Innovation Configurations in Sport Clusters: The role of Interorganizational Citizenship and Social Capital

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Abstract

Innovation plays a central role in the sports sector. However, delivering innovative solutions is increasingly becoming a network-level phenomenon, increasing the need to understand the network level dynamics. This research explores this phenomenon by building on two complementary theoretical foundations: interorganizational citizenship behavior (ICB) and social capital. The research aims to understand how different configurations of dimensions of social capital and interorganizational citizenship behavior facilitate product and process innovation. The research uses data from a horse industry cluster in France and applies fuzzy set qualitative comparative analysis (fsQCA), a method developed explicitly for configurational analysis. The results unveil a series of configurations leading to both product and process innovation. The findings show that the different dimensions of ICB and social capital have both positive and negative impacts on innovation. Moreover, the results chart multiple paths to innovation and highlight differences between product and process innovation in sports clusters.

Keywords: Citizenship; Social Capital; Innovation; Sports.

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1. Introduction

Innovation is at the heart of sport, whether it is to achieve better performance, to develop new technologies for spectators, to facilitate mass participation (Gerke, 2019), to obtain scarce resources, to increase service quality (Hoeber & Hoeber, 2012), to develop new services (Winand et al., 2016) or to develop sport entrepreneurship (Ratten, 2011). Innovation studies in sport deal with 1) technological innovations and different sources for the latter including the firm (Desbordes, 2001), the user (Hyysalo, 2009) and networks (Gerke, 2016); 2) administrative and organizational innovations, notably in sport federations and clubs, to increase service quality and diversity (Winand et al., 2016); and 3) with social innovation aiming at alleviating social issues through sport (Svensson & Hambrick, 2019). Furthermore, a few studies focus on the innovation process within the sport sector (Hoeber & Hoeber, 2012).

Innovation results from the interactions of economic, public, and non-profit organizations that operate in the sport industry, which is a highly interconnected, networked, and multi-sectoral industry (Babiak, Thibault, & Willem, 2018; Gerke et al., 2018). Studying innovation in sport is particularly relevant for a number of reasons: (i) the competitive nature of sport makes the industry dynamic and inherently oriented towards innovation (Hoye, Smith, Nicholson, Stewart, & Westerbeek, 2009; Ratten, 2016); (ii) the participation of varied, interconnected actors typical of sports clusters allows to take a network perspective, which has proven key for innovation (Carnovale & Yeniyurt, 2015; Dagnino, Levanti, Minà, & Picone, 2015; Sharma et al., 2019); (iii) innovation determines the role of sport in the society and consequently in the last ten years sport innovation emerged as a research field of its own (Tjønndal, 2017).

In this highly networked industry, innovation is less likely to come from a single organization (Desbordes, 2001; Hillairet, Richard, & Bouchet, 2009), but rather requires the collaboration of multiple organizations across the different phases of the innovation process (Alexiev, Volberda, & Van den Bosch, 2016; Gerke et al., 2017). As such, the interorganizational links between economic actors are not simply transactional, but cooperative and collaborative relationships acquire importance, either at the organizational or individual level (Parmigiani & Rivera-Santos, 2011; Chetty & Agndal, 2008). Economic rationale no longer drives organizations' decisions on its own, and factors like trust, empathy, reciprocity, legitimacy, are now recognized as central to organizations' decision-making processes (Babiak, 2007; Gerke et al., 2018; Oliver, 1990). Furthermore, innovation networks tend to span economic boundaries and include other organizations than traditional economic actors, like non-profit organizations, local and regional authorities, research institutes, and think tanks (Gerke, Desbordes, & Dickson, 2015; Torre, 2019).

As innovation increasingly comes from a network of organizations rather than from a single organization, we need a better understanding of interorganizational network dynamics and governance (Bonomi, Sarti, & Torre, 2020; Dagnino et al., 2015; Song, Ming, & Wang, 2013). When dealing with innovation networks, extant studies widely adopt a social network perspective (Antons, Kleer, & Salge, 2016) and specifically highlight the relevance of social capital dimensions (Carey, Lawson, & Krause, 2011). In line with this stream of literature, Cappiello, Giordani, & Visentin (2020) find that the cognitive, structural and relational dimension of social capital in a given network affect the innovation performance of networked firms in various ways. However, little is known about more nuanced dimensions of interorganisational dynamics. In this study, we intend to take stock of previous research linking social capital and innovation, but also further explore the characteristics of business-to-business relationships by introducing the concept of interorganizational citizenship

behavior. Despite a few studies pointing to the relevance of interoganizational citizenship for innovation (Gerke et al., 2017), empirical evidence on this connection is still limited.

The concept of interorganizational citizenship behavior has been used to investigate collective motivation and governance of temporary networks (Provan, Sydow, & Podsakoff, 2017). While a few studies look at antecedents of interorganizational citizenship in temporary organizations like projects or networks (Provan et al., 2017), or at outcomes like project (Ferreira, Braun, & Sydow, 2013) or innovation performance (Gerke et al., 2017), the field of interorganizational citizenship remains largely unexplored.

Building on literature that theorizes a positive relationship between citizenship behavior and innovation (Yan & Yan, 2013) and literature on collaborative innovation in interorganizational networks (Dagnino et al., 2015), we put forward the following question: *how do different configurations of social capital dimensions and interorganizational citizenship behaviors facilitate (or inhibit) product and process innovation?*

In the following section, we introduce the concepts of interorganizational citizenship behavior and social capital (with an overview of their respective sub-dimensions) and we discuss their link with innovation. In Section 3, we explain the method used to investigate different innovation configurations in a sport cluster. Results are presented in Section 4 and discussed in Section 5. Conclusions end the paper.

2. Literature Review and Theoretical Framework

Research on innovation is vast and abundant (Ratten, Ferreira, & Fernandes, 2017). Antons et al. (2016) draw a map of 57 topics in innovation research. Amongst those topics are "network effects" and "networks and network structure" which refer to the field that our article seeks to contribute to. A comprehensive literature review on innovation research is beyond the scope of this article but we aim at contributing to knowledge at the nexus of interorganizational networks, relationships characteristics and innovation research (Dagnino,

Levanti, Minà, & Picone, 2015; Palumbo & Manna, 2018). In the next, we will discuss the two main concepts at the core of our study (i.e., interorganizational citizenship and social capital) and set the stage for our empirical investigation.

Organ (1988, p. 4) defined Organizational Citizenship Behavior (OCB) as "*individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization*." Organ (1997) and Organ, Podsakoff, and MacKenzie (2006) revisit the concept's definition over time, but its original definition remains relevant in contemporary research (see for example López-Cabarcos, Vázquez-Rodríguez, Piñeiro-Chousa, and Caby (2020)). A large body of research is available on OCB, its antecedents and consequences, even though the latter has only recently gained more attention (N.P. Podsakoff et al., 2014). Most studies that investigate outcomes of OCB focus on performance-related variables such as productivity, efficiency, reduced cost, customer satisfaction and quality (N. P. Podsakoff et al., 2009; N. P. Podsakoff et al., 2014; Podsakoff, Ahearne, & MacKenzie, 1997). Few of the extant research has examined innovation as a possible consequence of OCB (Yan & Yan, 2013) even though Katz (1964) posits in his seminal work that OCB are "innovative and spontaneous" behaviors.

The concept of citizenship behavior has proven useful in explaining interorganizational behavior in various contexts. These include temporary interorganizational settings like projects involving multiple organizations (Braun, Müller-Seitz, & Sydow, 2012; Ferreira et al., 2013), as well as more permanent interorganizational settings like the supply chain (Autry, Skinner, & Lamb, 2008; Skinner, Autry, & Lamb, 2009; Wan & Chen, 2010) and industrial clusters (Gerke et al., 2017). The original definition for Interorganizational Citizenship Behavior (ICB) proposed by (Autry et al., 2008, p. 5) says "*interfirm behavioral tactics, generally enacted by boundary personnel, that are discretionary, not directly or explicitly included in formal agreements, and that in the aggregate promote the effective*

functioning of the supply chain." More recently, Provan et al. (2017, p. 11) proposed a less context dependent definition of ICB relating it to networks as a general interorganizational context: "*individual extra-role behavior exhibited by those who work in organizations that are part of a goal-directed multi-organizational network that supports the social and psychological environment in which the achievement of network-focused goals takes place.*"

Overall, research on ICB is scarce. Existing research on ICB research focuses either on the conceptualization and measurement of ICB (Autry et al., 2008; Braun et al., 2012; Skinner et al., 2009) or on antecedents (Esper, Bradley, Thomas, & Thornton, 2015; Provan et al., 2017; Wan & Chen, 2010). To date, research on the possible outcomes of ICB (Provan et al., 2017), like project performance (Ferreira et al., 2013) or innovation (Gerke et al., 2017) is limited. However, considering the amount of research on outcomes of OCB, it seems likely that ICB can affect aspects of both organizational and interorganizational performance.

Previous research developed sub-dimensions for citizenship behaviors in the intraorganizational and interorganizational context to operationalize the concept. While it is beyond the paper to provide a full picture of the development of those dimensions over the past few decades of citizenship behavior research, it is worth noting that the number and nature of dimensions has diverged in the early days of citizenship research (P. M. Podsakoff et al., 2000). OCB literature has introduced several different dimensions that have been later used in ICB literature. More recently, scholars seem to agree on dimensions of citizenship behavior with slightly different names in an intraorganizational versus an interorganizational context (Skinner et al., 2009). Table 1 shows which ICB dimensions have been used over the last ten years of ICB research. Even though scholars used a variety of dimensions, the literature show an essential convergence over recurring aspects of ICB. For this study, following the example of Esper et al. (2015), we selected a three-dimension conceptualization

of ICB, referring to *helping behavior*, *civic virtue*, *and loyalty* (see Table 2 for formal definitions).

----- Insert Table 1 about here. -----

----- Insert Table 2 about here. -----

Social capital is a complementary concept to citizenship behavior. It is defined as "*the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit*" (Nahapiet & Ghoshal, 1998, p. 243). Social capital is inherently embedded in the structure of relations between actors, which can be corporate actors (Coleman, 1988). Hence, those relationships between corporate actors (interorganizational relationships) can be the locus of information and knowledge sharing, resource exchange, technology transfer, and other activities that might be beneficial for a firm's innovation activities (Pérez-Luño et al., 2011). The conceptual proximity between social capital and ICB consists of the embeddedness of both in interorganizational relationships – dyads and beyond – and the potential borne within those relationships to convey knowledge, technology, information, and resources that might facilitate innovation.

Dimensions of social capital are threefold: (1) relational social capital refers to the kind of relationships people have developed with each other throughout interactions (i.e., trust, identification, and obligation); (2) cognitive social capital relates to resources that provide shared representations, interpretations, systems of meaning (i.e., values, visions, and ambitions); and (3) structural social capital refers to whom you are connected to and how (i.e., strength and number of ties) (Carey et al., 2011; Nahapiet & Ghoshal, 1998).

Research on the relationship between social capital and innovation is extensive (see for example Cappiello et al., 2020; Casanueva, Castro, & Galán, 2013; Pérez-Luño et al., 2011). While most research focuses on the positive effects of social capital, some highlight

the potential adverse effects of social capital on innovation (Capaldo, 2007; Pérez-Luño et al., 2011; Wang et al., 2017). Similarly, building on literature on collaborative innovation (Reypens, Lievens, & Blazevic, 2016; Xie, Fang, & Zeng, 2016) and network strategies of businesses (Håkansson & Ford, 2002; Håkansson & Snehota, 2006), previous research asserted a link between ICB and innovation (Gerke et al., 2017). Yet, social capital has received much more attention from scholars as antecedents for innovation than ICB (Pérez-Luño et al., 2011). This paper intends to uncover the relationship between social capital, ICB, and innovation by analyzing the importance of presence or absence of the different dimensions of social capital and ICB for product and process and innovation.

As in previous studies on innovation, we take into account the perception of market stability/ uncertainty in our study (Lau, Tang, & Yam, 2010). This contextual dimension is particularly interesting since sports markets can be, on the one hand, very uncertain due to the uncertainty of the outcome of sports competitions, but also factors like weather conditions and individual well-being of athletes. On the other hand, sports market can be quite stable due to high levels of regulation through the league and national sport organizations that govern sport (Hoye et al., 2009).

3. Method

In this study, we seek to identify the configurations of ICB and social capital dimensions that can foster or hinder innovation. Therefore, we followed a configurational approach through fuzzy set qualitative comparative analysis (fsQCA), which has proven effective in management studies (e.g., Fiss (2011), Ommen et al. (2016), Bonomi et al. (2020)).

3.1. Research context

We collected data from a horse industry cluster in Normandy (France). It is the only government-certified competitive cluster in France and reflects a network of more than 200

members (Hippolia, 2020). This context is particularly suitable for our research purpose for various reasons. First, the cluster explicitly defines its goal as follows: "*To position the French horse industry at the forefront of innovation with its beating heart in Normandy*." Therefore, it represents an ideal setting to investigate the dynamics of innovation. Furthermore, previous research on horseracing industries in the US (Garkovich, Brown, & Zimmerman, 2008) and in the UK (Parker & Beedell, 2010) have proved useful in exploring the concepts of clusters, networks and innovation.

Second, clusters are naturally structured as networks. Actors in a cluster are firms and institutions that intend to leverage commonalities or complementarities to achieve different objectives, such as increased productivity, entrepreneurship, and innovation (Porter, 1998). The relevance of clusters also hinges upon their contribution to regional economic development (Greve, 2009). As networks, clusters showcase complex relational dynamics between members, emphasizing the role of ICB and social capital, which are the target variables of this study. Third, sport clusters have proven a theoretically and empirically interesting context, offering peculiar opportunities to investigate a variety of interorganizational behaviors, ranging from competition to citizenship (Gerke et al., 2017). Recent studies confirm this view and propose sport clusters as a viable setting to develop middle-range theory in sport management research (Gerke, Woratschek, & Dickson, 2020).

3.2. Survey design and data collection

We collected data through a carefully designed, large-scale survey administered to all cluster member companies. We utilized an online questionnaire about interorganizational behaviors, social capital, and innovation performance using constructs derived from the literature. The survey was developed in English using the main theoretical framework that inspired the study. The constructs were defined in a construct book, reporting construct name and typology, definitions, survey items, scales, underlying theories, and corresponding

references. The English version of the questionnaire was translated into French using the Translation, Review, Adjudication, Pre-testing and Documentation procedure (Harkness, Pennell, & Schoua-Glusberg, 2004), and tested by two academics and two company managers to check the clarity of the questions. Before and during the pre-testing phase, emphasis was placed on the quality of the question formulation to reduce potential bias resulting from respondents' misleading cognition (Poggie, 1972; Schwarz & Oyserman, 2001). We concentrated questions on observable data to exclude every possible scope of interpretation. Respondents were contacted over e-mail and phone to determine their availability to give answers and to provide guidance for the survey completion. After a respondent agreed to participate, he or she was contacted via a customized e-mail including the survey link. Reminder e-mails and telephone calls were made to those who had not responded. Following similar key-informant-based research studies (Krause, Luzzini, & Lawson, 2018), the goal was to find the right person within the organization who was able to respond to all the questions.

The survey took place between September 2017 and March 2018. The respondents consisted of entrepreneurs and senior managers of the cluster member firms that were knowledgeable about both the firms' innovation activities and involvement in the cluster. At the time of data collection, there were 176 cluster members. Out of the 176 contacted members, 76 responded. Of these, 38 provided usable responses, accounting for an overall response rate of 22% percent. Non-respondent bias was tested by ruling out the differences in terms of distributions of demographic characteristics between respondents and non-respondents (Scott & Overton, 1977).

The final sample is in line with the fsQCA method, which is suitable for small and intermediate-size samples, with authors recommending between 10 to 50 cases (Ragin, 2008; Rihoux & Ragin, 2008; Russo et al. 2018; Schneider and Wagemann, 2012). Our aim is to

identify combinations of conditions related to ICB and social capital that determine high and low innovation performance. Hence, the relatively small number of cases should not be seen as a limitation but as a theoretical choice to ensure their relevance to the research and their fine-grained interpretation (Greckhamer, Misangyi, Elms, & Lacey, 2018). Qualitative comparative analysis methods, like any other research method, suffer from some limitations (e.g., de Meur, Rihoux, & Yamasakin, 2009; Misangyi et al. 2017; Rihoux and Ragin, 2008; Russo et al. 2018). However, many of the critiques of the method have been either discounted, or overcome through technical developments as discussed by de Meur et al. (2009) and Marx, Rihoux, and Ragin (2014).

3.3. Measures

The operationalization of the constructs was based on existing measures. All the items used to measure the latent variables we target are shown in the Appendix. In terms of conditions for the fsQCA, we collected data on three ICB constructs and three SC constructs, all measured through Likert-like scales from 1 ("Strongly disagree") to 7 ("Strongly agree") and from 1 ("Not at all") to 7 ("A very great extent"). The ICB measures were adapted from Podsakoff et al. (1997), Ferreira et al. (2013), and Skinner et al. (2009) and included civic virtue, helping behavior, and loyalty. We derived the social capital from Carey et al. (2011) and included structural, cognitive, and relational capital. As for the outcome variables, we measured product and process innovation based on Prajogo and Sohal (2003) on 1-7 scales (low/high and much worse/much better than competitors respectively).

3.4. fsQCA

Fuzzy set qualitative comparative analysis (fsQCA) is an analytic technique that uses Boolean algebra and fuzzy set theory to investigate causally complex patterns (Duşa, 2007; Fiss, 2011; Greckhamer et al., 2008; Misangyi et al., 2016; Ragin, 1987, 2006, 2008). The

technique involves analyzing a relatively small number of cases to evaluate the impact of different configurations of conditions on an outcome (Ragin, 1987, 2008).

In recent years, fsQCA has gain traction in the management and innovation literature as a novel approach to investigate causal complexity (e.g., Beynon, Jones, and Pickernell (2016); Fiss (2011); Habib, Bastl, Karatzas, and Mena (2020); Kraus, Ribeiro-Soriano, and Schüssler (2018); Misangyi and Acharya (2014)). Innovation is a causally complex phenomenon that is influenced by a range of factors within a firm, its network, and its environment. These factors can combine in different ways (i.e., configurations), leading to either the presence or absence of innovation. This approach allows investigating the combined effects of a 'recipe' of conditions, in contrast with statistical methods, such as multiple regression, which evaluate the net effects of each condition (or variable). Moreover, these configurations are not necessarily symmetrical, meaning that a set of factors leading to innovation does not imply that the absence of such factors leads to the lack of innovation. For these reasons, fsQCA represents a fresh approach that can help us better understand the causal complexity of product and process innovation.

In this research, we focus on two different outcomes: product innovation and process innovation. Through the fsQCA analysis we identify the configurations of conditions leading to either of these two outcomes using combinations of seven conditions, three related to citizenship behavior (helping behavior, civic virtue, and loyalty), three related to social capital (relational, cognitive, structural) and one contextual condition (market stability). As such, we present two sets of results, one focusing on product innovation and one on process innovation.

The execution of fsQCA was divided into four main stages: (1) Calibrate and construct truth table; (2) Logical reduction and analysis of configurations; (3) Sensitivity analysis; (4) Interpretation of the results. Table 3 presents a short description of each of these stages and how we implemented them in this research.

----- Insert Table 3 about here. -----

4. Results

In this section, we present the results of the fsQCA. First, we present the analysis of necessity, where we combine the results for both product and process innovation. Then we offer the analysis of sufficiency focusing on *product innovation* as an outcome. Finally, we present the analysis of sufficiency for *process innovation*. In both cases, we present results for both the presence and the absence of innovation (i.e., the negation of the set), given that fsQCA does not assume the data to be symmetrical.

4.1. Analysis of necessity

The analysis of necessity evaluates if any of the conditions is necessary for causing the outcome. Following Ragin (2006) we examined if conditions were present (or absent) in all cases where the outcome is present (or absent), using a consistency threshold of 0.9 for a condition to be deemed necessary. Table 4 shows the results of the necessity analysis for the presence and absence of both outcomes (process and process innovation). Results indicate that none of the conditions is necessary for either outcome.

----- Insert Table 4 about here. -----

4.2. Analysis of sufficiency for product innovation

The analysis of product innovation resulted in seven configurations, five leading to the presence of product innovation (PROD1-5), and two leading to the absence of product innovation (~PROD1, ~PROD2). Table 5 presents these seven configurations alongside the results for consistency and coverage. It is worth noting that all configurations are above the 0.75 benchmark stipulated by Ragin (2008).

----- Insert Table 5 about here. -----

We subdivided the five configurations leading to product innovation into three groups based on their common characteristics. The first group labeled "Relationship Driven Product Innovation," comprises of two configurations (PROD1 & PROD2) which combine the presence of relational capital and the absence of cognitive capital as core conditions. In the case of PROD 1, this combination is supported by the presence of helping behavior, structural capital, and market stability as peripheral conditions. PROD2 combines the same two core conditions as PROD1, with four peripheral conditions, helping behavior, civic virtue, loyalty, and structural capital.

The second group leading to process innovation, labeled "Stability Driven Product Innovation," involves two configurations (PROD3 & PROD4), and is distinguished by the presence of market stability and civic virtue, and the absence of loyalty as a core condition. In addition to these three core conditions, PROD3 is characterized by the presence of structural capital as a peripheral condition, while PROD4, includes helping behavior in addition to the three core conditions.

The final configuration leading to product innovation, PROD6, involves only two core conditions, the presence of loyalty, and the absence of civic virtue. We labeled this configuration "Loyalty Driven Product Innovation." The manifest presence of Loyalty as a causal condition behind product innovation contrasts with PROD3 and PROD4, which show an absence of loyalty.

Regarding the absence of product innovation, two configurations are revealed, both of which involve the absence of market stability as a core condition. One of these, termed "Relational Breakdown" (~PROD1), consists of the absence of relational capital as a core

condition. Conversely, ~PROD2, which has been called "Structural Breakdown," involves the absence of structural capital.

4.3. Analysis of sufficiency for process innovation

The analysis of process innovation yielded seven conditions, two resulting in the presence of process innovation (PROC1 & PROC2) and five leading to the absence of process innovation (~PROC1-5). The details of these configurations and the results for consistency and coverage are presented in Table 6. All configurations indicate good consistency (Ragin, 2008).

----- Insert Table 6 about here. -----

The first configuration leading to the presence of process innovation (PROC1) has been called "Social Capital Driven Process Innovation". This configuration is supported by all aspects of social capital (i.e., relational, cognitive, and structural), in combination with helping behavior, but in the absence of loyalty. The second configuration (PROC2), labeled "Loyalty Driven Process Innovation," features loyalty combined with market stability, and in the absence of structural capital.

The conditions leading to the absence of process innovation have been further subdivided into three groups. The first involves two configurations (~PROC1, ~PROC2) that feature the presence of loyalty, combined with a lack of relational and cognitive capital. In the case of ~PROC1, these core conditions are joined by the lack of helping behavior and market uncertainty as peripheral conditions. The second group of configurations (~PROC3, ~PROC4) indicates a presence of helping behavior combined with the absence of different aspects of social capital. The final configuration leading to a lack of process innovation (~PROC5) involves the presence of civic virtue in the absence of all elements of social capital, as well as the absence of loyalty.

5. Discussion

5.1. Configurations for product innovation

The Relationship Driven Product Innovation configurations (PROD1 & PROD2) suggest that relational capital, supported by structural links between cluster members, is critical for product innovation. These findings are partially in line with Pérez-Luño et al. (2011) who find that relational capital is a strong determinant for radical product innovation if combined with complexity and/or tacitness of knowledge, and Cappiello et al. (2020), who find structural and cognitive social capital yielding positive effects on firms' innovation performance. However, the absence of cognitive capital suggests that in these configurations, the collaborating firms do not share the same values and objectives. This situation might emerge when the actors possess complementary assets and capabilities, which can favor innovation by recombination (Teece, 2010).

As for the role of ICB, the Relationship Driven Product Innovation configurations reveal that helping behavior appears as a peripheral condition for both configurations (Gerke et al., 2017). This is contrasting with the results of (Yan & Yan, 2013) in the context of OCB, which show helping behavior to have a negative impact on innovation. In PROD1, helping behavior and market stability act as peripheral conditions representing a situation where members of the cluster play nice with each other when the market is stable. In the case of PROD2, we find peripheral support from all dimensions of ICB as peripheral conditions, in line with the findings of Gerke et al. (2017).

The Stability Driven Product Innovation configurations (PROD3 & PROD4) are characterized by the presence of civic virtue and market stability as core conditions as well as an absence of loyalty. The appearance of civic virtue is consistent with previous studies, which have found it can play a positive role in the product innovation process (Gerke et al., 2017). However, the presence of market stability as a core condition contradicts Lau et al.

(2010) who found that high market certainty negatively affects product innovation. These configurations appear to reflect a situation where members of the cluster support each other when the market is stable, like fair-weather friends, who might not be loyal to the cluster. In fact, the absence of loyalty has been found to favor product innovation is in line with arguments around the dark side of interorganizational relationships and their potential lock-in effect (Capaldo, 2007).

In the case of PROD4, we find helping behavior as a peripheral condition similar to findings by Gerke et al. (2017). Considering the items reflected in this construct, it represents the behavior of helping cluster members that have difficulties, resolve any dispute, and alert in case of situations that can be harmful to them. The cluster members are willing to help each other and respect common rules, but they do not entertain close relationships with other members. Using a sports analogy, firms representing these configurations are like star players, who respect the rules but count on their strengths to win over the competition. In this sense, the presence of a diffused helping behavior ensures that each firm is in the best condition to express its potential without worrying about opportunistic behaviors of other cluster members.

Results for the Stability Driven Product Innovation configurations suggest that product innovation emerges when markets are stable and when participants in the cluster show a degree of responsibility for other members of the cluster, but not a need to protect and defend the cluster at all costs. Overall, these configurations seem to suggest a situation of fair play, which we could also refer to as co-opetition (Bengtsson & Kock, 2000).

The final configuration leading to product innovation (PROD 5) has been called loyalty driven Product Innovation, because its features loyalty, combined with the absence of civic virtue as the two core conditions. This finding sits in stark contrast to the Stability Driven configurations (PROD3 & PROD4), which present a mirror image of these two conditions. These results suggest that product innovation can be driven through strong loyal

connections between members of the cluster, who are willing to defend other members under adverse conditions, even when they are not fully committed to the cluster.

The sharp differences between the stability driven and the loyalty driven configurations indicate that both civic virtue and loyalty are double-edged swords when it comes to product innovation, and that they can counterbalance each other. Moreover, the results show that the impact of both loyalty and civic virtue on product innovation are moderated by the degree of stability in the marketplace.

The analysis leading to the absence of product innovation yielded two configurations, both of which are characterized by the lack of market stability, contrasting directly with the stability driven configurations (PROD3 & PROD4), where market stability is a core condition. The first configuration (~PROD1) labeled Relational Breakdown, is characterized by the absence of relational capital in addition to market stability as the main impediments to product innovation. This difference can be explained through previous research arguing that relational capital is a condition for the exchange of tacit knowledge (Casanueva et al., 2013) relating to high knowledge complexity (Pérez-Luño et al., 2011). The second configuration (~PROD2), called structural breakdown, combines a lack of market stability with the absence of structural capital. Here, the absence of structural links between cluster members appear to make the exchange of practices and the observation of other members unfeasible (Nahapiet & Ghoshal, 1998).

The comparison of all seven configurations reveals some salient characteristics of product innovation in sport clusters. First, it shows that market stability is to be a critical contextual factor affecting product innovation, with only two configurations not featuring this condition. These two configurations (PROD1 & PROD5) appear to rely on different aspects of ICB to motivate product innovation. Second, it highlights the contrasting roles of the various aspects of social capital on product innovation. On the one hand, relational capital,

and to a lesser extent structural capital, appear to have a positive effect on product innovation. On the other hand, cognitive capital appears to harm the same outcome. As argued earlier, this could be related to the degree of redundant knowledge between firms with strong cognitive capital, which could lead firms to perceive a higher degree of competition from other cluster members. Finally, the sharp differences between the stability driven and loyalty driven product innovation configurations show that loyalty and civic virtue appear to be substitutes, not complements, in achieving product innovation. This finding highlights the equifinality of product innovation; this is the possibility of achieving the outcome through different, and possibly contradictory, paths (Misangyi & Acharya, 2014; Misangyi et al., 2016).

5.2. Configurations for process innovation

Concerning process innovation, we found seven different configurations, two related to the presence and five related to the absence of process innovation.

Two configurations lead to process innovation (PROC1 & PROC2). Social Capital Driven Product Innovation configuration (PROC1) emphasizes the role of all dimensions of social capital. In a relatively stable market (peripheral condition), the possibility to change how firms operate (adopting new methods and technologies) depends on the cohesiveness of the cluster. This likely indicates that new methods and technologies need a certain critical mass to diffuse. Therefore, the majority of cluster members should be on board. This situation is likely to happen when they frequently interact (structural capital), collaborate (relational capital), and have common views (cognitive capital). This hints to sophisticated process as otherwise purely structural social capital would be sufficient for process innovation (Casanueva et al., 2013). Our results regarding ICB show similar evidence to the case of product innovation. The presence of a shared set of social norms reflected in the helping behavior is a core condition, suggesting the positive effect of common rules and fair play. Instead, being loyal to the cluster causes inertia and a lack of process innovation (Capaldo,

2007). We interpret this result as the over-embeddedness into the cluster network, which could reduce the likelihood of challenging the status quo (Wang et al., 2017).

The Loyalty Driven Process Innovation configuration (PROC2) shows that process innovation can be achieved when the market is stable, and loyalty dominates. In this case, relational social capital is not needed, and too much interaction with cluster members is even counterproductive, as the absence of structural capital is a core condition. The only peripheral condition related to social capital is the presence of common values and goals (i.e., cognitive capital), which implies a high organizational complementarity and different specialization of cluster members (Teece, 2010). This configuration suggests a more efficient path towards process innovation compared to PROC1: Instead of cultivating the creation of social capital (which requires long term investments), the cluster members can proceed as individual actors without coordinating with the others, provided that they are loyal to the direction set by the cluster. This might be the case when the decision to adopt a new process is conveyed by actors that dominate the cluster (e.g., cluster administrators), and the individual members become executors.

The analysis associated with the absence of process innovation leads to five configurations (~PROC1-5). Given the significant overlaps across these configurations, we will discuss them conjointly. The main conclusion we can advance is the following: the absence of social capital is an impediment to process innovation. Indeed, in all five configurations, the lack of relational and/or cognitive capital represent core conditions, with the addition of structural capital in the last three. Process innovation depends on social capital, especially in close and intertwined organizations (Boschma, 2005) and complementary networks (i.e., cluster) necessitating complex knowledge (Pérez-Luño et al., 2011).

The second main conclusion is that, in the absence of social capital, the presence of some forms of ICB can be harmful. Loyalty (~PROC1 and 2), helping behavior (~PROC3 and

4), and even civic virtue within the cluster (~PROC5) are indeed counterproductive. This result is consistent with the previous argument raised about the over-embeddedness of the cluster network. The behaviors of advocating for the cluster, helping its members, or acting in their interest can lead to preserve the status quo instead of challenging current practices (Capaldo, 2007; Wang et al., 2017). When a strong network is missing, ICB seems to result in a nice façade, which does not serve the creation of the conditions for process innovation.

6. Conclusion

The key findings of this research show that the peripheral presence of the ICB dimensions helping behavior, civic virtue and loyalty in combination with the core presence of relational and the peripheral presence of structural social capital, is crucial for especially relationship driven product innovation. The important role of the ICB dimensions, helping behavior and loyalty, is even more evident for process innovation as well as the necessity for relational, cognitive and structural social capital in the framework in most configurations.

This research offers several contributions to both theory and practice. First, we provide empirical evidence of the effect of ICB on both product and process innovation. Our findings show that the different dimensions of ICB have both positive and negative impacts on innovation and that in some cases, the impact of one dimension can be moderated by another, as evidenced by the counterbalancing role of civic virtue and loyalty on product innovation. To our knowledge, no previous publications have identified the causally complex role of ICB on innovation. Secondly, our research shows multiple paths leading to innovation as well as multiple paths heading away from innovation. These paths highlight the complex interplay between ICB, social capital, and market conditions and reveal the equifinality of innovation processes. Thirdly, we identify clear differences in the configurations for product and process innovation, with ICB and social capital playing different roles. There are only a few studies that analyze differences between product and process innovation in clusters (Casanueva et al.,

2013). Finally, our work contributes to the sports cluster literature by providing a targeted investigation and showing the complexities of product and process innovation in this context.

This investigation provides valuable input to practitioners. For individual firms, our findings reveal that there is no single way of achieving innovation and that firms can pursue different paths that play to their strengths. Moreover, the different configurations identified in this research provide guidance regarding the areas where a firm might need investment to achieve product and process innovation. At a cluster level, our research shows that, given the diversity of paths leading to innovation, it would be valuable to have a cluster level strategy, charting a path to innovation for cluster members. This finding is valuable for industry associations and regional development agencies that advice and support clusters.

As with any research venture, this investigation has its limitations. Firstly, the generalizability of the research is limited by its scope, both in terms of geography and industry sector. Future research could overcome these limitations by expanding into other regions and sectors to reinforce generalizability. Secondly, the validity of the work is limited by a small dataset, which is determined by the exploratory nature and the narrow scope of the investigation. A viable next step for research would be to build on our initial findings to formulate hypotheses, and to collect a larger dataset to allow formal testing. Alternatively, researchers could seek to explore the configurational approaches unveiled in this research by adopting more in-depth qualitative studies, through methods such as action research or case study research, in order to validate and further expand our findings. Despite its limitations, this research provides a solid foundation to investigate the intriguing role of ICB on innovation and performance. We hope our work serves as a rallying cry for future research in this area.

Tables

Table 1

Citizenship dimensions adopted in ICB research

Author	Year	Dimensions	Context
Autry, Skinner & Lamb	2008	altruism, tolerance, loyalty, conscientiousness, compliance, constructiveness, advancement	supply chain
Skinner, Autry & Lamb	2009	altruism, tolerance, loyalty, compliance	supply chain
Wan & Chen	2010	altruism, tolerance, loyalty, compliance	supply chain
Braun, Müller-Seitz & Sydow	2012	helping behavior, loyalty, compliance, proactive behavior, self-development	projects and networks
Ferreira, Braun & Sydow	2013	relationship maintenance (civic virtue), initiative, compliance, helping behavior	projects
Esper, Bradley, Thomas and Thornton	2015	helping behavior, loyalty, civic virtue	supply chain
Provan, Sydow & Podsakoff	2018	helping behavior, loyalty, voice behavior	networks

Table 2

List of citizenship dimensions selected for this study and their definitions

ICB dimension	Definition	Reference
Helping behavior	"Behavior directed at helping a partner firm in solving problems or acquiring needed skills/knowledge"	Autry, Skinner & Lamb (2008, p. 56)
Civic virtue	"Interest and activity in interorganizational affairs affecting the relationships between exchange partner firm."	
Loyalty	"a firm's willingness to adopt behaviors that enhance the performance of the supply chain as a whole […] firm's allegiance to its partner firm and a willingness to adopt a supply chain system approach"	

Table 3

The fsQCA process

Stage	Description	Implementation in this research
1. Calibrate and construct truth table	Calibration involves assigning set membership the conditions and outcomes for each case (company). The outcomes of this calibration process are recorded into a data matrix, which is, in turn, used to construct a truth table that distinguishes all possible configurations and assigns cases to their corresponding configuration.	At this stage, we used a software package called 'QCA' (Dusa, 2007). Given that our data, both outcomes and conditions, were collected using Likert scales we used a transformation method called Totally Fuzzy and Relative (TFR) which uses the empirical Cumulative Distribution Function (CDF) of the observed data (Dusa, 2018). Given that our dataset includes 38 cases, we used a threshold of 1 case per configuration. For consistency, we used a threshold of 0.90 for both outcomes, product and process innovation.
2. Logical reduction and analysis of configurations	This stage seeks to identify the set of configurations are necessary or sufficient for the outcome. This identification is done by removing redundant conditions and configurations to derive the most straightforward formula. This is achieved through pairwise comparison of configurations.	We also used the 'QCA' software to conduct the analysis of necessity and the analysis of sufficiency for both outcomes. We did this analysis for both the presence and absence (negation) of the two outcomes (process and product innovation). In presenting the results, we combine both the intermediate and parsimonious solutions, following the graphical presentation used by Fiss (2011). The results for the analysis of necessity are presented in Table 4, the analysis of sufficiency for product innovation in Table 5 and for process innovation in Table 6.
3. Robustness analysis	Robustness can be tested by altering some of the thresholds used in calibration. Robustness could be further evaluated by using alternative methods such as cluster analysis or deviation score.	To test for robustness, we followed (Skaaning, 2011) advice and varied the consistency threshold to use both a higher (0.95) and a lower (0.85) threshold. In general, the tests involving the higher threshold yielded a lower number of configurations and those with the lower threshold resulted in a lower number of configurations. However, results of these tests were consistent with our original model, identifying the same core conditions and providing confidence in the robustness of the results.
4. Interpretation of results	Explicate how the configurations lead to the outcome. If the research is deductive, configurations are evaluated against the hypotheses to see if empirical evidence supports them or not. If the research is inductive, propositions are derived based on the configurations that emerge from the analysis.	The results are first presented in Section 4, and a more detailed discussion is included in Section 5, where we compare and contrast the results in light of the extant literature.

Table 4

Analysis of necessity

	Product Innovation				**Process Innovation**			
	Presence		**Absence**		**Presence**		**Absence**	
Condition	Consistency	Coverage	Consistency	Coverage	Consistency	Coverage	Consistency	Coverage
Helping behavior	0.72	0.73	0.70	0.60	0.67	0.69	0.74	0.63
~Helping behavior	0.61	0.71	0.68	0.67	0.63	0.75	0.63	0.62
Civic Virtue	0.68	0.70	0.66	0.58	0.65	0.68	0.70	0.61
~ Civic Virtue	0.60	0.67	0.66	0.64	0.62	0.71	0.63	0.60
Loyalty	0.69	0.63	0.75	0.57	0.69	0.63	0.74	0.56
~ Loyalty	0.53	0.71	0.52	0.59	0.52	0.71	0.51	0.58
Relational	0.73	0.73	0.68	0.58	0.72	0.73	0.67	0.56
~Relational	0.58	0.68	0.68	0.68	0.57	0.68	0.68	0.67
Cognitive	0.70	0.70	0.74	0.63	0.76	0.77	0.66	0.55
~Cognitive	0.63	0.74	0.64	0.64	0.56	0.66	0.72	0.71
Structural	0.70	0.73	0.65	0.58	0.68	0.72	0.68	0.64
~Structural	0.59	0.66	0.70	0.67	0.62	0.70	0.68	0.64
Market Stability	0.83	0.77	0.69	0.55	0.83	0.77	0.69	0.53
~Market Stability	0.51	0.66	0.71	0.78	0.50	0.65	0.71	0.77

Table 5

Product Innovation Configurations

	Configurations Leading to Product Innovation						**Configurations leading to the absence of Product Innovation**	
	Relationship Driven Product Innovation		**Stability Driven Product Innovation**		**Loyalty Driven Product Innovation**		**Relational Breakdown**	**Structural Breakdown**
Configuration	**PROD1**	**PROD2**	**PROD3**	**PROD4**	**PROD5**		**~PROD 1**	**~PROD 2**
Interorganizational Citizenship Behavior								
Helping behavior	●	●		●				
Civic virtue		●	⍰	⍰	⊗			
Loyalty		●	⊗	⊗	⍰			
Social Capital								
Relational	⍰	⍰					⊗	
Cognitive	⊗	⊗						
Structural	●	●	●					⊗
Context								
Market stability	●		⍰	⍰			⊗	⊗
Solution consistency	0.923	0.919	0.939	0.933	0.797		0.828	0.847
Solution coverage	0.367	0.359	0.301	0.296	0.444		0.553	0.553
Unique coverage	0.007	0.006	0.026	0.021	0.138		0.097	0.043
Solution Consistency	**0.832**						**0.824**	
Solution coverage	**0.635**						**0.666**	

Note: ⍰ Core causal condition (present) ⊗ Core causal condition (absent) ● Peripheral condition (present) ⊗ Peripheral condition (absent); ~ Indicates negation of set

Table 6

Process Innovation Configurations

	Configurations Leading to Process Innovation			**Configurations Leading to the absence of Process Innovation**				
	Social Capital driven Innovation	**Loyalty driven Innovation**		**Loyalty without Social Capital**		**Helping Behavior without Social Capital**		**Civic Virtue without SC**
Configuration	**PROC1**	**PROC2**		**~PROC1**	**~PROC2**	**~PROC3**	**~PROC 4**	**~PROC5**
Interorganizational Citizenship Behavior								
Helping behavior	●			⊗		●	●	
Civic virtue								●
Loyalty	⊗	●		●	●	⊗		⊗
Social Capital								
Relational	●			⊗	⊗	⊗	⊗	⊗
Cognitive	●	•		⊗	⊗	⊗	⊗	⊗
Structural	●	⊗				⊗	⊗	⊗
Context								
Market uncertainty	•	●		⊗			⊗	
Consistency	0.91	0.89		0.92	0.93	0.92	0.94	0.88
Raw coverage	0.19	0.33		0.35	0.35	0.30	0.36	0.28
Unique coverage	0.05	0.20		0.04	0.00	0.00	0.00	0.00
Solution consistency	**0.90**			**0.46**				
Solution coverage	**0.39**			**0.88**				

Note: ● Core causal condition (present) ⊗ Core causal condition (absent) • Peripheral condition (present) ⊗ Peripheral condition (absent)

References

Alexiev, A. S., Volberda, H. W., & Van den Bosch, F. A. J. (2016). Interorganizational collaboration and firm innovativeness: Unpacking the role of the organizational environment. *Journal of Business Research, 69*(2), 974-984. doi:https://doi.org/10.1016/j.jbusres.2015.09.002

Antons, D., Kleer, R., & Salge, T. O. (2016). Mapping the Topic Landscape of JPIM, 1984–2013: In Search of Hidden Structures and Development Trajectories. *Journal of Product Innovation Management, 33*(6), 726-749. doi:10.1111/jpim.12300

Autry, C. W., Skinner, L. R., & Lamb, C. W. (2008). Interorganizational citizenship behaviors: an empirical study. *Journal of Business Logistics, 29*(2), 53-74.

Babiak, K. (2007). Determinants of Interorganizational Relationships: The Case of a Canadian Nonprofit Sport Organization. *Journal of Sport Management, 21*(3), 338-376. doi:10.1123/jsm.21.3.338

Babiak, K., Thibault, L., & Willem, A. (2018). Mapping Research on Interorganizational Relationships in Sport Management: Current Landscape and Future Research Prospects. *Journal of Sport Management, 32*(3), 272-294. doi:10.1123/jsm.2017-0099

Bengtsson, M., & Kock, S. (2000). "Coopetition" in Business Networks—to Cooperate and Compete Simultaneously. *Industrial Marketing Management, 29*(5), 411-426. doi:http://dx.doi.org/10.1016/S0019-8501(99)00067-X

Beynon, M. J., Jones, P., & Pickernell, D. (2016). Country-based comparison analysis using fsQCA investigating entrepreneurial attitudes and activity. *Journal of Business Research, 69*(4), 1271-1276. doi:https://doi.org/10.1016/j.jbusres.2015.10.091

Blome, C., Schoenherr, T., & Kaesser, M. (2013). Ambidextrous governance in supply chains: the impact on innovation and cost performance. *Journal of Supply Chain Management, 49*(4), 59-80.

Bonomi, S., Sarti, D., & Torre, T. (2020). Creating a collaborative network for welfare services in public sector. A knowledge-based perspective. *Journal of Business Research, 112*, 440-449. doi:https://doi.org/10.1016/j.jbusres.2019.11.050

Boschma, R. (2005). Proximity and innovation. A critical assessment. *Regional Studies, 39*(1), 61-74.

Braun, T., Müller-Seitz, G., & Sydow, J. (2012). Project citizenship behaviour? - An explorative analysis at the project-network-nexus. *Scandinavian Journal of Management, 28*, 271-284.

Capaldo, A. (2007). Network structure and innovation: The leveraging of a dual network as a distinctive relational capability. *Strategic Management Journal, 28*(6), 585-608. doi:10.1002/smj.621

Cappiello, G., Giordani, F., & Visentin, M. (2020). Social capital and its effect on networked firm innovation and competitiveness. *Industrial Marketing Management, forthcoming*. doi:https://doi.org/10.1016/j.indmarman.2020.03.007

Carey, S., Lawson, B., & Krause, D. R. (2011). Social capital configuration, legal bonds and performance in buyer–supplier relationships. *Journal of Operations Management, 29*(4), 277-288. doi:https://doi.org/10.1016/j.jom.2010.08.003

Carnovale, S., & Yeniyurt, S. (2015). The role of ego network structure in facilitating ego network innovations. *Journal of Supply Chain Management, 51*, 22-46.

Casanueva, C., Castro, I., & Galán, J. L. (2013). Informational networks and innovation in mature industrial clusters. *Journal of Business Research, 66*(5), 603-613. doi:http://dx.doi.org/10.1016/j.jbusres.2012.02.043

Chetty, S., & Agndal, H. (2008). Role of Inter-organizational Networks and Interpersonal Networks in an Industrial District. *Regional Studies, 42*(2), 175-187. doi:10.1080/00343400601142696

Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology, 94*, S95-S120.

Dagnino, G. B., Levanti, G., Minà, A., & Picone, P. M. (2015). Interorganizational network and innovation: a bibliometric study and proposed research agenda. *Journal of Business & Industrial Marketing, 30*(3/4), 354-377. doi:doi:10.1108/JBIM-02-2013-0032

De Meur, G., Rihoux, B. & Yamasaki, S. (2009). Addressing the critiques of QCA. Configurational comparative methods, in Ed. Rihoux, B. and Ragin, C.C., *Qualitative comparative analysis (QCA) and related techniques*, (Vol. 51). Sage Publications. pp.147-165.

Desbordes, M. (2001). Innovation management in the sports industry: Lessons from the Salomon case. *European Sport Management Quarterly, 1*(2), 124-149.

Duşa, A. (2007). User manual for the QCA(GUI) package in R. *Journal of Business Research, 60*(5), 576-586. doi:https://doi.org/10.1016/j.jbusres.2007.01.002

Esper, T. L., Bradley, R. V., Thomas, R., & Thornton, L. M. (2015). Supply Chain Citizenship: Investigating the Antecedents of Customer Interorganizational Citizenship Behaviors. *Journal of Business Logistics, 36*(4), 306-320. doi:10.1111/jbl.12108

Ferreira, A. I., Braun, T., & Sydow, J. (2013). Citizenship behavior in project-based organizing: comparing German and Portuguese project managers. *The International Journal of Human Resource Management, 24*(20), 3772-3793. doi:10.1080/09585192.2013.777937

Fiss, P. C. (2011). Building Better Causal Theories: A Fuzzy Set Approach to Typologies in Organization Research. *54*(2), 393-420. doi:10.5465/amj.2011.60263120

Garkovich, L., Brown, K., & Zimmerman, J. N. (2008). “We're not horsing around” Conceptualizing the Kentucky Horse Industry as an Economic Cluster. *Community Development, 39*(3), 93-113. doi:10.1080/15575330809489671

Gerke, A. (2016). Towards a network model of innovation in sport – the case of product innovation in nautical sport clusters. *Innovation : Management, Policy & Practice, 18*(3), 207-288.

Gerke, A. (2019). L'innovation dans l'industrie du sport. In P. Aymar, M. Desbordes, & C. Hautbois (Eds.), *Management global du sport* (pp. 281): Amphora.

Gerke, A., Babiak, K., Dickson, G., & Desbordes, M. (2018). Developmental processes and motivations for linkages in cross-sectoral sport clusters. *Sport Management Review, 21*(2), 133-146. doi:10.1016/j.smr.2017.05.005

Gerke, A., Desbordes, M., & Dickson, G. (2015). Towards a sport cluster model: the ocean racing cluster in Brittany. *European Sport Management Quarterly, 5*(3), 343-363. doi:org/10.1080/16184742.2015.1019535

Gerke, A., Dickson, G., Desbordes, M., & Gates, S. (2017). The role of interorganizational citizenship behaviors in the innovation process. *Journal of Business Research, 73*, 55-64. doi:http://dx.doi.org/10.1016/j.jbusres.2016.12.005

Gerke, A., Woratschek, H., & Dickson, G. (2020). The sport cluster concept as middle-range theory for the sport value framework. *Sport Management Review, 23*(2), 200-2014. doi:https://doi.org/10.1016/j.smr.2018.12.004

Greckhamer, T., Misangyi, V. F., Elms, H., & Lacey, R. (2008). Using Qualitative Comparative Analysis in Strategic Management Research:An Examination of Combinations of Industry, Corporate, and Business-Unit Effects. *11*(4), 695-726. doi:10.1177/1094428107302907

Greve, H. R. (2009). Bigger and safer: the diffusion of competitive advantage. *Strategic Management Journal, 30*(1), 1-23. doi:10.1002/smj.721

Habib, F., Bastl, M., Karatzas, A., & Mena, C. (2020). Treat me well and I may leave you kindly: A configurational approach to a buyer's relationship exit strategy. *Industrial Marketing Management, 84*, 237-250. doi:https://doi.org/10.1016/j.indmarman.2019.07.008

Håkansson, H., & Ford, D. (2002). How should companies interact in business networks? *Journal of Business Research, 55*(2), 133-139. doi:http://dx.doi.org/10.1016/S0148-2963(00)00148-X

Håkansson, H., & Snehota, I. (2006). No business is an island: The network concept of business strategy. *Scandinavian Journal of Management, 22*(3), 256-270. doi:http://dx.doi.org/10.1016/j.scaman.2006.10.005

Harkness, J., Pennell, B., & Schoua-Glusberg, A. (2004). Survey questionnaire translation and assessment. In S. Presser, J. M. Rothgeb, M. P. Couper, J. T. Lessler, E. Martin, J. Martin, & E. Singer (Eds.), *Methods for Testing and Evaluating Survey Questionnaires* (pp. 453-473). Hoboken, NJ: John Wiley & Sons.

Hillairet, D., Richard, G., & Bouchet, P. (2009). The dual management of innovation by the Declathon Group. A distinctive strategic system on the sport goods market. *Journal of Innovation Economics, 1*(3), 188-210.

Hippolia. (2020). The Horse Industry Competitive Cluster. Retrieved from https://pole-hippolia.org/en/

Hoeber, L., & Hoeber, O. (2012). Determinants of an Innovation Process: A Case Study of Technological Innovation in a Community Sport Organization. *Journal of Sport Management, 26*, 213-223.

Hyysalo, S. (2009). User innovation and everyday practices: micro-innovation in sports industry development. *R & D Management*, *39*(3), 247-258.

Hoye, R., Smith, A., Nicholson, M., Stewart, B., & Westerbeek, H. (2009). *Sport Management Principles and Applications* (2nd ed.). Amsterdam: Elsevier.

Katz, D. (1964). The motivational basis of organizational behavior. *Behavioral Science, 9*(2), 131-146. doi:10.1002/bs.3830090206

Kraus, S., Ribeiro-Soriano, D., & Schüssler, M. (2018). Fuzzy-set qualitative comparative analysis (fsQCA) in entrepreneurship and innovation research – the rise of a method. *International Entrepreneurship and Management Journal, 14*(1), 15-33. doi:10.1007/s11365-017-0461-8

Krause, D., Luzzini, D., & Lawson, B. (2018). Building the case for a single key informant in supply chain management survey research. *Journal of Supply Chain Management, 54*(1), 42-50.

Lau, A. K. W., Tang, E., & Yam, R. C. M. (2010). Effects of Supplier and Customer Integration on Product Innovation and Performance: Empirical Evidence in Hong Kong Manufacturers. *Journal of Product Innovation Management, 27*(5), 761-777. doi:10.1111/j.1540-5885.2010.00749.x

López-Cabarcos, M. Á., Vázquez-Rodríguez, P., Piñeiro-Chousa, J., & Caby, J. (2020). The role of bullying in the development of organizational citizenship behaviors. *Journal of Business Research, 115*, 272-280. doi:https://doi.org/10.1016/j.jbusres.2019.10.025

Marx, A., Rihoux, B. & Ragin, C., 2014. The origins, development, and application of Qualitative Comparative Analysis: the first 25 years. *European Political Science Review: EPSR, 6(*1), p.115.

Misangyi, V. F., & Acharya, A. G. (2014). Substitutes or Complements? A Configurational Examination of Corporate Governance Mechanisms. *Academy of Management Journal, 57*(6), 1681-1705. doi:10.5465/amj.2012.0728

Misangyi, V. F., Greckhamer, T., Furnari, S., Fiss, P. C., Crilly, D., & Aguilera, R. (2016). Embracing Causal Complexity: The Emergence of a Neo-Configurational Perspective. *Journal of Management, 43*(1), 255-282. doi:10.1177/0149206316679252

Nahapiet, J., & Ghoshal, S. (1998). Social Capital, Intellectual Capital, and the Organizational Advantage. *The Academy of Management Review, 23*(2), 242-266.

Oliver, C. (1990). Determinants of Interorganizational Relationships: Integration and Future Directions. *Academy of Management Review, 15*(2), 241-265. doi:10.5465/AMR.1990.4308156

Ommen, N. O., Blut, M., Backhaus, C., & Woisetschläger, D. M. (2016). Toward a better understanding of stakeholder participation in the service innovation process: More than one path to success. *Journal of Business Research, 69*(7), 2409-2416. doi:http://dx.doi.org/10.1016/j.jbusres.2016.01.010

Organ, D. W. (1997). Organizational Citizenship Behavior: It's Construct Clean-Up Time. *Human Performance, 10*(2), 85.

Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). *Organizational Citizenship Behaviour.Its Nature, Antecedents, and Consequences*. Thousand Oaks, US: Sage Publications.

Palumbo, R., & Manna, R. (2018). Innovation at the crossroads. An investigation of the link between inter-organizational relationships and innovation. *International Journal of Organizational Analysis, 26*(3), 432-449.

Parker, G., & Beedell, J. (2010). Land-based Economic Clusters and their Sustainability: The Case of the Horseracing Industry. *Local Economy, 25*(3), 220-233. doi:10.1080/02690941003784275

Parmigiani, A., & Rivera-Santos, M. (2011). Clearing a Path Through the Forest: A Meta-Review of Interorganizational Relationships. *Journal of Management, 37*(4), 1108-1136. doi:10.1177/0149206311407507

Pérez-Luño, A., Cabello Medina, C., Carmona Lavado, A., & Cuevas Rodríguez, G. (2011). How social capital and knowledge affect innovation. *Journal of Business Research, 64*(12), 1369-1376. doi:https://doi.org/10.1016/j.jbusres.2011.01.014

Podsakoff, N. P., Blume, B. D., Whiting, S. W., & Podsakoff, P. M. (2009). Individual- and Organizational-Level Consequences of Organizational Citizenship Behaviors: A Meta-Analysis. *Journal of Applied Psychology, 94*(1), 122-141.

Podsakoff, N. P., Podsakoff, P. M., MacKenzie, S. B., Maynes, T. D., & Spoelma, T. M. (2014). Consequences of unit-level organizational citizenship behaviors: A review and recommendations for future research. *Journal of Organizational Behavior, 35*(S1), S87-S119. doi:10.1002/job.1911

Podsakoff, P. M., Ahearne, M., & MacKenzie, S. B. (1997). Organizational citizenship behavior and the quantity and quality of work group performance. *Journal of Applied Psychology, 82*(2), 262.

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational Citizenship Behaviors: A Critical Review of the Theoretical and Empirical Literature and Suggestions for Future Research. *Journal of Management, 26*(3), 513-563.

Poggie, J. (1972). Toward quality control in key informant data. *Human Organization, 31*(1), 23-30.

Porter, M. E. (1998). Clusters and the new economics of competition. *Harvard Business Review, November-December*, 77-90.

Prajogo, D. I., & Sohal, A. S. (2003). The relationship between TQM practices, quality performance, and innovation performance: An empirical examination. *International Journal of Quality & Reliability Management, 20*(8), 901-918. doi:10.1108/02656710310493625

Provan, K. G., Sydow, J., & Podsakoff, N. P. (2017). Network Citizenship Behavior: Toward a Behavioral Perspective on Multi-organizational Networks. In T. K. Das (Ed.), *Culture and Behavioral Strategy. Research in Behavioral Strategy*. Charlotte, NC.

Ragin, C. C. (1987). *The comparative method: Moving beyond qualitative and quantitative strategies*. Berkeley, CA: University of California Press.

Ragin, C. C. (2006). Set Relations in Social Research: Evaluating Their Consistency and Coverage. *Political Analysis, 14*(3), 291-310.

Ragin, C. C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond.* Chicago, IL: University of Chicago Press.

Ratten, V. (2011). Sport-based entrepreneurship: towards a new theory of entrepreneurship and sport management. *International Entrepreneurship and Management Journal, 7*(1), 57-69. doi:10.1007/s11365-010-0138-z

Ratten, V. (2016). Sport innovation management: towards a research agenda. *Innovation, 18*(3), 238-250. doi:10.1080/14479338.2016.1244471

Ratten, V., Ferreira, J. J., & Fernandes, C. I. (2017). Innovation management - current trends and future directions. *International Journal of Innovation and Learning, 22*(2), 135-155. doi:10.1504/ijil.2017.085916

Reypens, C., Lievens, A., & Blazevic, V. (2016). Leveraging value in multi-stakeholder innovation networks: A process framework for value co-creation and capture.

Industrial Marketing Management, 56, 40-50. doi:https://doi.org/10.1016/j.indmarman.2016.03.005

Rihoux, B., & Ragin, C. C. (2008). *Configurational comparative methods: Qualitative comparative analysis (QCA) and related techniques* (Vol. 51): Sage Publications.

Russo, I., Confente, I., Gligor, D. & Cobelli, N. (2019). A roadmap for applying qualitative comparative analysis in supply chain research. *International Journal of Physical Distribution & Logistics Management*, 49(1), 99-120.

Schneider, C.Q. & Wagemann, C. (2012). *Set-theoretic methods for the social sciences: A guide to qualitative comparative analysis.* Cambridge University Press.

Schwarz, N., & Oyserman, D. (2001). Asking questions about behavior: cognition, communication, and questionnaire construction. *American Journal of Evaluation, 22*(2), 127-160.

Scott, J. A., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research, 14*(3), 396-402.

Sharma, A., Pathak, S., Borah, S. B., & Adhikary, A. (2019). Is it too complex? The curious case of supply network complexity and focal firm innovation. *J Oper Manag., n/a*(n/a), 1– 27. doi:10.1002/joom.1067

Skaaning, S. E. (2011). Assessing the robustness of crisp-set and fuzzy-set QCA results. *Sociological Methods & Research, 40*(2), 391-408. doi:10.1177/0049124111404818

Skinner, L. R., Autry, C. W., & Lamb, C. W. (2009). Some measures of interorganizational citizenship behaviors: Scale development and validation. *International Journal of Logistics Management, 20*(2), 228-242. doi:10.1108/09574090910981314

Song, W., Ming, X., & Wang, P. (2013). Collaborative product innovation network: Status review, framework, and technology solutions. *Concurrent Engineering, 21*(1), 55-64. doi:10.1177/1063293x12468457

Svensson, P. G., & Hambrick, M. E. (2019). Exploring how external stakeholders shape social innovation in sport for development and peace. *Sport Management Review, 22*(4), 540-552. doi:https://doi.org/10.1016/j.smr.2018.07.002

Teece, D. J. (2010). Technological innovation and the theory of the firm: the role of enterprise-level knowledge, complementarities, and (dynamic) capabilities. In *Handbook of the Economics of Innovation* (Vol. 1, pp. 679-730): North-Holland.

Tjønndal, A. (2017). Sport innovation: developing a typology. *European Journal for Sport and Society, 14*(4), 291-310. doi:10.1080/16138171.2017.1421504

Torre, A. (2019). Territorial development and proximity relations. In R. Capello & P. Nijkamp (Eds.), *Handbook of Regional and Development Theories* (2nd ed., pp. 674). Cheltenham: Edward Elgar Publishers.

Wan, Y., & Chen, C. (2010). *Interorganizational Citizenship Behavior, Social Capital and Buyer Performance in Supplier-Buyer Relationships: A Theoretical Model.* Paper presented at the International Conference on Management and Service Science (MASS), 24-26 Aug. 2010.

Wang, S., Guidice, R., Zhou, Y., & Wang, Z.-M. (2017). It's more complicated than we think: The implications of social capital on innovation. *Asia Pacific Journal of Management, 34*(3), 649-674. doi:10.1007/s10490-016-9491-y

Winand, M., Scheerder, J., Vos, S., & Zintz, T. (2016). Do non-profit sport organisations innovate? Types and preferences of service innovation within regional sport federations. *Innovation, 18*(3), 289-308. doi:10.1080/14479338.2016.1235985

Xie, X., Fang, L., & Zeng, S. (2016). Collaborative innovation network and knowledge transfer performance: A fsQCA approach. *Journal of Business Research, 69*(11), 5210-5215. doi:https://doi.org/10.1016/j.jbusres.2016.04.114

Yan, L., & Yan, J. (2013). Leadership, organizational citizenship behavior, and innovation in small business: an empirical study. *Journal of Small Business & Entrepreneurship, 26*(2), 183-199. doi:10.1080/08276331.2013.771863

Appendix

Factors and corresponding items used in the study

Construct/Item	Loadings
HELPING BEHAVIOR [adapted from Podsakoff et al. (1997)]	
Cronbach's α = 0.840; CR = 0.861; AVE= 0.564	
HB1 – We help each other out if another cluster member falls behind	0.79
HB2 – We try to act as peacemakers when other cluster members have disagreements	0.61
HB3 – We willingly dedicate time/ resources to help cluster members who have problems	0.57
HB4 – We touch base with other cluster members before initiating actions that might affect them	0.73
HB5 – We encourage each other when someone is down	0.72
CIVIC VIRTUE [adapted from Podsakoff et al. (1997)]	
Cronbach's α = 0.674; CR = 0.736; AVE= 0.508	
CV1 – We provide constructive suggestions about how other cluster members can improve their effectiveness	0.91
CV2 – We willingly risk disapproval to express our beliefs about what's best for the cluster as a whole	0.58
CV3 – We attend and actively participate to cluster meetings/ events	0.46
LOYALTY [adapted from (Ferreira et al., 2013) and (Skinner et al., 2009)]	
Cronbach's α = 0.928; CR = 0.953; AVE= 0.51; KMO= 0.873	
LO1 – We present the cluster favorably to outsiders	0.87
LO2 – We defend the cluster when criticized by outsiders	0.88
LO3 – We encourage outsiders to join the cluster	0.88
RELATIONAL CAPITAL [Carey et al. (2011)]	
Cronbach's α = 0.908; CR = 0.924 ; AVE= 0.805	
RC1 – The relationship is characterized by close interaction at multiple levels	0.83
RC2 – The relationship is characterized by mutual trust at multiple levels	0.88
RC3 – The relationship is characterized by mutual respect at multiple levels	0.72
COGNITIVE CAPITAL [Carey et al. (2011)]	

Cronbach's α = 0.765; CR = 0.828; AVE= 0.56; KMO= 0.624	
CO1 – We share the same business values	0.70
CO2 – We share consistent or compatible business goals	0.52
CO3 – We share the same ambitions and vision	0.77
STRUCTURAL CAPITAL [Carey et al. (2011)]	
Cronbach's α = 0.857; CR = 0.881; AVE= 0.600	
HB1 – Organized social events	0.70
HB2 – Joint workshops	0.77
HB3 – Interorganizational teams	0.84
HB4 – Co-location	0.73
HB5 – Joint R&D/ new product development projects	0.55
MARKET STABILITY [adapted from Blome et al. (2013) and Lau et al. (2010)]	
Cronbach's α = 0.706; CR = 0.740; AVE= 0.594	
ST1 – Customer's needs are well defined	0.70
ST2 – Technological phenomena are well known to us	0.82
PRODUCT INNOVATION [adapted from Prajogo and Sohal (2003)]	
Cronbach's α = 0.825; CR = 0.714; AVE= 0.490	
PDTI1 – The level of newness (novelty) of new products	0.76
PDTI2 – The speed of new product development	0.69
PDTI3 – The number of new products introduced to the market	0.81
PDTI4 – The number of new products that is first-to-market (early market entrants)	0.67
PROCESS INNOVATION [adapted from Prajogo and Sohal (2003)]	
Cronbach's α = 0.907; CR = 0.879; AVE= 0.665	
PROI1 – The technological competitiveness	0.72
PROI2 – The updated-ness or novelty of technology used in processes	0.58
PROI3 – The speed of adoption of the latest technological innovations in processes	0.96
PROI4 – The rate of change in processes, techniques and technology	0.94

Legend: CR = Composite reliability; AVE =Average variance extracted.