were engaged in coepetition activities. Regarding the type of coepetitive relationships observed (Bengtsson and Kock, 2000), 7 lean toward cooperation, 7 lean toward competition and for 15 of them, the two dimensions are relatively balanced. The cooperation goals are related to access to tangible and intangible resources (economic/ financial, knowledge/learning and networking, expertise), and also related to quality enhancement. Customer-driven incentives (customer satisfaction, meeting demand, sales promotion, market access) and networking motivations are also observed.

[Table 3](#) illustrates the interviewees' profile.

Interviewee	Position in the Company	Years in Position	Educational Background	Age	Sex
I1	Director/Owner	16	Related (Agricultural College)	66	Male
I2	Director/ Owner	20	Related (Agriculture)	66	Male
I3	Owner	4	Unrelated (Health)	63	Female
I4	Owner	16	Unrelated (English Lit.)	67	Female
I5	Director/ Owner	15	Unrelated (Engineering)	69	Male
I6	Director/ Owner	11	Unrelated (Science)	42	Male
I7	Manager	1	Related (Practical Experience from childhood)	32	Male
I8	Director/Owner	20	Unrelated (Army)	63	Female
I9	Owner	20	Related [Scientific (Zoology and Comparative Fish Biology)]	54	Female
I10	Partner	2	Unrelated (Banking)	56	Female
I11	Owner	5	Unrelated (University)	55	Female
I12	Owner	15	Unrelated (A levels)	55	Male
I13	Owner	15	Unrelated	55	Male
I14	Owner	12	Related (A levels & Advanced courses in livestock farming)	60	Female
I15	Owner	17	Unrelated (A levels)	61	Male
I16	Partner	15	Unrelated (No. Uni. College)	60	Female

I17	Owner	9	Unrelated (Education)	68	Male
I18	Manager/Owner	8	Unrelated	52	Female
I10	Director	8	Unrelated (Local College)	44	Female
I20	Owner	4	Unrelated (Business)	54	Male
I21	Owner	10	Unrelated	50	Male
I22	Owner	10	Related (Farming)	53	Female
I23	Owner	20	Related (Farming)	76	Female
I24	Owner	2.5	Related (Breeding and Stud Management)	32	Female
I25	Owner	12	Unrelated (A levels)	55	Male
I26	Owner	16	Unrelated	50	Female
I27	Owner/Director	14	Related (Science Degree/ Agriculture)	38	Male
I28	Owner	15	Unrelated (Languages)	57	Female
I29	Director/ Owner	15	Related (Agricultural College)	62	Male
Table 3: The profile of the interviewees					

All interviewees are the owners of their organizations. Their age ranges between 38 and 62. Most of them had degree level qualifications or higher. The sample was split between men and women.

3.4 Working with the data

Interviews were recorded and transcribed. NVivo-12plus was used to conduct a thematic analysis, providing an effective measure for testing propositions and sorting data to analyze trends and themes (Braun and Clarke, 2006). Most themes and sub-themes were predetermined, while a few new ones emerged while coding. [Table 4](#) lists the major themes and sub-themes.

Management of Coopetition					
<i>Concept (Theme)</i>	<i>Variable (Sub-theme)</i>	<i>Sources</i>	<i>Times</i>	<i>Level</i>	<i>Coopetition Stage</i>
Relational Capabilities and Routines	Improve contact/ communication	5	10	Individual	2
	Develop a good relationship—openness (manage the relationship)	3	6	Individual	2
	Establish mutual trust	5	7	Individual	2
	Coordinate, make management easy	2	3	Individual	2
Partner Selection	Chemistry—easy to work with	6	6	Individual	1
	Expected contribution-added value	4	4	Organizational	1
	Previous achievements—experience	3	4	Organizational	1
	Location/ proximity/ not	4	7	Organizational	1
	Profile of the company	1	1	Organizational	1
	Size	3	3	Organizational	1
Balance	Fairness (equally spread risk/ guarantee equal benefit)	2	4	Organizational	1
Resources Sharing	Rational use / Management of common resources (sharing)	2	4	Organizational	2
	Share knowledge and experience (sharing)	10	10	Organizational	2
Strategic Positioning	Differentiation Strategy (heterogeneity)	2	2	Organizational	1
	High degree of input= strong player	2	2	Organizational	1
Control	Establish control mechanisms	3	5	Organizational	2
Invest in the Industry Development	Support the creation of a national industry	1	2	Industrial	1
	Educate other companies—invest	4	5	Industrial	2
	Build Interest and Awareness	3	6	Industrial	2
Coopetition Outcomes					
<i>Concept (Theme)</i>	<i>Variable (Sub-theme)</i>	<i>Sources</i>	<i>Times</i>	<i>Level</i>	<i>Coopetition Stage</i>
Diffusion of Knowledge	Knowledge and Learning	15	17	Individual	3
	Information exchange, innovation, new ideas and new strategy	10	13	Individual & Organizational	3
Financial Benefit	Spread/ mitigation of the financial risk	5	14	Organizational	3
	Economies of Scale	4	6	Organizational	3
	Improved Sales/ Profits	11	15	Organizational	3
	Improved Prices	1	2	Organizational	3
	Reduced Cost	9	12	Organizational	3
Resources	Spread the cost = access to financial and non-financial resources	9	13	Organizational	3

	Access to rare resources (genetics)	19	29	Organizational	3
	More resources to devote elsewhere	2	2	Organizational	3
	Shorter time frames for checking the quality of resources (progeny)	1: I3	1	Organizational	3
Growth/ Overall Performance	Improved Efficiency– Productivity	6	6	Organizational	3
	Overall outcome: our business has grown	2	2	Organizational	3
Access and Development	Business Network Development	4	4	Organizational	3
	Social Network Development	4	4	Individual	3
	Development of a Support Network	5	5	Individual &Organizational	3
	New Product Development	2	3	Organizational	3
	Development of a credible profile	3	3	Organizational	3
	Access to customer networks (coopetitors' contacts)	5	6	Organizational & Market	3
	Appeal to a greater market place	1	1	Organizational & Market	3
	Access to a foreign market	1	2	Organizational & Market	3
Industry Improvement	Improved Quality–Create a Niche	12	17	Industrial	3
	Diffusion of Ideas– Innovation	6	6	Industrial	3
	Industry Growth	6	8	Industrial	3
	Cohesiveness and Safety	3	3	Industrial	3
Influences affecting the management and outcomes of coopetition in various levels					
<i>Concept (Theme)</i>	<i>Variable (Sub-theme)</i>	<i>Sources</i>	<i>Times</i>	<i>Level</i>	<i>Coopetiton Stages</i>
Industry Influences	Competitive Rivalry	9	15	Industry	All
	Increased levels of risk [Disease] (Industry-specific)	8	10	Industry specific	All
	Newness and Smallness	5	5		
Market Influences	Demand Conditions=the product is becoming popular= sale of natural fiber	2	4	Market	All
	Pressures on price-cost	3	4	Market	All
	Demand in product specifications	1	1	Market	All
Institutional Influences	Government support– Legislation	2	2	Institutional	All
	Political Instability– BREXIT	2	2	Institutional	All
Table 4: Major themes and subthemes of the analysis					

4. Results and Discussion

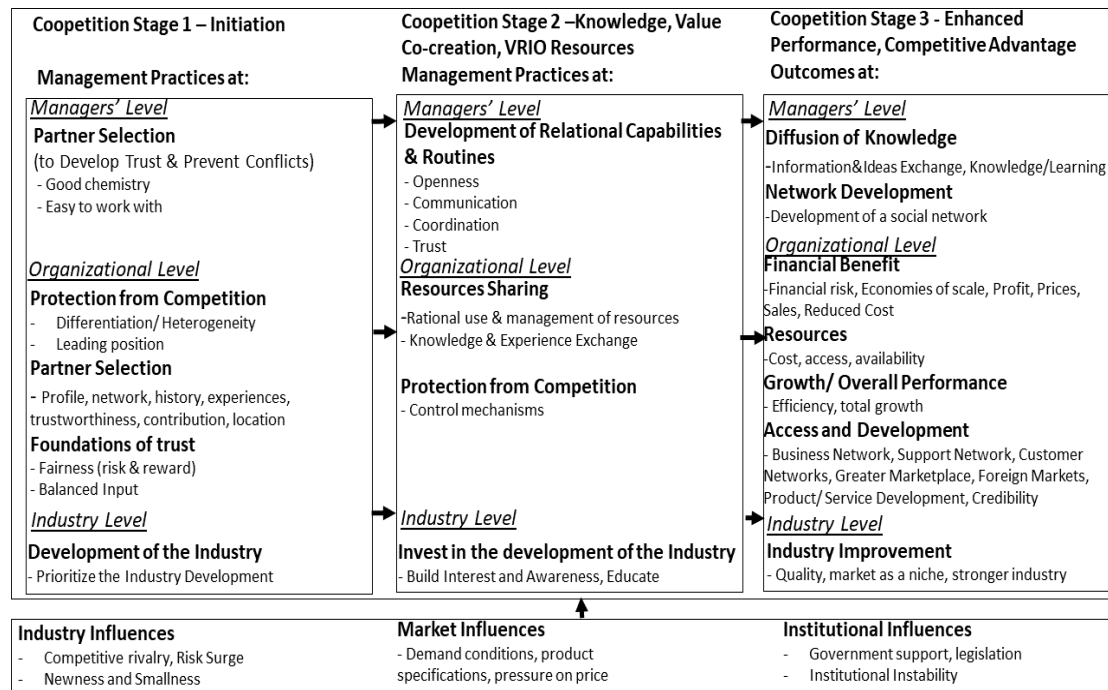


Figure 1 presents the mechanism interconnecting coopetition management and outcomes, at an individual, organizational, and industry level, at three stages of coopetition: initiation, knowledge-enhancement, value-co-creation, enhanced performance-competitive advantage. Also, it presents the main industrial, market, and institutional forces regulating the outcome of the link between coopetition management and outcomes.

4.1 Coopetition Management at various levels through time

Coopetition management is an underexplored area (Dorn et al, 2016). Coopetition managers deal with relationship building, structural complexity, partner selection, resources sharing (Albers et al, 2015). Simultaneously, companies continue to compete as “*Most alpaca owners see the other breeders as competition rather than as collaborators*” (15). We asked the interviewees to discuss on the decisions made and on the elements managed, to develop a successful coopetition strategy that will

generate positive outcomes. We add to coopetition research by identifying the specific management requirements leading to successful coopetition, at various stages.

4.1.1 Coopetition management at an individual level

At an individual level, managers handle tensions and conflicts arising between the coopetitive partners (Tidstrom, 2014). Previous papers examine the value of trust (Bierly et al, 2007), and the sources and types of conflicts (Fernandez et al, 2014), without considering how these tensions can be prevented (Dorn et al, 2016). Moreover, the antecedents, dynamics, and consequences of trust at various levels have not been thoroughly addressed (Dorn et al, 2016). Our findings elaborate on specific ways of managing the coopetitive relationship at different coopetition stages.

At the first stage of coopetition, when the coopetitive relationship is shaped, a proactive coopetition management at an individual level can minimize potential tensions and conflicts (Lacomba et al, 2013). To set the foundations of trust and of tensions prevention, a wise choice of a coopetition partner at a managerial level is needed (Levy et al, 2003). Managers should choose to cooperate with other managers that have prior connections, are easy to work with and share a good chemistry with, to make cooperation easier: *“The first marker is whether or not we think the people are going to be easy to work with, as it does create pressure. You have to have trust and mutual trust. In terms of who we choose, trust is the first and foremost” (I29), “its friendship and trust” (I8)*. Early on the element of trust emerges as a critical factor of a successful coopetition (Alves and Meneses, 2015). Deciding wisely on who you will cooperate with is linked to the coopetition outcome (Das and He, 2006): *“when the relationship works is highly beneficial, when personalities clash is highly detrimental” (I1)*. Right after deciding on the coopetition partner, and after establishing the relationship, the management of this relationship starts.

At the second stage of coopetition, the successful coopetition management at an individual level requires the relational capabilities and routines development (Eriksson, 2008) to enable knowledge sharing and value co-creation among the company's coopetitive network (Ngugi et al, 2010) through guarantying openness, "*In developing a good relationship with a coopetitor, it all depends on openness, we are open with them and they are with us*" (I28), continuously improving communication "*We have a lot of contact with the people we co-own with, we develop forums to improve communication*" (I9), coordinating-making management easy "*the management is complicated and stressful, we need to coordinate to make management and sharing of common resources simple and easy*" (I29), and finally, through building actual trust as mentioned earlier, providing evidence for the existence of management leadership (Chin et al, 2008). According to Zineldin (2004), coordinating activities for a mutual benefit should be a key strategy to be implemented for both parties to benefit as well as improve the industry and the market. Our findings support proposition 1a.

4.1.2 Coopetition management at the organisational/organizational level

A company has to differentiate from its coopetitors to benefit from coopetition (Ritala & Hurmelinna-Laukkanen, 2013). I28 mentions: "*Competitive pressure is medium because we are different to a lot of other breeders. We are not just selling alpacas; we have a whole farm approach. Also, because of our training in alpacas and people, we occupy a different niche.*" Moreover, being a strong player in the industry, having the ability to offer high volumes to customers can give a competitive edge to the company: "*we have more choice than a small breeder. We are more suited for new buyers buying from us because we can give them a high degree of input*" (I9).

Choosing the right partner is a success factor (Cassiman et al, 2009; Alves and Meneses, 2015). Looking from an organizational lens, when companies decide on whether to engage in cooperation or not, they have to look at the competitor's profile and network: "*we look at their past customers, relations and business history*" (I27), at its previous achievements and experiences: "*knowing about what they have previously done, knowing the expertise of the breeder*" (I9), and at its expected contribution: "*everybody has a different strength, we work with people that are good at the fibre side, I just breed elite stud males*" (I21), corroborating Das and He (2006). The importance of choosing trustworthy partners with complementary resources and competences (Gnyawali & Park, 2011) is confirmed. The partner's location is important for this particular industry as co-owning stud males is the main cooperation activity: "*the travelling distance is challenging, we look for it being positioned around the country in strategic areas*" (I4). As for the competitor's size we monitored different views: "*size doesn't make a difference in selecting a partner*" (I9, I29), versus "*they need to have a size that warrants spending the money on common activities*" (I27). However, the last is a reference to resources abundance rather than to the company size.

At this first cooperation stage, when the relationship's foundations are established, fairness and sharing play a critical role toward a successful cooperation. The examined companies were engaged in both formal and informal agreements (Dorn et al, 2016). However, fairness—that is, equally spread risk and reward between the competitors—has to be guaranteed in a substantial way regardless of the agreement form: "*a proper balance, a 50–50 partnership*" (I20). Sharing refers to a rational use of common resources (Bengtsson & Kock, 2000), "*information, knowledge* (I12)" and experiences.

At the second stage of coopetition, resources sharing and control mechanisms lead to value co-creation and knowledge-enhancement (Bouncken et al, 2015): “*Sharing of information and knowledge of our business with the co-owning breeder, to keep an open dialogue and provide new ideas and strategy to drive our business forward and reduce cost and risk for both parties*” (I28). Control mechanisms (Dorn et al, 2016) manage the common resources sharing to avoid conflict with the coopetition partner: “*the partners shouldn’t use the stud for their own benefit by using it beyond the agreed measures, which means that it is an uneven proportion of benefit between us*” (I28). “*There is a certain reluctance to share this knowledge, because you are reinforcing your competition. There is always an element of protectionism*” (I17). Control mechanisms are established to measure the coopetition outcome too (Bouncken & Kraus, 2013), or as I28 posits it: “*to assess the whole project.*”

4.1.3 Coopetition Management at an Industry Level

Coopetition management at an industry level, requires work towards the development of a national industry from the beginning of coopetition. This is important for industries in early or late phases of their life cycle (Harfield, 1999), as well as for industries that mainly consist of SMEs or micro-businesses (Flanagan et al, 2018).

At the first stage of coopetition, companies should actively support the creation of a national industry, by even putting their short-term financial interest behind the development of the industry as a whole (Flanagan et al, 2018): “*We sell all the Huacaya fleece to the UK Alpaca. This is based on the idea that while we would love to make more money out of the fibre, we should be able to help create a UK fibre industry*” (I29).

At the second stage of coopetition, companies should support and empower the industry (Gnyawali et al, 2011) through investing in educating and through building interest and awareness around the industry: *“I am a great believer in educating and building knowledge and interest. You cannot expect an industry to expand without knowledge. Overall awareness of that industry and people [...]. Firstly, they need to know a lot about alpacas and then this should generate interest” (I9). “We run educational events and we are working hard to make it educational. We have spent a lot of money to educate other breeders” (I29), “We have had some experts in the Alpaca Club that talked to us about fleece and what can be done with it, marketing opportunities; they were breeders with specialist knowledge”(I5).*

Results indicate that the rising tide lifts all boats perspective (Mathias et al, 2018) drives the development of a collective identity in the industry, directing towards the collective goals achievement and towards the industry advancement. The empowerment of the industry and of its reputation is expected to return the favor to the company by producing long-term benefits for all the members of the industry. Our findings provide support for the proposition 1c.

4.2 Coopetition Outcomes

4.2.1 Coopetition Outcomes at an Individual Level

Important benefits derive from the relationship developed between the individuals involved in the coopetition management. Enabling good communication (Eriksson, 2008) and developing a good relationship, results in exchange of information, advice, expertise, knowledge, and learning (Luo et al, 2006). As I9 poses it: *“Developing a good relationship with breeders we are involved with results in sharing of knowledge. Also, advice in strategy with things we have experienced to better advise them. An*

example is health issues [...] we are as well gaining knowledge. We learn from other people and what they are doing. It is beneficial in terms of information.” I23 adds: *“We have contact. People ask me if I have an alpaca to sell. If I receive an enquiry, I will ask other people if I cannot help them.”* Coopetition requires managers to establish structures and mechanisms to enable value co-creation and knowledge-enhancement (Dorn et al, 2016), which is one the most important coopetition outcomes at an individual level: *“It is beneficial in terms of expertise and knowledge of the other breeder so we can learn from them to apply it to grow our business; to learn from them how to improve the quality of our products. Learning new ways to utilise our unique products such as our yarn, came as a result of learning from our co-owning breeder. Now we have greater knowledge of other resources which are of benefit”* (I28). Evidence supports the social embeddedness framework, showing that the knowledge and experience of managers is strengthened through information diffusion, and through learning (Schiavone & Simoni, 2015). Moreover, a social network is developed: *“there is the social side of it”* (I11), *“you are talking to people that share common interests with you”* (I20). Proposition 2a is supported.

4.2.2 Coopetition Outcomes at an Organizational Level

Coopetition is a fruitful strategy, because of the interplay between cooperation and competition that generates mutual benefits for the engaged firms (Brandenburger & Nalebuff, 1996). Financial benefits render coopetition as a financial gain and value-creation mechanism (Ritala, 2012) in terms of profit *“it improves our prices and profits for products such as selling yarn”* (I9), sales *“coopetition has helped in livestock sales more than anything”* (I5), *“sales increased a lot”* (I7), selling prices *“we get a better selling price because of the higher volumes”* (I27), economies of scale *“we collaborate to collect more fibre”* (I12), reduced cost *“my coopetition partner is*

a shearer, that reduces the cost in my herd because I don't have to pay an outside person to do it" (I4), "saving bills by not having to call out the vet" (I14), "sharing of knowledge at no cost" (I8), and a mitigated financial cost and risk, "you get access to the male, but you don't have to pay the whole price" (I20). Coopetition drives synergy (Zineldin, 2004), allows for the achievement of financial gains, helps companies achieve economies of scale, and reduces cost (Cygler et al, 2014). We confirm that risk reduction (Chen et al, 2013) is a key coopetition outcome, as there is mutual benefit for all parties as risk is shared (Dittrich & Duysters, 2007; Akdogan et al, 2015). Because of the industry and of the high cost of accessing rent-gaining resources, using cooperative strategies enables organizations to gain access through reduced capital application: "Due to our relatively small size, financial risk and access to resources were the most important outcomes (I28).

Coopetition improves SMEs' resources' access (Tidstrom, 2014), efficiency and performance: *"It allows us to access much higher value, higher quality breeding males" (I2), "in the early days of my business, being poor, having a cooperation with other breeders allowed me to have alpacas" (I6), "co-owning massively lowers the cost and we can purchase more studs" (I9). These quotas provide evidence not only for the financial benefit deriving from coopetition, but also for the access to rare and complementary resources (Akdogan et al, 2015), that otherwise would be inaccessible because of the company's smallness (Tidstrom, 2014). Spreading the cost of one activity with your partner means that more resources will become available to be deployed elsewhere: "the marketing gives us more impact, generally because now we can afford more advertising space" (I27). The increased access to resources increases the company's potential, as "it helps you aspire higher" (I9), and improves the raw material and the final product quality: "It has allowed us to improve quality and allowed*

us to do things we couldn't have done before" (I29). Furthermore, it allows for shorter time frames for results *"it improves our breeding program quicker"* (I1).

Coopetition enables the sharing of new ideas that drives new strategies development and innovation initiatives (Quintana-Garcia and Benavides-Velasco, 2004): *"We have been able to adapt our business with new strategies that are being used by our coopetitor, such as producing other alpaca-based products other than yarn, such as allergic-free pillows. [...] New ideas and strategies were provided to drive our business forward"* (I28). Coopetition may change the company's strategy and structure (Bouncken et al, 2018), resulting in business model innovation (Ritala & Sainio, 2014). Results reveal that innovation is connected to market expansion: *"There have been different events that we run to develop new products, which has appealed to a different market space"* (I27), or to product/ service development *"my (coopetition) partner is a shearer, so we have been able to provide shearing services to people, which I didn't do before"* (I4) . This quote outlines both innovation and market-related coopetition outcomes.

Our findings illustrate more market-related coopetition outcomes. Gnyawali et al (2009) support that coopetition enables firms to protect and increase their market share, while Rodrigues et al (2011) found that coopetition promotes international brand recognition and market penetration: *"the customer has more confidence in us and that is generating much more interest and enquiries"* (I4), *"we share a farm in Holland, it gives us access to another market"* (I27).

Coopetition allows the company to develop or access business networks: *"the sale was facilitated by having a network of other breeders"* (I10), support networks: *"an exchange of information for some of us who have got problems doesn't make people isolated. You get support from other alpaca breeders if you come across something that*

they have seen before” (I18), to customer networks, through accessing the coopetition partner’s network: “we have been able to spread our reach through their contacts” (I28), and allows the company to appeal to a greater marketplace “to appeal to a greater marketplace we need increased volumes of product; we can only do that by working together (I27).”

The increased access to financial, non-financial, and rare resources, networks, knowledge, learning and innovation, has a positive effect to the overall company’s results and performance, expressed as improved efficiency and overall business growth: *“Coopetition is an excellent strategy, because it has meant we have grown our business and improved the quality of our produce as well as improved our own efficiency” (I28), “we learn from each other and share our different knowledge and in turn we have grown a great business” (I19).* The existence of a positive link between coopetition and organizational performance of individual micro-firms (Robert et al, 2009; Peng et al, 2012; Chen et al, 2013) is confirmed, providing support for the proposition 2b.

4.2.3 Coopetition Outcomes at an Industry and Market Level

We find ample coopetition evidence in the UK alpaca industry: *“Alpaca breeding is relatively new in the UK, there is large room for improvement, most of the breeders are quite small, cooperation can help all of us doing better. If you had a much more mature industry with more consolidated breeding you would probably have less cooperation and more competition” (I11).* Coopetition has significant benefits for the industry (Padula & Dagnino, 2007). *“It makes good genetics available to more breeders, which improves the quality throughout the industry, which is a benefit for everyone, it helps the whole industry grow” (I27).* Coopetition improves the average product quality in

the industry (Eriksson & Westerberg, 2011), improving and establishing the industry's reputation: *"It also helps the alpaca industry overall because it improves the access for other breeders to improve the quality that they have in their herd, so improve the overall fiber quality in the UK"* (I28).

Findings reveal that cooperative activities in an industry which is non-tech, non-knowledge-intensive, being still in the introduction stage of its life cycle (Morris et al, 2007), is beneficial for the industry as they can market the whole industry as a niche: *"We are helping the industry to market it (alpaca fiber) as a different niche product"*(I28), diffuses innovation-ideas to the industry *"I was the first to set-up alpaca walking in the country, it has now become a large part of the industry"* (I8), and makes the industry more cohesive and safe *"it makes the industry more cohesive, as pricing of alpacas isn't particularly scientific"* (I15).

Additionally, cooperation has positive market implications, as it drives market growth and market development. The product quality improvement or the introduction of new products (Bouncken et al, 2018), along with the industry's reputation improvement (Rodrigues et al, 2011) trigger market growth, increase consumer value (Kotzab & Teller, 2003) and benefit the market as a whole. Findings provide support for the propositions 2c and 3.

4.3 Factors affecting the management and outcomes of cooperation in various levels

The intensity of competitive rivalry and the increased risk levels in the industry create conditions that can make cooperation necessary and affect its outcomes: *"Price declined as the number of alpacas increased. That is overloaded by the fact of security and disease that affect the industry. It does have a major price influence on the overall*

industry. There are regional variations on who is selling alpacas, which has a huge impact on the price” (I9). I28 adds: “Large changes in the amount of alpacas available affects sales [...] the price decline is apparent even with co-owning and improving our quality because of factors such as disease scares and increased number of breeders.” “It is a complex industry at the moment, it’s not truly commercial, a large part of it is lifestyle” (I2), showcasing the industry’s newness and smallness. The major opportunities and threats emerging at the external environment, and especially in the industry, can significantly affect decision-making (Padula & Dagnino, 2007) and therefore the coopetition outcomes.

Moreover, customer demands drive interactions between firms (Bengtsson & Raza-Ullah, 2016). Market pressures include pressures on price, as described above, accompanied with pressures from product specifications “trends are developing, there is a demand in coloured alpacas” (I29) and from demand conditions “there has been a real resurgence in the sale of natural fibers” (I9). As the level of these influences fluctuates, the coopetition outcome will be affected (Pathak et al, 2014). Such market-driven influences have a moderating effect on coopetition, as SMEs can respond to customer demands by engaging in coopetition (Bengtsson & Johansson, 2014).

The institutional environment influences the evolution of the alpaca industry in terms of legislation (Mariani, 2007): “the strains of agricultural law are driving change in the industry” (I28), institutional stability “I think Brexit is a challenge” (I2), and government support “it needs to get itself accepted as a mainstream livestock; this is problematic as it requires government recognition” (I29). Proposition 4 is supported.

4.4 Theoretical Implications

We combine RBV and network theory to explore value co-creation and knowledge-enhancement in cooperative micro-firm networks; to explain enhanced performance at individual, organizational and industry level. Looking at the non-turbulent UK alpaca industry, we find strong evidence supporting that the company's capabilities development, such as knowledge and innovation, drive the achievement of higher levels of organizational performance (Bounchen et al, 2018). Micro-firms engage in cooperation to gain access to knowledge and resources. This access, along with the successful management of the cooperative relationship, lead to knowledge-enhancement, value co-creation and subsequently to enhanced performance. Sharing similar resources does not decrease value for the network partners, as cooperators usually hold similar resources because of their competitive positioning (Bengtsson & Kock, 2000), and also have dissimilar, complementary resources due to company-specific uniqueness.

The positive influence of value co-creation and knowledge-enhancement is extended to the individual level, leading managers to develop/ strengthen their knowledge, experiences, and networks. At an industry level, it leads to the strengthening and development of the industry. We verify the crucial role of the industrial, market and institutional factors that affect the cooperation outcomes' intensity at all levels of analysis.

The majority of cooperation research concentrates on one level of analysis (Bengtsson & Raza-Ullah, 2016). Our findings show that cooperation is a multi-level phenomenon that includes the interplay between individuals, between organizations in a one-to-one level, and between organizations at an industry level. The various levels interrelate and affect each other, along with the final cooperation outcome. Our findings illustrate the cross-level interactions (Bouncken et al, 2018) and show that the cooperation

management by individuals, the decision-making at an organizational level will enable sharing of resources, value co-creation and knowledge-enhancement among the cooperative network, resulting in efficiency and enhanced performance for all the engaged parties. Moreover, we identify the institutional and market-related influences that affect the mechanism of value co-creation, knowledge-enhancement and advanced performance. In a nutshell, we find that successful cooperation management leads to value co-creation and knowledge-enhancement within the cooperative network. This results in the development of VRIO resources at multiple levels, and thereafter in positive cooperation outcomes at individual, organizational, and industry level, as illustrated in Figure 1.

5. Implications and Future Research

During the initiation of cooperation, at an individual level, managers should choose to cooperate with other managers that share a good chemistry with and are easy to work with to boost the development of trust, to prevent conflicts, and to make cooperation easier to manage. At the second stage of cooperation, at an individual level, relational capabilities and routines are developed. At this stage, managers can drive value co-creation and knowledge-enhancement through guaranteeing openness, continuously improving communication, coordinating-making management easy and by building actual trust.

At an organizational level, at the first stage of cooperation, companies should secure their competitive advantage through occupying a differentiation position or by securing their leading position in the industry. Additionally, choosing the right partner at an organizational level, makes cooperation easier and increases the chances for success. Managers should look into the profile, network, history, and experiences of the potential

partner. Also, managers should evaluate the trustworthiness and the potential contribution of the candidate partner. The complementarity of resources and competences is a good indicator of value that can be added by the partner. The location of the partner is an industry-specific criterion. Managers should also build the trust foundations by guaranteeing fairness through setting norms for fairly spread risk and reward. At the second cooperation stage, managers co-create value and enhance knowledge by rationally using and sharing common tangible and intangible resources, focusing on knowledge and experiences exchange. Moreover, managers should establish control mechanisms to manage the use of common resources, to measure the cooperation outcomes, and to avoid tensions and conflicts.

At an industry level, the support for the creation of a collective identity towards national industry development should be initiated from the first stage of cooperation, through putting their short-term financial interest behind industry development. At the second phase of cooperation, companies should get more actively engaged, through educating other companies in the industry and by building interest and awareness around the industry.

At an individual level, the cooperation outcomes include ideas and information exchange, social network development, and knowledge and learning diffusion. At an organizational level, the main cooperation outcomes include financial benefits, such as less financial risk, economies of scale, improved profit, prices, and sales, and reduced financial costs. They also include resources-related outcomes including a decreased resources cost, access to ordinary and rare resources, more available resources to devote elsewhere. Cooperation also provides access to customer networks, to a greater marketplace, and even to foreign markets. It assists the companies engaged to develop a business and support network, new products and services, to improve their business

model, and to increase their credibility. Regarding the overall organizational growth and performance, cooperation seems to improve organizational efficiency and to boost total growth.

At an industry level, cooperation boosts the diffusion of ideas and innovation in the industry, makes the industry more cohesive and safe, improves the overall product quality offered by the industry, and markets the whole industry as a niche, improving the industry as a whole.

Finally, managers should remember that the link between the management and the cooperation outcomes is moderated by industry influences, like the competitive rivalry intensity, the industry's newness and smallness, and the increased pressure in times of an increased level of risk in the industry. Furthermore, the link is moderated by market influences, including demand conditions, pressures on price, and demand in product specifications. From an institutional perspective, the link is moderated by the institutional stability level, by the existence or lack of government support, and by the legislations that regulate the industry's operation.

This paper has not provided an exhaustive overview of the manner in which cooperation management, value co-creation and knowledge-enhancement, the outcomes and moderators of cooperation are related. Further quantitative research can be used to define the intensity of the above relationships. Furthermore, future research can include more national markets and non-technology-intensive industries where cooperation is regularly observed, such as the wine industry in New Zealand or South Africa. These future research attempts are required to fully characterize the interaction between the concepts explored—however, this paper has clearly evidenced the existence of interdependencies.

References

- Akdogan, A.A., Dogan, N. Ö., & Cingöz, A. (2015). Coopetition as a business strategy: Determining the effective partner selection criteria using fuzzy AHP. *International Review of BounckenManagement and Business Research*, 4(1), 137.
- Albers, S., Schweiger, B., & Gibb, J. (2015). Complexity, power and timing in multipartner alliances: An integrative review and research agenda. *Managing multipartner strategic alliances*, 57-87.
- Alves, J., & Meneses, R. (2015). Partner selection in co-opetition: a three step model. *Journal of Research in Marketing and Entrepreneurship*.
- Barney, J.B. (1995). Looking inside for competitive advantage. *Academy of Management Perspectives*, 9(4), 49-61.
- Bengtsson, M., & Johansson, M. (2014). Managing coopetition to create opportunities for small firms. *International Small Business Journal*, 32(4), 401-427.
- Bengtsson, M., & Kock, S. (1999). Cooperation and competition in relationships between competitors in business networks. *Journal of business & industrial marketing*, 14(3), 178-194.
- Bengtsson, M., & Kock, S. (2000). "Coopetition" in business Networks—to cooperate and compete simultaneously. *Industrial marketing management*, 29(5), 411-426.
- Bengtsson, M., & Raza-Ullah, T. (2016). A systematic review of research on coopetition: Toward a multilevel understanding. *Industrial Marketing Management*, 57, 23-39.
- Bierly, P.E. and Galagher, S. (2007), "Explaining alliance partner selection: fit, trust and strategic expediency", *Long Range Planning*, 40(2), 134-153.
- Bouncken, R.B., Fredrich, V., Ritala, P., & Kraus, S. (2018). Coopetition in new product development alliances: advantages and tensions for incremental and radical innovation. *British Journal of Management*, 29(3), 391-410.
- Bouncken, R.B., 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, R.B., & Kraus, S. (2013). Innovation in knowledge-intensive industries: The double-edged sword of coopetition. *Journal of Business Research*, 66(10), 2060-2070.
- Brandenburger, A., & Nalebuff, B. (1996). *Co-opetition*. Doubleday Publishing, New York.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Cassiman, B., Di Guardo, M.C., & Valentini, G. (2009). Organising R&D projects to profit from innovation: Insights from co-opetition. *Long Range Planning*, 42(2), 216-233.
- Chen, G., Farh, J.L., Campbell-Bush, E.M., Wu, Z., & Wu, X. (2013). Teams as innovative systems: Multilevel motivational antecedents of innovation in R&D teams. *Journal of Applied Psychology*, 98(6), 1018.
- Chin, K.S., Chan, B.L., & Lam, P.K. (2008). Identifying and prioritizing critical success factors for coopetition strategy. *Industrial Management & Data Systems*, 108(4), 437-454.
- Czakon, W., & Rogalski, M. (2014). Coopetition typology revisited—a behavioural approach. *International Journal of Business Environment*, 6(1), 28-46.
- Cygler, J., Gajdzik, B., & Sroka, W. (2014). Coopetition as a development stimulator of enterprises in the networked steel sector. *Metalurgija*, 53(3), 383-386.
- Dahl, J., Kock, S., & Lundgren-Henriksson, E.L. (2016). Conceptualizing coopetition strategy as practice: A multilevel interpretative framework. *International Studies of Management & Organization*, 46(2-3), 94-109.

- Das, T.K. and He, I.Y. (2006), "Entrepreneurial firms in search of established partners: review and recommendations", *International Journal of Entrepreneurial Behaviour & Research*, Vol. 12(3), 114-143.
- Ding, X.H., Huang, R.H., & Liu, D.L. (2012). Resource allocation for open and hidden learning in learning alliances. *Asia Pacific Journal of Management*, 29(1), 103-127.
- Dittrich, K., & Duysters, G. (2007). Networking as a means to strategy change: the case of open innovation in mobile telephony. *Journal of product innovation management*, 24(6), 510-521.
- 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.
- Eriksson, P.E. (2008). Achieving suitable coopetition in Buyer–Supplier relationships: The case of AstraZeneca. *Journal of Business-to-Business Marketing*, 15(4), 425-454.
- Eriksson, P.E., & Westerberg, M. (2011). Effects of cooperative procurement procedures on construction project performance: A conceptual framework. *International journal of project management*, 29(2), 197-208.
- Fernandez, A.S., Ji, F.X., & Yami, S. (2014). Balancing exploration and exploitation tension in coopetition: the case of European space innovation programmes. *International Journal of Business Environment* 5, 6(1), 69-91.
- Flanagan, D.J., Lepisto, D.A., & Ofstein, L.F. (2018). Coopetition among nascent craft breweries: a value chain analysis. *Journal of Small Business and Enterprise Development*, 25(1), 2-16.
- Gast, J., Filser, M., Gundolf, K., & Kraus, S. (2015). Coopetition research: towards a better understanding of past trends and future directions. *International Journal of Entrepreneurship and Small Business*, 24(4), 492-521.
- Geraudel, M., & Salvatat, D. (2014). What are the antecedents of coopetition? An explanation in terms of centrality and personality traits. *European Business Review*, 26(1), 23-42.
- Gnyawali, D.R., & 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, D.R., & Park, B.J.R. (2011). Co-opetition between giants: Collaboration with competitors for technological innovation. *Research Policy*, 40(5), 650-663.
- Granata, J., Géraudel, M., Nicolosi, A., & Garcia, K. (2017). Understanding the evolution of coopetition among SMEs in a wine cluster: a social capital approach. *International Journal of Entrepreneurship and Small Business*, 31(1), 67-84.
- Harfield, T. (1999). Competition and cooperation in an emerging industry. *Strategic Change*, 8(4), 227-234.
- Ho, H., & Ganesan, S. (2013). Does knowledge base compatibility help or hurt knowledge sharing between suppliers in coopetition? The role of customer participation. *Journal of Marketing*, 77(6), 91-107.
- Hyde, K.F. (2000). Recognising deductive processes in qualitative research. *Qualitative market research: An international journal*, 3(2), 82-90.
- Kay, J. (1993). *Foundations of Corporate Success*. Oxford: Oxford University Press.
- Khanna, T., Gulati, R., & Nohria, N. (1998). The dynamics of learning alliances: Competition, cooperation, and relative scope. *Strategic management journal*, 19(3), 193-210.
- Kotzab, H., & Teller, C. (2003). Value-adding partnerships and co-opetition models in the grocery industry. *International Journal of Physical Distribution & Logistics Management*, 33(3), 268-281.

- Lacomba, J.A., Lagos, F., & Neugebauer, T. (2013). Who makes the pie bigger? An experimental study on co-opetition. In *Economic Psychology and Experimental Economics* (pp. 67-76). Routledge.
- Lai, K.K., Su, F.P., Weng, C.S., & Chen, C.L. (2007). Co-opetition strategy from the patent analysis perspective: the case of the stent market. *International Journal of Innovation and technology management*, 4(02), 137-153.
- Lavie, D. (2006). The competitive advantage of interconnected firms: An extension of the resource-based view. *Academy of management review*, 31(3), 638-658.
- 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.
- Lee, I.W., Feiock, R.C., & Lee, Y. (2012). Competitors and cooperators: A micro-level analysis of regional economic development collaboration networks. *Public Administration Review*, 72(2), 253-262.
- Levy, M., Loebbecke, C., & Powell, P. (2003). SMEs, co-opetition and knowledge sharing: the role of information systems. *European Journal of Information Systems*, 12(1), 3-17.
- Luo, X., Rindfleisch, A., & Tse, D.K. (2007). Working with rivals: The impact of competitor alliances on financial performance. *Journal of marketing research*, 44(1), 73-83.
- Luo, X., Slotegraaf, R.J., & Pan, X. (2006). Cross-functional "coopetition": The simultaneous role of cooperation and competition within firms. *Journal of Marketing*, 70(2), 67-80.
- Mariani, M.M. (2007). Coopetition as an emergent strategy: Empirical evidence from an Italian consortium of opera houses. *International Studies of Management & Organization*, 37(2), 97-126.
- Mathias, B.D., Huyghe, A., Frid, C.J., & Galloway, T.L. (2018). An identity perspective on coopetition in the craft beer industry. *Strategic Management Journal*, 39(12), 3086-3115.
- McGregor, B.A. (2006). Production, attributes and relative value of alpaca fleeces in southern Australia and implications for industry development. *Small Ruminant Research*, 61(2-3), 93-111.
- Morris, M.H., Koçak, A., & Ozer, A. (2007). Coopetition as a small business strategy: Implications for performance. *Journal of small business strategy*, 18(1), 35-56.
- Ngugi, I.K., Johnsen, R.E., & Erdélyi, P. (2010). Relational capabilities for value co-creation and innovation in SMEs. *Journal of small business and enterprise development*, 17(2), 260-278.
- Orb, A., Eisenhauer, L., & Wynaden, D. (2001). Ethics in qualitative research. *Journal of nursing scholarship*, 33(1), 93-96.
- Padula, G., & Dagnino, G.B. (2007). Untangling the rise of coopetition: the intrusion of competition in a cooperative game structure. *International Studies of Management & Organization*, 37(2), 32-52.
- Park, B.J.R., Srivastava, M.K., & Gnyawali, D.R. (2014). 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.
- Pathak, S.D., Wu, Z., & Johnston, D. (2014). Toward a structural view of co-opetition in supply networks. *Journal of Operations Management*, 32(5), 254-267.
- Peng, T.J.A., Pike, S., Yang, J.C.H., & Roos, G. (2012). Is cooperation with competitors a good idea? An example in practice. *British Journal of Management*, 23(4), 532-560.
- Quintana-Garcia, C., & Benavides-Velasco, C.A. (2004). Cooperation, competition, and innovative capability: a panel data of European dedicated biotechnology firms. *Technovation*, 24(12), 927-938.
- 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.

- 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., & 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., & Sainio, L.M. (2014). Coopetition for radical innovation: technology, market and business-model perspectives. *Technology Analysis & Strategic Management*, 26(2), 155-169.
- 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*, 8(1), 23-43.
- Rodrigues, F., Souza, V., & Leitao, 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.
- Schiavone, F., & Simoni, M. (2016). Prior experience and co-opetition in R&D programs. *Journal of the Knowledge Economy*, 7(3), 819-835.
- Sirmon, D.G., & Hitt, M.A. (2003). Managing resources: Linking unique resources, management, and wealth creation in family firms. *Entrepreneurship theory and practice*, 27(4), 339-358.
- Stephens, N. (2007). Collecting data from elites and ultra elites: telephone and face-to-face interviews with macroeconomists. *Qualitative Research*, 7(2), 203-216.
- Thomason, S.J., Simendinger, E., & Kiernan, D. (2013). Several determinants of successful coopetition in small business. *Journal of Small Business & Entrepreneurship*, 26(1), 15-28.
- Tidström, A. (2014). Managing tensions in coopetition. *Industrial Marketing Management*, 43(2), 261-271.
- Tolich, M. (2004). Internal confidentiality: When confidentiality assurances fail relational informants. *Qualitative Sociology*, 27(1), 101-106.
- Van Gils, A., & Zwart, P.S. (2009). Alliance formation motives in SMEs: an explorative conjoint analysis study. *International Small Business Journal*, 27(1), 5-37.
- Wu, L.Y. (2010). Applicability of the resource-based and dynamic-capability views under environmental volatility. *Journal of Business Research*, 63(1), 27-31.
- Yin, R.K. (2014). Case study research: Design and methods (Fifth).
- Zineldin, M. (2004). Co-opetition: the organisation of the future. *Marketing Intelligence & Planning*, 22(7), 780-790.