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The Influence of Formal Institution Agents on Coopetition in the Organic Food Industry

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Abstract: Recent academic research presents a large volume of studies on the organic market from the perspective of consumers' motivation and purchasing preferences. However, these studies adopt a competitive or cooperative approach, but overlook the institutional complexity of emerging markets. This study aims to investigate the organic food production chain of emerging countries from the perspective of coopetition, taking into account the influence of formal institution agents. We focused our analysis on the chain of the organic food products, with the organic ice-cream producer as the key node of the chain. It is a single-case study conducted through in loco interviews with participants in the organic food products' chain, along with secondary data. The results show the influence of formal institution agents and non-financial incentives as primary drivers of entrepreneurial strategic decisions. We contributed to the coopetition literature by demonstrating the influence of formal institution agents on value creation and value capture in the organic chain.

Keywords: coopetition, formal institution agents, organic food industry

1 Introduction

Nowadays, there is a growing global trend among consumers who have begun to search for foods related to healthy lifestyle habits, improved quality of life, health and

well-being, which has fueled the organic food products industry. One of the changes in economic growth is in consumption requirements. Significant changes have taken place in consumption patterns and consumer tastes. There is a greater propensity for natural and organic foods due to increased green consciousness (Chen et al. 2017). In 2017, the Brazilian Council for Organic and Sustainable Production (ORGANIS) held its first national survey to outline the profile of Brazilian organic consumers. The results showed that 15% of consumers are buyers of organic food products, with the largest number of them located in the South region (34%).

Organic foods stem from an agriculture production process free of agro-toxics and fertilizers, while involving culture techniques that do not harm the environment (Institute of Food Science and Technology 2015). Organic food production aims at cultivation based on the three pillars of sustainability: social, economic, and environmental (Kim and Chung 2011). Organic products are not limited to agriculture; hence, its context has expanded for manufacturing and processing, making it possible to expand this market in various associations. In addition, the importance of the food market is reflected in Brazil's central position in this segment, with Rio Grande do Sul being one of the world's leading suppliers of animal and plant protein (Contini, Talamini, and Vieira 2013).

Ever since the second half of the 1990s, coopetition has been an emerging and trending topic in the strategic relationship between firms, which has attracted wide interest among researchers (Czakon and Rogalski 2014). It is recognized as a multifaceted, multilevel and paradoxical phenomenon (Gnyawali and Park 2009; Raza-Ullah, Bengtsson, and Kock 2014) that shares a divergent use of definitions (Bengtsson and Kock 2014), lack of generalizability, and a limited context analysis (Bouncken et al. 2015) since it is a concept still under development. Despite the significant number of studies related to the phenomenon, coopetition is still considered as a concept in progress. Studies have been limited in exploring a variety of firms, mainly small- and medium-sized enterprises (SMEs), startups, or family businesses (Bouncken et al. 2015). Explaining the complex network formed by multiple agents with different functions remains a challenge

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(Myllärniemi et al. 2012). In this study, coopepetition refers to a strategic and dynamic process in which economic actors jointly create value through cooperative strategies, while simultaneously competing to capture part of this value (Bouncken et al. 2015).

Interestingly, few studies have addressed coopepetition from the perspective of the institutional environment, e.g., studies on the consortium of Italian operas (Mariani 2007), theme parks in Finland and Italy (Kylänen and Mariani 2012), and the European wireless telecommunications sector (Nemeh and Yami 2016). This fact could be justified since the majority of the studies still focus on developed countries that enjoy stronger institutions, unlike emerging economies involving unstable institutions (Cuervo-Cazurra and Genc 2008), marked by inefficient legal and regulatory systems, arbitrary government policies, and inadequate infrastructure (Hoskisson et al. 2000; Mesquita and Lazzarini 2008). Moreover, although coopepetition was originally used to describe the value-creating network (Brandenburger and Nalebuff 1996), papers have rarely addressed this issue (Czakon and Rogalski 2014), thereby becoming an issue still limited in theoretical and empirical levels (Volschenk, Ungerer, and Smit 2016). Therefore, it is necessary to examine the different roles and effects that institutions might have on several levels of coopepetition (Dorn, Schweiger, and Albers 2016) and their impact on value creation.

The current academic research presents a large volume of studies aimed at the organic market from the perspective of consumers' motivation and purchasing preferences. However, the bias of the production chain in this segment is still rarely explored. This study aims to investigate the organic food production chain of emerging economies from the perspective of coopepetition in order to create and capture value among agents, considering the influence of formal institution agents. These institutions have a formal legal structure, which may be public or private institutions related to the government or businesses, including government agencies, industrial bureaus, tax bureaus, state banks, and commercial administration bureaus (He and Wei 2013). Our analysis unit focused on the organic food product's chain, with the organic ice-cream producer in Brazil as the key agent of the chain. In this scenario, we used the studies based on coopepetition and formal institution agents to theoretically support the analysis of our industry.

Today, more mature markets can be found in the European Union and the United States, where organic products are widely distributed across multiple retail channels (Sahota 2013). According to the Organic Trade Association (OTA 2017), the United States had the largest organic

market in the world reaching \$50 billion of income. However, the growing interest in organic production is not limited to developed economies. Over the past few decades, the production and consumption of urban centers in Latin America emerging economies have increased, especially in Brazil, where organic agriculture generated about R\$ 2.5 billion in 2016 (Portal Brasil 2017). The economic contribution of this sector shows that organic producers have a 33% higher income than conventional producers. The additional contribution, in the annual income of those participating in the chain, reaches an average of \$2000 more than those who participated in the chain only with conventional products (OTA 2017).

Agri-food industry is one of the oldest industries, which has several examples of coopepetition (Walley and Custance 2010). Our research shows the existence of coopepetition between organic ice cream producers competing for space in the market, while simultaneously cooperating to promote the industry's visibility in the segment. Other coopepetition and value-creating relationships are shown between organic product suppliers cooperating at fairs and markets, thus avoiding product overlap, but competing to capture the value of the customer who is willing to pay more for organic products. In other words, their goal is to create a larger market through cooperation, and then divide it through competition. This movement provides the growth of the organic industry, which presents an institutional influence on the strategic decision-making of the producers regarding the adopted market positioning.

Having this in mind, this paper makes three important contributions to the literature. The first contribution lies in demonstrating the influence of formal institution agents on value creation in the value network. In these terms, formal institution agents act as a formal regulation that legitimizes the players in the field who accept it as a legitimate issuer of standard conditions. As a result, these players (as suppliers, clients and competitors) use these standard conditions to create and dispute value. Therefore, this study goes beyond the analysis of value creation through complementary resources (Bouncken and Kraus 2013; Estrada, Faems, and de Faria 2016) or high market overlap (Bouncken, Fredrich, and Kraus 2019) due to consideration of the value development and its capture with the support of formal institution agents. Secondly, coopepetition in the agri-food industry has rarely been applied, with the exceptions of Galdeano-Gómez, Pérez-Mesa, and Giagnocavo (2015) and Granata (2012). Therefore, this paper contributes by exploring limited researches on agri-food and, mainly, the organic food industry. In these terms, this paper aims to fill the lack of holistic coopepetitive research among supply chain players (Klimas 2014), such as exploratory and

qualitative research (Houé and Guimarães 2013). Finally, the third contribution is based on non-financial incentives in the organic food industry. We identified that players cooperate to create and dispute value in the network for ethical or particularly healthy reasons. Financial incentives are secondary reasons for cooperating in this industry. In fact, this study differs from previous research, because we went beyond the coopetition strategy in an attempt to fill these research gaps, while considering the role of formal institution agents with firms that primarily use cooperative strategies for non-financial incentives.

2 Coopetition

Coopetition is still underdeveloped and has not yet reached the paradigm status as competition and cooperation have achieved (Bengtsson, Eriksson, and Wincent 2010; Padula and Dagnino 2007). From a managerial point of view, the origin of the term “coopetition” is attributed to Ray Noords, founder and CEO of Novell, who first mentioned it in the 1980s in this phrase: “You must be able to compete and cooperate at the same time,” while describing markets and firms’ configurations that must increasingly compete and cooperate simultaneously (Bengtsson and Kock 2000; Padula and Dagnino 2007). In the following decade, coopetition was appropriated by the academia and became the object of theoretical studies, beginning with the book *Coopetition*, by Brandenburger and Nalebuff (1996), who used game theory as theoretical support to validate the purpose of “Sleeping with the enemy” – learning to work with rivals (Coy 2006).

Coopetition can be analyzed by two approaches: as a process and as a context (Bengtsson, Eriksson, and Wincent 2010). As a process, coopetition involves narrow strategies of competition and cooperation simultaneously between competing firms, in different areas and levels of interaction (Bengtsson and Kock 1999, 2000). One continuum ranges from complete competition to complete cooperation with different degrees of cooperative relations. The stronger the cooperation, the weaker the competition, and vice-versa (Bengtsson and Kock 2000). Two-continuum approaches suggest that different levels of cooperation and competition can co-exist in parallel within a cooperative relationship, based on a multifaceted concept (Bengtsson, Eriksson, and Wincent 2010).

On the other hand, as a context, which is the focus of our research, coopetition is broadly presented in a chain that adds value to the company through environmental interaction (Brandenburger and Nalebuff 1996; Lado, Boyd, and Hanlon 1997). This chain refers to customers,

suppliers, substitutes, and complementors (players from whom customers buy complementary products or to whom suppliers sell complementary resources) called “The Value Net”. In this relationship, based on game theory, there will be coopetition between the firm and these parties in any direction (Nash 1950). In this case, we can draw an analogy to the market with a pie. Players cooperate to expand the market by creating value and developing the market as if they were to bake a pie. Then, competing is required to capture value in the market, that is, getting the largest piece of the cake (Brandenburger and Nalebuff 1996; Gnyawali, He, and Madhavan 2006). The interaction of competitive and cooperative strategies will create a synthetic rent or higher overall rent for a firm (Lado, Boyd, and Hanlon 1997). In these terms, coopetition is a relationship strategy wherein the partners; mainly, the suppliers, firms, and customers aim to increase the value of their businesses more than it could be obtained individually. The crucial point is how to divide the results that the firms obtained through a cooperative strategy.

In the perspective of coopetition as a context, in a more general concept, coopetition includes all the relations developed between complementary organizations (Pellegrin-Boucher, Le Roy, and Gurău 2013). It is based on the ability of firms to collaboratively create and appropriate value, thereby capturing the greater proportion of value individually (Gnyawali and Park 2011). The Value Network (Figure 1) explores all interdependencies in this context.

Coopetition is based on the interdependence between firms, with the partial convergence of interests and goals through disparate and hybrid relationships. It is based on creating opportunities for competitive advantage through the removal of external barriers and threat neutralization

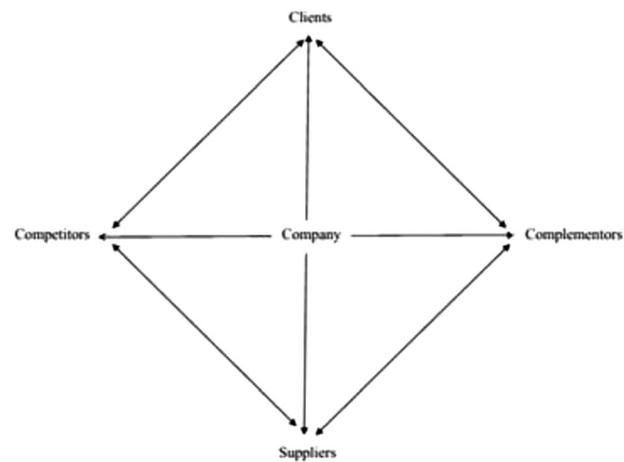


Figure 1: Value network. Source: Adapted from Brandenburger and Nalebuff (1996).

(Chin, Chan, and Lam 2008). In this case, the shared objectives prove more important than maximizing individual profits. Self-interests overlap and positively depend on each other. This behavior generates a strategic interdependence between firms, giving rise to a cooperative system of value creation (Dagnino and Padula 2002; Padula and Dagnino 2007). However, it is necessary to clarify how firms create value and how appropriate this value is for them (Volschenk, Ungerer, and Smit 2016), considering mutual reciprocity (Franco and Belo 2013).

Coopetition permits firms to access resources and markets, economies of scale and scope, increased bargaining power, reduced transaction costs, periods of product development and innovation, and contractual mechanisms to neutralize opportunistic risks (Kraus et al. 2019). Nevertheless, strategic options enable the assumption of flexible postures (Lado, Boyd, and Hanlon 1997). Using these terms, firms can reduce costs, conduct research, acquire knowledge, and develop new products or technologies (Luo 2007). Moreover, coopetition may create entry barriers against competitors not included in the coopetition (Klein et al. 2019; Ritala and Hurmelinna-Laukkanen 2009). Especially for SMEs that may improve their market position using coopetition, this relationship is strategic in developing and gaining competitive advantage (Granata et al. 2017; Robert et al. 2018; Tomski 2011). Excessive coopetition may have a negative influence on innovation performance and can be a cause for concern about opportunistic behavior (Gnyawali and Park 2009; Sun et al. 2012). This happens due to the threat of expropriation, resulting from a difference between the knowledge created by cooperation and the knowledge appropriated by competition. Depending on the absorptive capacity of the competing firm, the volume of knowledge leakage may be significant (Ritala and Hurmelinna-Laukkanen 2009). In addition to the free-riding behavior, another example of the negative externalities of coopetition is the generation of redundant knowledge or learning isomorphism and a reduction in learning efficiency, mainly because as the number of collaborations grows, there is no heterogeneity between the participants (Gnyawali and Charleton 2018; Oliver 2004). This double-edged sword can be potentiated by institutional effects, mainly in emerging economies.

3 Institutions on Coopetition

Institutions impose restrictions by defining legal, moral and cultural boundaries, which legitimize (or not) activities and support the actors that execute them (Hodgson 2006; Scott 2001). However, they also provide resources for

these same actors to work in relation to social structures. In this case, institutions play a predominant role in promoting or facilitating networks and stimulating coopetition strategies, mainly in already robust industries (Brito 2001). Thus, they aim to increase the competitiveness of local businesses by developing learning and relationship networks, reducing transaction costs, and promoting the internationalization of firms. In industries with high competition and cooperation, institutions encourage coopetition between rival firms, thereby creating barriers for new entrants. Once again, firms are strengthened to face foreign competitors. This stimulation occurs through the identification and complementarity of resources (Klein et al. 2019). Finally, these relationships are dynamic, since their goals evolve following the interdependence of firms and institutions (Deligonul et al. 2013).

From an economic perspective, North (1990) emphasizes that institutions play a crucial role in the economy because they reduce uncertainty and become a reference for individuals. In this sense, institutions serve as “the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction” (North 1990, p. 3). Institutions can be formal constraints, which are explicit (rules, laws, constitutions), and informal constraints (norms of behavior, conventions and self-imposed codes of conduct). Therefore, the institutions will operate through their formal or informal structures to perform economic and social transactions that, in turn, will affect any strategic decision adopted by the firm (North 1990).

As formal structures, formal institution agents affect firms’ decisions and may improve performance (e.g., by addressing market imperfections and providing resources or protection for certain industries, cf. Monticelli, Garrido, and Vasconcellos 2018), but on the other hand, they may also hinder performance due to bureaucracies, rules, party systems, political actors, interested groups, government programs, and structural mechanisms (Wu and Deng 2020). Therefore, a certain degree of normative and cognitive pressures (cf. Peng et al. 2009) emanating from formal institution agents will affect the actions undertaken by firms and the resulting outcomes. Consequently, firms may find it easier to perceive the benefits of participating in network relations as managed by formal institution agents than to cooperate directly with their competitors (in terms of information gathering, marketing, technology, or procurement efforts) because the latter entails a complex interplay of the expected benefits with potential (and unwanted) risks (He and Wei 2013).

Formal institution agents can directly provide resources or help firms complement each other (Deligonul

et al. 2013), thus contributing an essential support to the firm's strategy by developing relationship networks, reducing transaction costs, promoting learning, creating barriers to new entrants, or providing the identification and complementarity of resources between firms (Deligonul et al. 2013; Ritala and Hurmelinna-Laukkanen 2009). The nature of the institutions and their environment influences institutional strategies, which, in turn, redesign their competitive positions based on the social structures that legitimize or challenge them to the group (Lawrence 1999). As a result, adherence to formal institution agents is based on different kinds of legitimacy, such as regulatory (conformity to regulatory standards, rules and laws), normative (compliance to broadly-accepted informal norms and values), cultural-cognitive (conformity to widely-held cultural beliefs and taken-for-granted practices), and industrial legitimacy (conformity to practices derived from the industry) (Castellano and Ivanova 2008).

Formal institution agents that interfere with the coopetition between firms can be created out of public and private interests, or even both. The dynamics of coopetition among or between government actors can occur in the vertical dimension (based on federalism) or horizontal dimension (based on decentralization) between federal, state, and local authorities (Esty and Geradin 2000). From a private point of view, formal institution agents are useful mechanisms for protecting or boosting specific industries, thereby stimulating cooperation between competitors (Ohkita and Okura 2014). Industry-level factors affect all firms, while firm-level factors play a distinct role in influencing coopetition (Gnyawali and Park 2009). In industries with high competition and cooperation, institutions encourage coopetition between rival firms, thereby creating barriers to new entrants. Once again, firms are strengthened to face foreign competitors. This stimulation occurs through the identification and complementarity of resources. These relationships are dynamic since their goals evolve based on the interdependence of firms and institutions.

If the nature of institutions can influence businesses in an environment (Doh et al. 2017), it is relevant to trace how formal institution agents influence this strategy, mainly with firms from the same industry, which operate simultaneously via competition and cooperation. In this sense, most of the existing studies consider coopetition as a deliberate or emergent strategy, but then a deliberate strategy at the firm level may be influenced by an emergent coopetition at other levels (Dahl, Kock, and Lundgren-Henriksson 2016; Tidström and Rajala 2016). In these cases, there are impositions or incentives by a formal institution agent for cooperation between firms, as in the tourism in

Finland and Italy (Mariani and Kylänen 2014). At the same time, induced coopetition is a transitory stage of coopetition when cooperation is imposed on competing firms, thus creating an emergent and unintentional strategy (Kylänen and Mariani 2012; Mariani 2007). Hence, it is possible to notice this transitory stage of coopetition. In our concept, formal institution agents play a predominant role in promoting or facilitating networks and stimulating coopetition strategies, thus developing an emergent strategy. Therefore, our goal is to highlight the role of formal institution agents in coopetitive strategies due to the relevance on the creation and legitimation of firms.

4 Methodology

We conducted a qualitative research using a descriptive case study approach (Flick 2007) due to its applicability to objectives and the complexity of the proposed subject. A qualitative approach is appropriate for the selected case (Brazilian organic food products) since it is a fragmented industry based on the creation and value dispute between the participants in the chain, coordinated by formal institution agents to stimulate coopetition strategies between organic food producers. In these terms, coopetition strategies are ways for organic food producers to gain competitiveness in emerging industries, which are difficult to capture value based on differentiation positioning. Moreover, coopetition is rarely addressed in emerging economies (Peng and Bourne 2009) with the exception of Kedia et al. (2015) and Monticelli, Garrido, and Vasconcellos (2018).

To analyze coopetition in the organic food industry, we selected a specific part of the chain that representing all participants in the Value Network (Brandenburger and Nalebuff 1996). In these terms, an organic ice-cream producer is a good option because it is a paradoxical relationship in several aspects. First of all, from an industrial perspective, this is a single case because it is a product that usually contains high fat, but in this case, it focuses on health. Secondly, from a theoretical point of view, the organic ice-cream producer has a relevant role in the chain because it develops relationships in all parts of the chain. In this case, there are creation and value disputes between participants in the chain.

Representatives of organic food producers with differing status regarding membership of business groups, cooperatives, etc., who were considered relevant to mapping the industry, were interviewed (Creswell 2009). The representatives were selected if the following criteria were met: (i) having a relationship with the organic ice-cream

producer; and (ii) becoming a participant of Value Network in the organic ice-cream production (competitors, suppliers, complementors, clients, and companies). Data were collected through nine semi-structured interviews with the organic food producer, managers and organic business owners, and representatives of formal institution agents (Table 1). All interviews were conducted by two researchers.

We recorded and transcribed so as to enable data triangulation between different accounts of organic participants in the industry. Secondary data were also collected from the websites of the formal institution agents and organic food producers to complement and contrast information from interviews and bibliographical materials, such as websites, annuals, newspapers, magazines, and books. Data triangulation was accomplished by correlating the interviews with secondary data, observations and researchers' notes. Data triangulation was aimed at obtaining more validity and reliability when collecting data from different sources or tools at different times while studying the same phenomenon (Collis and Hussey 2003; Stake 1998).

For the purpose of data analysis, the content analysis technique was used to infer knowledge by generating or not generating quantitative indicators (Bardin 1977). Data analysis was performed by preparing abstracts, interview recordings, as well as printed and digital materials. Our

analysis is based on two categories: cooptation and the influence of institutional environment on cooptation (Table 2). These categories were used to describe the relationship strategies adopted by organic food producers with respect to the organic ice-cream producer in the Value Network. Finally, the results have promoted discussions on institutional influences on cooptation strategies.

5 The Organic Food Industry

The analysis of the transformation of the global agri-food systems in recent decades has made it possible to observe the consumption trend of healthy, nutritional, and agro-toxic free food (Hoefkens et al. 2009). It can be seen that consumers are seeking alternative forms of feeding, aiming to achieve more sustainable or health-oriented consumption modes (Dalmoro 2015; De Barcellos, Teixeira, and Venturini 2014). Thus, an organic food market emerges, the number of consumers of which has increased both among regular consumers and among consumers seeking a sustainable logic that is different from conventional production (Dalmoro 2015; Schouten et al. 2015).

The production of organic ice cream is becoming an increasingly healthy dietary trend, which emphasizes health and sustainability within the consumption intentions as pointed out in *Brasil Food Trends 2020* (2019),

Table 1: General information about the interviews.

Interviewee	Position in Value Network	Location of business	Duration
Organic food producer (fruits) and Osteria owner	Supplier	Bento Gonçalves	1 h 23 min
Ice-cream producer (Santo Fruto)	Company	Bento Gonçalves	1 h 42 min
Organic food producer (fruits and vegetables)	Supplier	Farroupilha	2 h 01 min
Organic food producer (fruits and vegetables)	Supplier	Farroupilha	1 h 49 min
Ecological producers' cooperative (COOPEG)	Complementor	Garibaldi	1 h 14 min
Ecological Center Ipê	Complementor	Ipê	44 min
Brazilian Corporation for Agricultural Research (Embrapa)	Complementor	Bento Gonçalves	25 min
Organic food producer (fruits and vegetables) and ice-cream producer (La Naturelle)	Competitor	São Paulo	1 h 31 min
Delicatessen	Customer	Porto Alegre	46 min

Table 2: Categories used for the interview script.

Categories	Subcategories	References
Cooptation	Development and capture of value; complementary of resources; conflicts, advantages, difficulties, opportunities; creation and value dispute among the participants in the chain; risks of opportunism.	Bouncken et al. (2015); Brandenburger and Nalebuff (1996); Klein et al. (2019); Padula and Dagnino (2007); Volschenk, Ungerer, and Smit (2016)
Institutional environment	Main formal institution agents in this industry and their roles; the role of the formal institution agents in the industry; the relationship between participants of chain and formal institution agents; the influence of the formal institution agents in the business and the environment.	Doh et al. (2017); He and Wei (2013); Mariani (2007); Kylänen and Mariani (2012); Mariani and Kylänen (2014)

thereby reinforcing consumer demand for food with health benefits besides health, quality and badges of information regarding the origin of ingredients (Brasil Food Trends 2020 2019). According to the Brazilian Association of Industries and the Ice Cream Sector (in Portuguese, Associação Brasileira das Indústrias e do Setor de Sorvetes [ABIS]), Brazil's ice cream consumption increased from 686 million liters in 2003 to 1 billion liters in 2016, especially in 2014, where consumption increased by 1.3 billion. It is also worth noting that the country is considered the 10th largest producer and the 11th largest consumer of ice cream in the world (ABIS n.d.). According to the Brazilian Micro and Small Business Support Service (in Portuguese, Serviço Brasileiro de Apoio às Micro e Pequenas Empresas [SEBRAE]) 2017), the emergence of new types of ice cream, with variations such as premium, gourmet, organic and vegan, will make the market grow by about 81% by 2020. The data reinforces the importance organic products have gained in this segment while being viewed as a market differential with great potential to be explored. Currently, only two firms in Brazil industrially produce organic ice cream: La Naturelle, located in the Southeastern region of Brazil, and Santo Fruto, the object of this study, located in the southern region of the country. Therefore, considering the exponential growth of the sector, understanding the importance of exploring the organic ice cream industry is a promising and developing innovation within the segment.

Organic food production combines tradition, innovation, and science to benefit the shared environment and promote fair relationships and a good quality of life for all those involved. According to the International Federation of Organic Agriculture Movements (IFOAM), organic agriculture is defined as a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to the site. Organic production can be considered as a holistic production system that considers long-term environmental sustainability and aims mainly to produce food in an environmentally friendly way (Seufert, Ramankutty, and Foley 2012).

Certification and labeling act as a formal institution agent and are necessary to transfer the credibility attributes of organic foods and make them visible to consumers, which may lead consumers to make informed purchasing decisions (Jahn, Schramm, and Spiller 2005). However, organic certification can also be considered as a barrier to entry for small farmers. When it comes to costs, certification can be expensive because infrastructures to monitor and document producers are necessary. Therefore, many small-scale farmers with limited resources cannot afford them (Gómez et al. 2011). In addition, to convert or

start organic agriculture, farmers must go through a three-year transition, during which they are required to practice organic agriculture, but are not allowed to sell in the form of organic products. With typically lower incomes, during this transition period, farmers converting to certified organic food products must face the risk management problem during their transition period (Uematsu and Mishra 2012).

Finally, in their studies on organic production carried out in different countries, Jouzi et al. (2017) pointed out that optimal benefits perceived in the organic chain include not only environmental issues, but also economic, institutional, and social issues. In this process, consumers follow the trend to improve their habits, and seek less industrialized and healthier products, with fewer additives and preservatives and with traceability. Considering the above, we emphasize the importance of studying the organic ice cream industry, as it is based on a promising and developing innovation within the segment, considering the exponential growth of the industry.

6 Analysis and Discussion of Results

We analyzed the organic food industry from the perspective of the value network, considering the influence of formal institution agents involved in the production of organic home-made ice cream by a company called Santo Fruto. First of all, our analysis of coopetition between participants in the organic food industry shows that, even when players cooperate, there is also a value dispute between them. This case reinforces the dynamics of value creation and appropriation when competitors cooperate (Volschenk, Ungerer, and Smit 2016), including in downstream activities (Walley and Custance 2010). The organic ice-cream producer called Santo Fruto and its main competitor called La Naturelle, for example, cooperate to promote the organic food industry, while promoting greater visibility, not only for the organic food industry but also for this sort of product. However, despite La Naturelle not recognizing Santo Fruto as a competitor, they both disputed space to gain more customers. Therefore, the value dispute occurs when both organic ice cream manufacturers compete for the same market.

Secondly, similarly, organic food producers cooperate to prevent overlapping of products negotiated in organic food product fairs, thereby avoiding competition. As a result, organic food producers cooperate to promote the growth of the organic food product market, while avoiding

competition among themselves, and compete to capture the value of the customer who is willing to pay more for organic food products. It is a way of mainly explaining the value chain or value network when firms cooperate to create a larger market and then compete to divide it up (Bouncken et al. 2015; Brandenburger and Nalebuff 1996) in a cooperative network structure or between networks (Gnyawali, He, and Madhavan 2006). Value creation also occurs between organic food producers and the organic ice cream manufacturer, also commercializing the suppliers' excess production. However, there is a value dispute when we observe organic food producers challenging the price demanded by the organic ice cream manufacturer. High levels of competition imply interdependence between firms to find the same resources that not all of them can have at the same time. This motivates an individualistic behavior that targets the gains of only one of them while ignoring the interests of other participants in favor of their benefits (Padula and Dagnino 2007).

In these terms, there is a strong influence of the mindset pervaded by motivations ranging from health, quality of life, and well-being to personal beliefs, family and community values among organic food producers. However, the business model has little influence on producers since they do not have a clear market positioning strategy, but they consider the opportunities in organic food markets, mainly because of the growth of the industry. For this reason, emergent competition has been relevant because it allows access to resources such as learning and networks, obtaining technical support and creating social influence to promote players' competitiveness (Tidström and Rajala 2016). With the support of institutions, producers can have access to certification, organization, participation in fairs and events, and opportunities for large retailers. The firm (Santo Fruto) corroborated the producers' mindset to remain in this market segment and also received a strong institutional influence from the business model. The reason for this is that the formal institution agents can enable the company to have access to a larger number of producers, which cannot only meet the production demands, but also legitimize the products into the market through the certification obtained. For customers of the delicatessen, it was identified that the mindset does not have such strong relevance since they commercialize other products that are not exclusively organic. In this case, the main factor is related to the model business, which is a perceived opportunity as the market continues to expand. In this sense, customers are related to formal institution agents seeking to create value for their businesses through the reliability and legitimacy provided by the regulation of the organic food products. Therefore, the benefits of competition may extend beyond the main

firms and are not always economic (Walley and Custance 2010).

Thirdly, complementors play another important role in the value network. They work by disseminating the role of formal institution agents to other players, supervising and legitimizing the players that participate in the organic food industry. However, this kind of competition is more transactional than traditional due to the need to deliver benefits to third parties that induced the competition (Ohkita and Okura 2014). In this case, certifiers such as the Ecological Producers Cooperative (in Portuguese, *Cooperativa de Produtores Ecológicos de Garibaldi Ltda. [COOPEG]*) and Ipe Ecological Center (in Portuguese, *Centro Ecológico Ipê*) create value with other participants in the chain; organic food producers, organic ice cream manufacturers, and specialty stores in organic food products, but dispute part of the value created by the certification requirements (EcoVida badge) for industry participants. These complementors are at the core of the relationships established between the participants and create value from two axes: mindset and business model (Figure 2). Therefore, induced or forced competition is likely to improve performance as firms have higher levels of efficiency under new environmental conditions (Mariani 2007).

Fourthly, through the development of ecological and environmental awareness, and of the physical and well-being concern, which was acquired through the non-use of pesticides, the study identified the fostering of cultivation and the production of products that provide health and quality of life for those who produce and consume them. Similarly, being part of the organic food industry promotes and propagates ethical actions. Based on the current analysis of the relationship between market players, we identified that, for motivating agents, performance in the organic food industry can be divided into two categories:

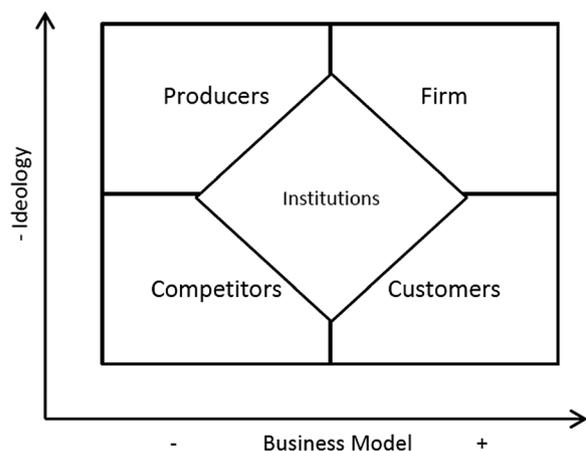


Figure 2: Institutional Network Value. Source: The authors (2019).

(i) mindset, involving sustainability, environmental awareness, wellbeing, and health, and (ii) business model, involving industrial growth, opportunities, and differentiated positioning. The actions of suppliers and formal institution agents are consistent with the perception of clients, and the earnings of common development are higher than those obtained only by gains, which are evaluations of the client's business and quality of life. In both cases, the gains associated with suppliers, complementors and clients create legitimacy, sustainability, and new business opportunities using local assets (Franco and Belo 2013).

We observe that the mindset and the performance in a sustainable industry are above the financial incentives. However, this issue is not forgotten. All players mention that the consumption and production of organic food, despite still growing compared to the traditional industry, is considered a market trend. This trend makes the organic food industry a promising business opportunity. Besides presenting an expansion in the number of products, it enables the already available products to become more popular. Similarly, other factors identified are the greater appreciation and differentiation, both of organic food products and of professionals working in this industry. This perspective is in line with Dal-Soto and Monticelli (2017), who identified coopetition as promoting cost reduction, learning, qualification, and differentiation of activities. It is also consistent with Franco and Belo (2013), who associated coopetition with brand creation and product certification.

Fifthly, regarding the barriers to the organic food industry, respondents working in organic agriculture and formal institution agents (complementors) highlighted some technical aspects. There are some peculiarities inherent in organic culture, such as harvests that occur only in the natural period of each cultivation, which results in the supply of particular products (*in natura*) exceeding the level that can be absorbed by the market, and also a greater risk of crop failures than traditional culture. Moreover, issues were highlighted, such as the lack of technical and political factors and the lack of financing that considered the difference between organic and traditional cultures.

As a result of the barriers for agriculturists and complementors, we identified evidence in the speeches of the manufacturers and the specialty store when discussing this topic. *In natura* products are less accessible – resulting in increased manufacturing costs of processed products, which reflect prices for the final consumer, and generate difficulty in enhancing the supply of a small variety of products with organic badges. However, there is a

perception that the demand for organic food products is on the rise, with demand exceeding the quoted price.

Aiming at exhibiting the main findings of our research, Table 3 shows quotes of representatives that are examples of discourses of the participants in the organic food industry, crossing with other theoretical background and, consequently, their subcategories.

7 Concluding Remarks

Our study had a main objective to investigate the organic food industry from the perspective of coopetition in order to create and capture value among agents, taking into account the influence of formal institution agents. From this perspective, the analysis shows that the relationships between the participants in the chain can be divided into two categories: mindset and business model. Regarding the mindset, the results point to the existence of a strong and collective awareness driven by the creation of values that permeate environmental sustainability, health, and wellbeing of those involved. Mindset incentives can be considered as the main driver for staying in this segment. These values corroborate with consumer interests, as emphasized by specific authors (Dalmoro 2015; De Barcellos, Teixeira, and Venturini 2014; Hoefkens et al. 2009; Schouten et al. 2015).

Regarding the performance barriers in the organic food industry, unique factors have been identified, which affect organic agriculture more than conventional agriculture, whereas differential planting techniques are related to periods of shorter crops and pest risks due to the lack of using agrochemicals and pesticides. These aspects reduce the scale of production, thus increasing commercialization costs. Uematsu and Mishra (2012) emphasized that the risk management problem in production is one of the main impediments to the development of the industry. Moreover, the intensity of coopetition varies across different industries, with firms engaging in greater coopetition as the industry matures (Walley and Custance 2010).

In this sense, the research showed that formal institution agents play an important role since they can provide greater technical support to the producers, as well as offering credit lines to promote the organic market. These barriers in production create a cascading effect that affects the entire organic chain, starting with an increasing cost for producers that generates a small supply of certified products (both *in natura* and processed products) and affects the small variety of products and the high prices offered to the final consumer.

Table 3: The discourse of the participants in the organic food industry.

Subcategories	Organic food industry
Incentives	<p>Producer 2: “Not wanting to use toxic products as in conventional production (...). Also, one of the brothers has many allergies, so we believe that organic food products are good for him and the other people as well.”</p> <p>Santo Fruto: “Our main incentive is to make a healthy product (...), but we also see a growing market that values organic food products.”</p> <p>COOPEG: “Our main incentive is health. The market of organics is growing; it is becoming popular. If you have a reliable physician or lawyer, why wouldn’t you also have an agriculturist? Thus, the cheaper a product is, the better.”</p>
Barriers	<p>Producer 3: “In organic agriculture, if the plantation is beset by illness, we will lose everything and need to wait for the next harvest (...).”</p> <p>Santo Fruto: “I can say that the biggest problem will be the price of the products: if agro-toxins are not used, why are they so expensive? (...). Our biggest struggle is the cost established in the market of organics.”</p> <p>La Naturelle: “The two biggest barriers we face today (...) lack of technical support (...), lack of political will (...). If these two factors are solved, our product will be much more accessible to the public.”</p> <p>Coopetition</p>
Creation and value dispute between the participants of the chain	<p>Producer 1: “Low production prevents us from serving major retailers and specialty stores (...). In addition, major retailers have trading requirements that we cannot respond to, which is why we use COOPEG to assist in negotiations.”</p> <p>Producer 2: “The competition between producers is made by the customer, based on the conquest of the producer (...). The price between the products is the same; what is different is the basis of appearance.”</p> <p>“But also, when products are transported, we prevent competition with equivalent products, which</p>

Table 3: (continued)

Subcategories	Organic food industry
	<p>are complementary thus preventing stockpiles and wastes.”</p> <p>COOPEG: “There has always been competition among agriculturists. COOPEG tries to open up new markets and promote cooperation. For example, products do not overlap in the commercialization process to maintain group unity.”</p>
Conflicts and risks of opportunism	<p>COOPEG: “Competition is healthy to a certain extent, but for example, in fairs, there is an internal regulation that establishes penalties for producers who participate in the fair and who do not comply with the rules, for instance, the product must be marked with the product name of COOPEG.”</p> <p>Ipe Ecological Center: “In order to have the badge, they must necessarily be part of a group, since it is a collective badge. Both are jointly responsible, so trust and compromise should exist between the participants. Obviously, as it is a case of joint responsibility due to collective sanctions, farmers may take wrong actions and cause the entire Group to lose certification (...). I’ll give you an example: COOPEG markets with major retailers. There have been cases where the retailer came into direct contact with the producer to negotiate prices. This producer acted against the collective interest and was removed from the network.”</p> <p>Institutional environment</p>
Relationship between participants in the chain and formal institution agents	<p>Ipe Ecological Center: “The organization, in a collective way, allows greater access to the market and large retailers, since the producers by themselves do not possess access to the market dynamically. For those who are connected, the paths are already open.”</p> <p>COOPEG: “Our certification is participatory, thus if an agriculturist makes a mistake, all 53 families will be harmed. To be a member of a cooperative, there is no need for quotas; exclusivity is not required in the purchase of production, only when it comes to</p>

Table 3: (continued)

Subcategories	Organic food industry
	issuing a certificate, then yes, there is.”
Perception and influence of the certification of organic food products by formal institution agents	<p>Santo Fruto: “The acceptance of the organic food product, in general, is good and the badge helps as a result of the product warranty. However, it is up to the social class to be willing to pay the differential value in the competition of gourmet ice cream and popsicles.”</p> <p>La Naturelle: “We do not participate in any cooperative because we think they are not serious; and with intermediate certification, it’s the same thing (...). Even being more expensive and also more bureaucratic, we prefer the North-American IBD and ICT (...) I don’t believe in participatory certification because it is not rigorous and is susceptible to corruption.”</p> <p>COOPEG: “The Eco Vida badge is our certification; it is printed and taken to fairs; it consists of organic food products that can be commercialized. This reassures the customer when buying our product.”</p>

With regard to coopetition, the study showed that the relationship between players is evident not only by creating value through cooperation, but also by the dispute of value through competition between them. Regarding the Santo Fruto, which was the focus of this study, the cooperation was established with La Naturelle to promote the organic food industry, but there was a value dispute in their market positions based on differentiation. Similarly, Santo Fruto and the final customer (storekeeper) compete for fresh products from chain producers, but also cooperate through the availability of diversification in the range of organic food products. Moreover, the firm Santo Fruto and its suppliers (producers and/or agriculturists) dispute the value since Santo Fruto does not have exclusivity in the supply of *in natura* products, as other buyers in the chain dispute the production of organic food products. However, Santo Fruto and the suppliers cooperate through the efforts of the suppliers in the search for the certifications necessary to include the organic seal in the processed product. In this sense, the structure of coopetition facilitates each member to focus on their competence (Myllärniemi et al. 2012).

Finally, the study is helpful in understanding the influence of formal institution agents on value creation of the organic chain. The Centro Ecológico Ipê (EcoVida badge) certified producers and processors of organic food products, while using the guarantee badge to provide credibility to the final consumer. Moreover, the certification is believed to help open up new markets as it is considered a parameter of quality and organic sources. These attributes are emphasized in the literature by Jahn, Schramm, and Spiller (2005) and McCluskey (2000) regarding the organic food industry and by Klein et al. (2019) and Robert et al. (2018) regarding coopetition. In turn, cooperatives play an institutional role of intermediate performance between organic food producers and large retail networks, thereby making production gain the necessary scale to meet the demand required by the market. This formal institution agent also operates in smaller consumer networks, such as fairs, thereby avoiding competition between producers through product overlap.

One limiting factor of the research is related to the number of participants in the data collection process, which should be extended for a better generalization of the study, thus stimulating also the use of quantitative methods. As a suggestion for future studies, this study can focus on the evolution of the organic food chain from the perspective of coopetition, since it implies dynamism and may change according to the development and maturation of the industry. Therefore, there is still a need to examine not only whether formal institution agents are important to coopetition, but also how important they are over time.

References

- Associação Brasileira das Indústrias e do Setor de Sorvetes (ABIS). n.d. *Estatística*. http://www.abis.com.br/estatistica_producaoconsumodesorvetesnobrasil.html (accessed February 28, 2019).
- Bardin, L. 1977. *L’analyse de contenu*. France: PUF.
- Bengtsson, M., and S. Kock. 1999. “Cooperation and Competition in Relationships between Competitors in Business Networks.” *Journal of Business & Industrial Marketing* 14 (3): 178–94.
- Bengtsson, M., and S. Kock. 2000. “‘Coopetition’ in Business Networks – To Cooperate and Compete Simultaneously.” *Industrial Marketing Management* 29 (5): 411–26.
- Bengtsson, M., and S. Kock. 2014. “Coopetition – Quo Vadis? Past Accomplishments and Future Challenges.” *Industrial Marketing Management* 43 (2): 180–8.
- Bengtsson, M., J. Eriksson, and J. Wincent. 2010. “Co-opetition Dynamics – An Outline for Further Inquiry.” *International Business Journal* 20 (2): 194–214.
- Bouncken, R. B., V. Fredrich, and S. Kraus. 2019. “Configurations of Firm-Level Value Capture in Coopetition.” *Long Range Planning*. In Press. <https://doi.org/10.1016/j.lrp.2019.02.002>.

- Bouncken, R. B., J. Gast, S. Kraus, and M. Bogers. 2015. "Coopetition: A Systematic Review, Synthesis, and Future Research Directions." *Review of Managerial Science* 9 (3): 577–601.
- Bouncken, R. B., and S. Kraus. 2013. "Innovation in Knowledge-Intensive Industries: The Double-Edged Sword of Coopetition." *Journal of Business Research* 66 (10): 2060–70.
- Brandenburger, A. M., and B. J. Nalebuff. 1996. *Co-opetition*. New York: Currency Doubleday.
- Brasil Food Trends. 2020–2019. <http://www.brasilfoodtrends.com.br/> (accessed February 28, 2019).
- Brito, C. M. 2001. "Towards an Institutional Theory of the Dynamics of Industrial Network." *Journal of Business & Industrial Marketing* 16 (3): 150–66.
- Castellano, S., and O. Ivanova. 2008. "Impact of Change on Organizational Legitimacy: The Case of the Bulgarian Wine Sector." *Association International de Management Stratégique*. <http://www.strategie-aims.com/events/conferences/6-xviieme-conference-de-l-aims/communications/1490-impact-of-institutional-change-on-organizational-legitimacy-the-case-of-the-bulgarian-wine-sector/download> (accessed October 24, 2017).
- Chen, W., J. Chen, D. Xu, J. Liu, and N. Niu. 2017. "Assessment of the Practices and Contributions of China's Green Industry to the Socio-Economic Development." *Journal of Cleaner Production* 153 (1): 648–56.
- Chin, K.-S., B. L. Chan, and P.-K. Lam. 2008. "Identifying and Prioritizing Critical Success Factors for Coopetition Strategy." *Industrial Management & Data Systems* 108 (4): 437–54.
- Collis, J., and R. Hussey. 2003. *Business Research: A Practical Guide for Undergraduate and Postgraduate Students*, 2nd ed. New York: Palgrave Macmillan.
- Contini, E., D. J. D. Talamini, and P. A. Vieira. 2013. "Cenário Mundial de Commodities: frango, soja e milho." *Anais, Conferência Facta*. Facta, Campinas.
- Coy, Peter. 2006. "Sleeping with the Enemy." *Business Week*: 96–7. August 21/28.
- Creswell, J. W. 2009. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 3rd ed. London: SAGE Publications.
- Cuervo-Cazurra, A., and M. Genc. 2008. "Transforming Disadvantages into Advantages: Developing-Country MNEs in the Least Developed Countries." *Journal of International Business Studies* 39 (6): 957–79.
- Czakon, W., and M. Mariusz Rogalski. 2014. "Coopetition Typology Revisited – A Behavioural Approach." *International Journal of Business Environment* 6 (1): 28–46.
- Dagnino, G. B., and G. Padula. 2002. "Coopetition Strategy: A New Kind of Interfirm Dynamics for Value Creation." In *II Annual Conference of Euram on: "Innovative Research Management," Track: "Coopetition Strategy: Towards a new kind of interfirm dynamics."* Stockholm, Sweden.
- Dahl, J., S. Kock, and E.-L. Lundgren-Henriksson. 2016. "Conceptualizing Coopetition Strategy as Practice: A Multilevel Interpretative Framework." *International Studies of Management & Organization* 46 (2–3): 94–109.
- Dalmo, M. 2015. "Construção de significados culturais acerca dos orgânicos: uma análise do mercado de suco de uva orgânico." *Revista Brasileira de Marketing* 14 (1): 97–109.
- Dal-Soto, F., and J. M. Monticelli. 2017. "Coopetition Strategies in the Brazilian Higher Education." *RAE – Revista de Administração de Empresas* 57 (1): 65–78.
- De Barcellos, M. D., C. M. Teixeira, and J. C. Venturini. 2014. "Personal Values Associated with Political Consumption: An Exploratory Study with University Students in Brazil." *International Journal of Consumer Studies* 38 (2): 207–16.
- Deligonul, S., E. Ulf, E. Cavusgil, and P. N. Ghauri. 2013. "Developing Strategic Supplier Networks: An Institutional Perspective." *Journal of Business Research* 66 (4): 506–15.
- Doh, J., S. Rodrigues, A. Saka-Helmhout, and M. Makhija. 2017. "International Business Responses to Institutional Voids." *Journal of International Business Studies* 48 (3): 293–307.
- Dorn, S., B. Schweiger, and S. Albers. 2016. "Levels, Phases and Themes of Coopetition: A Systematic Literature Review and Research Agenda." *European Management Journal* 34 (5): 484–500.
- Esty, D. C., and D. Geradin. 2000. "Regulatory Co-opetition." *Journal of International Economic Law* 3 (2): 235–55.
- Estrada, I., D. Faems, and P. de Faria. 2016. "Coopetition and Product Innovation Performance: The Role of Internal Knowledge Sharing Mechanisms and Formal Knowledge Protection Mechanisms." *Industrial Marketing Management* 53: 56–65.
- Flick, U. 2007. *The Sage Qualitative Research Kit. Designing Qualitative Research*. Thousand Oaks, CA: Sage Publications.
- Franco, M., and M. Belo. 2013. "Cooperation Networks as a Mechanism for Strengthening Territorial Competitiveness: The Case of the Qualifica Association." *World Review of Entrepreneurship, Management and Sustainable Development* 9 (4): 421–43.
- Galdeano-Gómez, E., J. C. Pérez-Mesa, and C. L. Giagnocavo. 2015. "Food Exporters and Co-opetition Relationships: An Analysis on the Vegetable Supply Chain." *British Food Journal* 117 (5): 1596–609.
- Gnyawali, D. R., and B.-J. (Robert) Park. 2009. "Co-opetition and Technological Innovation in Small and Medium-Sized Enterprises: A Multilevel Conceptual Model." *Journal of Small Business Management* 47 (3): 308–30.
- Gnyawali, D. R., and B.J. (Robert) Park. 2011. "Co-opetition between Giants: Collaboration with Competitors for Technological Innovation." *Research Policy* 40 (5): 650–63.
- Gnyawali, D. R., and T. Ryan Charleton. 2018. "Nuances in the Interplay of Competition and Cooperation: Towards a Theory of Coopetition." *Journal of Management* 44 (7): 2511–34.
- Gnyawali, D. R., J. He, and R. Ravindranath Madhavan. 2006. "Impact of Co-opetition on Firm Competitive Behavior: An Empirical Examination." *Journal of Management* 32 (4): 507–30.
- Gómez, M., C. B. Barrett, L. Buck, H. De Groote, S. Ferris, O. Gao, E. McCullough, D. Miller, H. Outhred, A. N. Pell, T. Reardon, M. Retnanestri, R. Ruben, P. Struebi, J. Swinnen, M. A. Touesnard, K. Weinberger, J. D. H. Keatinge, M. B. Milstein, R. Y. Yang 2011. "Food Value Chains, Sustainability Indicators and Poverty Alleviation." *Science* 332 (6034): 1154–5.
- Granata, J. 2012. "Economic and psychological drivers of coopetition in SMEs and their evolution. Small Business Advancement National Center." *International Council for Small Business World Conference Proceedings*. <http://sbaer.uca.edu/research/icsb/2012/Granata%20175.pdf>.
- Granata, J., L. Frank, F. Le Roy, and L.-P. Dana. 2017. "How Do Micro-firms Manage Coopetition? A Study of the Wine Sector in France." *International Small Business Journal: Researching Entrepreneurship* 36 (4), 026624261774041.

- He, X., and Y. Wei. 2013. "Export Market Location Decision and Performance: The Role of External Networks and Absorptive Capacity." *International Marketing Review* 30 (6): 559–90.
- Hodgson, G. M. 2006. "What are Institutions?." *Journal of Economic Issues* 15 (1): 1–25.
- Hoefkens, C., W. Verbeke, J. Aertsens, K. Mondelaers, and J. Van Camp. 2009. "The Nutritional and Toxicological Value of Organic Vegetables: Consumer Perception versus Scientific Evidence." *British Food Journal* 111 (10): 1062–77. <http://hdl.handle.net/1854/LU-821829>.
- Hoskisson, R. E., E. Lorraine, M. L. Chung, and W. Mike. 2000. "Strategy in Emerging Economies." *Academy of Management Journal* 43 (3): 249–67. <https://www.jstor.org/stable/1556394>.
- Houé, T., and R. Guimaraes. 2013. "A Diversity of Supply Chain Management: Towards a Geo-Explicative Model Explaining Coordination." *Proceedings of the EURAM Conference*. <https://econpapers.repec.org/RePEc:hal:journl:hal-01375858>.
- Institute of Food Science and Technology. 2015. *Food Science Fact Sheets*. <https://www.ifst.org/resources/food-science-fact-sheets> (accessed February 26, 2019).
- Jahn, G., M. Schramm, and A. Spiller. 2005. "The Reliability of Certification: Quality Labels as a Consumer Policy Tool." *Journal of Consumer Policy* 28 (1): 53–73.
- Jouzi, Z., H. Azadi, F. Taheri, K. Zarafshani, K. Gebrehiwot, S. Van Passel, and P. Lebailly. 2017. "Organic Farming and Small-Scale Farmers: Main Opportunities and Challenges." *Ecological Economics* 132 (C): 144–54.
- Kedia, B., N. Rhew, N. Gaffney, and J. Clampit. 2015. "Emerging Market Multinationals: Coopetition for Global Growth." *Thunderbird International Business Review* 58 (6): 515–26.
- Kim, H. Y., and J.-E. Chung. 2011. "Consumer Purchase Intention or Organic Personal Care Products." *Journal of Consumer Marketing* 28 (1): 40–7.
- Klein, K., T. Semrau, S. Albers, and J. Edward. 2019. "Multimarket Coopetition: How the Interplay of Competition and Cooperation Affects Entry into Shared Markets." *Long Range Planning*. in press. <https://doi.org/10.1016/j.lrp.2019.02.001>.
- Klimas, P. 2014. "Multifaceted Nature of Coopetition inside an Aviation Supply Chain – The Case of the Aviation Valley." *Journal of Economics & Management* 17: 96–119.
- Kraus, S., J. Gast, P. Klimas, and T. Stephan. 2019. "Sleeping with Competitors: Types, Drivers and Outcomes of Coopetition of Small- and Medium-Sized Craft Beer Breweries." *International Journal of Entrepreneurial Behaviour & Research* 25 (1): 50–66.
- Kylänen, M., and M. M. Mariani. 2012. "Unpacking the Temporal Dimension of Coopetition in Tourism Destinations: Evidence from Finnish and Italian Theme Parks." *Anatolia: An International Journal of Tourism and Hospitality Research* 23 (1): 61–74.
- Lado, A. A., N. G. Boyd, and S. C. Hanlon. 1997. "Competition, Cooperation, and the Search for Economic Rents: A Syncretic Model." *Academy of Management Review* 22 (1): 110–41.
- Lawrence, T. B. 1999. "Institutional Strategy." *Journal of Management* 25 (2): 161–88.
- Luo, Y. 2007. "From Foreign Investors to Strategic Insiders: Shifting Parameters, Prescriptions and Paradigms for MNCs in China." *Journal of World Business* 42 (1): 14–36.
- Mariani, M. M. 2007. "Coopetition as an Emergent Strategy Empirical Evidence from an Italian Consortium of Opera Houses." *International Journal of Management and Organizational Studies* 37 (2): 97–126.
- Mariani, M. M., and M. Kylänen. 2014. "The Relevance of Public-Private Partnerships in Coopetition: Empirical Evidence from the Tourism Sector." *International Journal of Business Environment* 6 (1): 106–25.
- McCluskey, J. 2000. "A Game Theoretic Approach to Organic Foods: An Analysis of Asymmetric Information and Policy." *Agricultural & Resource Economics Review* 29 (1): 1–9.
- Mesquita, L. F., and S. G. Lazzarini. 2008. "Horizontal and Vertical Relationships in Developing Economies: Implications for SMEs' Access to Global Markets." *Academy of Management Journal* 51 (2): 359–80.
- Monticelli, J. M., I. L. Garrido, and S. L. de Vasconcellos. 2018. "Coopetition and Institutions: A Strategy for Brazilian Wineries Facing Internationalization." *International Journal of Wine Business Research* 30 (1): 74–95.
- Myllärniemi, J., J. Okkonen, J. Paavilainen, and V. Vuori. 2012. "Negative Competition Steering Patient Flow in a Public-Private Healthcare Co-opetition Setting – A Finnish Case." *World Review of Entrepreneurship, Management and Sustainable Development* 8 (2): 208–20.
- Nash, J. F. 1950. "The Bargaining Problem." *Econometrica* 18 (2): 155–62.
- Nemeh, A., and S. Yami. 2016. "The Determinants of the Emergence of Coopetition Strategy in R&D." *International Studies of Management & Organization* 46 (2–3): 159–78.
- North, D. C. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- Ohkita, K., and M. Okura. 2014. "Coopetition and Coordinated Investment: Protecting Japanese Video Games' Intellectual Property Rights." *International Journal of Business Environment* 16 (1): 92–105.
- Oliver, A. L. 2004. "On the Duality of Competition and Collaboration: Network-Based Knowledge Relations in the Biotechnology Industry." *Scandinavian Journal of Management* 20 (1–2): 151–71.
- Organic Trade Association (OTA). 2017. *Maturing US Organic Sector Sees Steady Growth of 6.4 Percent in 2017*. <https://ota.com/news/press-releases/20201> (accessed February 28, 2019).
- Padula, G., and G. B. Dagnino. 2007. "Untangling the Rise of Coopetition." *International Studies of Management & Organization* 37 (2): 32–52.
- Pellegrin-Boucher, E., F. Le Roy, and C. Gurău. 2013. "Coopetitive Strategies in the ICT Sector: Typology and Stability." *Technology Analysis & Strategic Management* 25 (1): 71–98.
- Peng, T.-J. A., and M. Bourne. 2009. "The Coexistence of Competition and Cooperation between Networks: Implications from Two Taiwanese Healthcare Networks." *British Journal of Management* 20 (3): 377–400.
- Peng, M. W., S. L. Sun, B. Pinkham, and H. Chen. 2009. "The Institution-Based View as a Third Leg for a Strategy Tripod." *Academy of Management Perspectives* 23 (3): 63–81.
- Portal Brasil. 2017. *Agricultura Orgânica Deve Movimentar R\$ 2,5 Bi Em 2016*. http://www.brasil.gov.br/economia-e-emprego/2015/10/agricultura-organica-deve-movimentar-r-2-5-bi-em-2016/info_organicos-home.png/view (accessed February 28, 2019).
- Raza-Ullah, T., M. Bengtsson, and S. Kock. 2014. "The Coopetition Paradox and Tension in Coopetition at Multiple Levels." *Industrial Marketing Management* 43 (2): 189–98.

- Ritala, P., and P. Hurmelinna-Laukkanen. 2009. "What's in it for Me? Creating and Appropriating Value in Innovation-Related Coopetition." *Technovation* 29 (12): 819–28.
- Robert, M., C. Paul, B. Mira, and F. Le Roy. 2018. "Better, Faster, Stronger: The Impact of Market-Oriented Coopetition on Product Commercial Performance." *M@n@gement* 21 (1): 574–610.
- Sahota, H. S. 2013. *Wireless Sensor Network for Precision Agriculture: Design, Performance Modeling and Evaluation, and Node Localization*. Paper 13466. Iowa, USA: Iowa State University Ames, <https://doi.org/10.31274/etd-180810-3149>.
- Schouten, J. W., D. M. Martin, H. Blakaj, and A. Botez. 2015. "From Counterculture Movement to Mainstream Market: Emergence of the U.S. Organic Food Industry." In *Assembling Consumption: Researching Actors, Networks and Markets*, edited by R. Canniford, and D. Bajde, 22–31. London: Routledge, <https://doi.org/10.4324/9781315743608..>
- Scott, W. R. 2001. *Institutions and Organizations*. Thousand Oaks, CA: Sage Publications.
- Serviço Brasileiro de Apoio às Micro e Pequenas Empresas (Sebrae). 2017. *Estudo de Mercado: Como se destacar no mercado de sorvetes*. <http://www.sebrae.com.br/sites/PortalSebrae/artigos/como-se-destacar-no-mercado-de-sorvetes,a49d99a5a995b510VgnVCM1000004c00210aRCRD> (accessed February 28, 2019).
- Seufert, V., N. Ramankutty, and J. A. Foley. 2012. "Comparing the Yields of Organic and Conventional Agriculture." *Nature* 485 (7397): 229–32.
- Stake, R. E. 1998. "Case Studies." In *Strategies of Qualitative Inquiry*, 3rd ed., edited by N. K. Denzin, and Y. S. Lincoln, 336–96. Thousand Oaks, CA: Sage.
- Sun, G., Y. Wu, S. Liu, T.-Q. Peng, J. Jonathan, H. Zhu, and R. Liang. 2012. "EvoRiver: Visual Analysis of Topic Coopetition on Social Media." *IEEE Transactions on Visualization and Computer Graphics* 20 (12): 1753–62.
- Tidström, A., and A. Rajala. 2016. "Coopetition Strategy as Interrelated Praxis and Practices on Multiple Levels." *Industrial Marketing Management* 58: 35–44.
- Tomski, P. 2011. "The Horizons of Coopetition – The Analysis of the Selected Aspects of Application." *Management of Organizations: Systematic Research* 59: 131–47.
- Uematsu, H., and A. K. Mishra. 2012. "Organic Farmers or Conventional Farmers: Where's the Money?." *Ecological Economics* 78: 55–62.
- Volschenk, J., M. Ungerer, and E. Smit. 2016. "Creation and Appropriation of Socio-Environmental Value in Coopetition." *Industrial Marketing Management* 57: 109–18.
- Walley, K., and C. Paul. 2010. "Coopetition: Insights from the Agri-Food Supply Chain." *Journal on Chain and Network Science* 10 (3): 185–92.
- Wu, B., and P. Deng. 2020. "Internationalization of SMEs from Emerging Markets: An Institutional Escape Perspective." *Journal of Business Research* 108: 337–50.