Governance dynamics in inter-organizational networks: a meta-

ethnographic study

ABSTRACT

Governance has been a pervasive theme in discussions of strategy and management in the

context of inter-organizational networks. To date, network researchers call for a dynamic theory

of governance to deal with increased uncertainty in the network environment. In response to

this call, this study aims to generate a better understanding of how and why governance in inter-

organizational networks can change over time and what the implications are of these

governance dynamics for the network and its members. A meta-ethnographic analysis of 15

longitudinal case studies reveals that network actors can combine relational and formal

governance in different ways over time, thereby constituting three governance patterns: the

relational celebration pattern, the competitive protection pattern, and the forced facilitation

pattern. The relational celebration and competitive protection patterns can generate favorable

outcomes for the network and its members if disagreement about the formal governance terms

is eliminated by revising these terms and/or repeating the pattern with a subset of the network

members. In case of the forced facilitation pattern, favorable network outcomes emerge if

different types of relational governance are balanced. By detailing how and why governance

patterns emerge and can generate favorable outcomes for the network and its members, the

present research creates a better understanding of governance dynamics for researchers,

business practitioners, and policy makers.

Keywords: Meta-ethnographic analysis, Governance dynamics, Inter-organizational networks

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1. INTRODUCTION

Managing inter-organizational networks is an absolute necessity in a society of networks (Börjeson, 2015; Raab & Kenis, 2009). As a consequence, network governance – defined as "a mechanism of reaching and implementing decisions whereby, instead of hierarchy and command or markets and prices, networks and cooperation are at work" (Hollstein, Matiaske, & Schnapp, 2017, p.1) – is pervasive in discussions of strategy and management (Jones, Hesterly, & Borgatti, 1997; Provan & Kenis, 2008). Today, inter-organizational networks are ever more complex with different types of actors (e.g., individuals, firms, NGOs, governmental agencies) from a wide variety of industries in arenas from the local up to the global level (Börjeson, 2015; Hollstein et al., 2017). In this context, network researchers have emphasized the importance of managing inter-organizational networks as social systems or structures, which involves embracing uncertainty in networks (Sydow, 2017).

Over the past few years, the network literature has positioned governance as a solution to problems of uncertainty (Provan & Kenis, 2008), but recent research suggests that governance adopted by one or more network actors may also act as a possible source of systemic or structural dynamics in inter-organizational networks (Clegg, Jossrandt, Mehra, & Pitsis, 2016; Sydow, 2017). These network dynamics, in turn, may change the way in which network actors – such as orchestrators – deal with governance dilemmas (Paquin & Howard-Grenville, 2013). In response to recent calls for a dynamic theory of network governance by coupling conceptual and empirical work (Dagnino, Levanti, & Destri, 2016; Latusek & Vlaar, 2018), the present research aims to generate a better understanding of governance dynamics along with their impact on inter-organizational networks and their members by means of a metaethnographic study. Specifically, a meta-ethnographic analysis of 15 longitudinal case studies provides insight into how and why governance in inter-organizational networks can evolve over time and the implications of these governance dynamics for the network and its members.

By adopting a meta-ethnographic approach, this research allows to empirically investigate the governance dynamics in different types of inter-organizational networks. Using abductive reasoning (Dubois & Gadde, 2002), the present research explores how and why network actors dynamically combine two types of governance – that is, relational and formal governance – over time. By exploring how and why governance can change over time (i.e., governance dynamics), this research does not only respond to the paucity of empirical studies in the network governance literature, but also generates a better understanding of the conditions under which path dependencies – that is, inter-organizational networks becoming inflexible and/or develop rigidities over time (Zaheer & Soda, 2009) – occur (e.g., Sydow, 2017). Finally, this research also contributes to the network literature, which has emphasized the importance of studying network dynamics for generating a better understanding of the performance of networks and its organizational members (Ahuja, Soda, & Zaheer, 2012). Indeed, the present research paves the way for a better comprehension of the implications of governance dynamics for inter-organizational networks and their members.

2. CONCEPTUAL BACKGROUND

2.1. Dynamics in inter-organizational networks

Network researchers have recognized that inter-organizational networks – whether emergent or consciously formed/mandated – are dynamic (Clegg et al., 2016; Dagnino et al., 2016). Indeed, inter-organizational networks involve representations of connections between organizations, which may change over time (Ahuja et al., 2012; Dagnino et al., 2016; Provan & Kenis, 2008). At any point in time, inter-organizational networks are – in line with the social network analysis literature – characterized as a set of nodes (organizations) linked by a set of ties that connect these nodes (inter-organizational connections), which result in a network structure or pattern (Borgatti & Halgin, 2011). Here, an inter-organizational network is defined as an emergent or consciously formed/mandated group of more than two organizations connected to each other

by a certain pattern or structure (Borgatti & Halgin, 2011). Network dynamics, in turn, involve changes in the number of nodes (e.g., addition or subtraction of nodes) or changes in the ties that connect the nodes (e.g., creation of new ties, dissolution of existing ties, or modification of ties in terms of content or strength), which generate an infinite number of patterns of ties that connect nodes (Ahuja et al., 2012). In other words, networks dynamics are associated with changes in terms of nodes, ties, and patterns, which constitute the network structure or architecture.

Provan and Lemaire (2012) point out that the network dynamics depend on both events in the external environment (exogenous drivers) and incentives and pressure from network members (endogenous drivers). Sydow (2017) confirms that exogenous environmental uncertainty and endogenous system uncertainty need to be considered when managing interorganizational networks over time, in that both affect the evolution or dynamics of the network. Building upon the importance of not only exogenous or random factors beyond the control of the network but also endogenous elements, Ahuja et al. (2012) propose that network dynamics are shaped by agency, opportunity, and inertia. Here, agency refers to network actors' motivation or ability to shape the network architecture or structure, opportunity refers to the structural context that encourages linking within groups rather than across them, and inertia encompasses the pressure for persistence and change (Ahuja et al., 2012).

These exogenous and endogenous factors associated with changes in the network structure or architecture also drive network evolutions over time (Popp, MacKean, Casebeer, Milward, & Lindstrom, 2014). Gulati, Sytch, and Tatarynowicz (2012) identify an inverted U-shaped evolutionary pattern wherein the growth of the network is followed by its decline. In the early stages, a lot of opportunities exist for network actors to form ties with one another, but these opportunities turn into sources of constraint in later stages due to homogenization of the networks and separation of some clusters of actors from the network. In other words, the

formation of these ties declines, while the global separation is growing (Gulati et al., 2012). In line with the inverted U-shaped evolutionary pattern, a more recent review of the network literature identified four stages throughout the evolution of a network: (1) its formation, (2) the development and growth of the network, (3) maturity, sustainability, and resilience stage, and (4) its death and transformation (Popp et al., 2014). Interestingly, governance appears to play a crucial role in the evolution of networks across these stages (Dagnino et al., 2016; Latusek & Vlaar, 2018; Provan & Kenis, 2008). Specifically, Latusek and Vlaar (2018) stress the importance of a dynamic treatment of governance in inter-organizational networks. The next section further elaborates on governance in inter-organizational networks.

2.2. Inter-organizational network governance

Governance typically involves the structure, power and process to make decisions on collective activities (Von Tunzelmann, 2003), which also applies to inter-organizational networks (Hollstein et al., 2017). Building on transaction cost economics and social network theory, extant research suggests that network governance can occur in multiple ways (Cao & Lumineau, 2015; Walter, Walter, & Müller, 2015). The transaction cost perspective contends that the most significant determinants of the network governance mode are the costs of exchanges (Zaheer & Venkatraman, 1995). In response to possible exchange hazards, managers may craft complex contracts that define remedies for foreseeable contingencies or specify processes for resolving unforeseeable outcomes (Williamson, 1981). When such contracts are too costly to craft and enforce, managers may choose to vertically integrate. These explicit organizational structures and legal agreements are labeled as formal or contractual governance (Lusch & Brown, 1996). This type of formal or contractual governance supports the development of calculative trust, which "permits economic actors to deal with each other, but in guarded ways" (Ring, 1996, p. 152). Indeed, when partners believe rewards and punishment are well specified for the

particular transaction using formal governance, the benefits derived from executing the specified task outweigh the net costs from not doing so (Williamson, 1993).

Following social network theory, the formation of ties between actors requires specific coordination and integration (Grandori & Soda, 1995) to support repeated interaction (Nooteboom, 2004) while safeguarding actors from the risks of inter-organizational collaboration (Gulati & Gargiulo, 1999). These actions rely on rules based on implicit understandings, which are usually socially derived and therefore not accessible through written documents or sanctions through formal positions (Poppo & Zenger, 2002). Social network theory therefore calls for governance that is embedded within social relationships. In line with this type of relational governance, prior work based upon transaction costs economics also shows that relational contracting is the basis for an alternative governance form between markets and hierarchies (Mariotti & Cainarca, 1986). Relational governance is – in contrast with formal or contractual governance – informal and social in nature, in that it is based upon relational norms and trust (Griffith & Myers, 2005). Relational norms refer to shared expectations about the behaviors of each party in inter-organizational networks (Heide & John, 1992) and relational trust refers to confidence in the partner's integrity, credibility, and benevolence in a risky exchange relationship (Zaheer, McEvily, & Perrone, 1998). When relational trust exists, the network actors hold common beliefs and commitment to the network. These beliefs harmonize interests and avoid potential opportunistic behavior (Ring & Van de Ven, 1994).

Both formal and relational governance may lead to beneficial outcomes for the interorganizational network, but not in any situation. A recent study of Poppo, Zhou, & Li (2016) shows that calculative trust – which is associated with formal governance – relates more strongly to supplier performance when behavioral uncertainty is high. However, if buyers in an inter-organizational network invest in supplier-specific assets or when supply side market uncertainty is high, relational trust — which fits with relational governance — is more strongly associated with supplier performance. Too much relational trust, however, can have a negative effect on the performance of organizations in an inter-organizational network. Villena, Choi, & Revilla (2019) show that relational trust follows an inverted-U shape with performance. There is a point at which the negative effects of trust offset its benefits, and beyond that point, performance of the buyer in the inter-organizational network declines. The aforementioned evidence suggests that the effectiveness of formal and relational governance varies not only across situations but also along different stages of the network evolution. To date, extant research pays little attention to the governance dynamics in inter-organizational networks (Dagnino et al., 2016; Latusek & Vlaar, 2018). Therefore, the present research aims to generate a better understanding of how and why governance in inter-organizational networks can evolve over time and its implications for the network and its members by means of a meta-ethnographic study.

3. METHODOLOGY

3.1. Research design

To gain insight into governance dynamics and its explanatory mechanisms and implications for inter-organizational networks, this research builds upon meta-ethnography – a methodology initially described by Noblit and Hare (1988) and enhanced by Doyle (2003). This methodology is intended to enable – among others – systematic comparison and/or synthesis of existing case studies. In a meta-ethnography, synthesis does not mean transferability of similar findings on a case-by-case basis but rather a reconceptualization across studies (Aveyard & Bradbury-Jones, 2019). In other words, the goal of a meta-ethnography is not aggregative in the sense of adding findings from different case studies together, but interpretive in broadening the understanding of a particular phenomenon (Doyle, 2003; Grant & Booth, 2009). By constructing new interpretations of findings of the selected cases and hence moving towards reconceptualization,

a meta-ethnography contributes to developing "an inductive and interpretive form of knowledge synthesis" (Noblit & Hare, 1998, p. 16).

3.2. Case selection

In a meta-ethnography, researchers are not necessarily looking for cases with the same purpose, findings and/or interpretations. Instead, case selection decisions are based on the learning opportunities in relation to the research aims/questions (Doyle, 2003; Noblit & Hare, 1988). To select case studies with the best opportunities to learn about governance dynamics and its implications for inter-organizational networks, we searched for longitudinal case studies on inter-organizational networks. Specifically, we developed a search string with 'inter-organizational networks' and its variants as topics (e.g., inter-organizational relationships, cooperative arrangements, and strategic alliances) in combination with 'case' or 'longitudinal'. As the quality of the case studies is an important determinant of the quality of meta-ethnographic research (Doyle, 2003; Eisenhardt & Graebner, 2007), we applied the search string in the Web of Science. This database gives access to high-quality journals and allows to filter journals and/or analyze their impact by means of the journal citation reports (Archambault, Campbell, Gingras, & Larivière, 2009).

--- Insert Figure 1 about here ---

After the exclusion of articles in other areas than "business economics" and non-English articles, we retained 1005 records. As shown in Figure 1, we screened the titles and abstracts of these records to evaluate its focus on evolutions in inter-organizational network over time. Subsequently, we checked the quality of the journals wherein case studies were published and only Q1 and Q2 journals were maintained.

Next, we evaluated the remaining 64 articles in terms of theoretical and methodological rigor. With respect to theoretical rigor, each study had to be more than a case description and involve an interpretation and analysis of the case that contributes to established theories.

Theories are established if they are widely accepted in the literature, as exemplified by extensive and favorable citations over a period of time (Doyle, 2003). To ensure for methodological rigor, we only included case studies with triangulation of at least two types of data sources, an explicit description of the analysis methods, and a chain of evidence (Doyle, 2003; Verleye, 2019). In line with the recommendations of Noblit and Hare (1988), we included both single and multiple case studies. After applying these theoretical and methodological criteria, we retained 34 papers for further analysis.

Finally, two researchers independently read and coded the 52 cases in the 34 papers in terms of the time period, the industry, the network goal, and the governance patterns, the explanatory mechanisms for these patterns, and the implications of these patterns for the network and its members. In line with the recommendations for meta-ethnography (Doyle, 2003), we applied a "casing" strategy whereby we selected cases with the best learning opportunities in light of our research objectives (Ragin & Becker, 1992; Verleye, 2019). Based upon this strategy, the two researchers compared their codes and emerging interpretations and decided to exclude (1) cases without detailed information about the network and its governance, (2) cases where governance did not change over time, and (3) cases with similar patterns in terms of how and why governance in networks changes over time and also similar goals and implications for the network and its members. After excluding these cases, we had a set of 15 cases for the meta-ethnography. Table 1 gives descriptive information about the cases.¹

--- Insert Table 1 about here ---

3.3. Analysis and interpretation

Most of the selected case studies started when the network was formed, which allowed for longitudinal analyses of network governance starting from the network initiation phase. The

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¹ A table in which each case selection step is documented is available upon request, for more information please contact the first author.

longitudinal case descriptions involved texts with interpretations of the researchers and even the language of these researchers in their written interpretations (Dixon-Woods, Shaw, Agarwal, & Smith, 2004). In our meta-ethnography, we subject these textual units to an augmented or constructivist grounded theory approach with a focus on 'translations'. Here, translations represent interpretations of the interpretations and language of researchers of the original case studies (Doyle, 2003). In line with this interpretive approach, we – that is, two researchers - viewed the textual data associated with each case as fresh data and independently wrote descriptive narratives (translations) to tell detailed stories about how governance in interorganizational networks changed over time, thereby holding to the words of the original authors.

Next, we juxtaposed our descriptive narratives of different cases to identify key descriptors for each case. By moving back and forth between the descriptive narratives, the raw case data, and the strategy and management literature, we identified different types of relational and formal governance. Table 2 gives an overview of the different types of relational governance (F) and formal governance (F) that were identified.

--- Insert Table 2 about here ---

In line with the recommendations for a meta-ethnography, we independently rewrote the descriptive narratives with specific attention for (1) what types of governance were used at what points in time, (2) what mechanisms explained why the type of governance changed over time, and (3) what the implications were of these governance patterns for the network and its members. After comparing the rewritten descriptive narratives, we created a table where the different types of governance were chronologically ordered per case and linked to their explanatory mechanisms and implications. As such, we engaged in process research to gain

insight into the governance patterns and its explanatory mechanisms and implications per case (Langley, 1999; Kouamé & Langley, 2018).²

Following this within-case analyses, we compared the different cases to identify similarities and differences (Yin, 2013). Based upon these cross-cases analyses, we identified three network governance patterns that are labeled as 'relational celebration', 'competitive protection', and 'forced facilitation'. In the findings, we detail these network governance patterns along with their explanatory mechanisms and implications for the network and its members.

4. FINDINGS

Based upon the within-case and cross-case analyses, we identified the relational celebration pattern, the competitive protection pattern, and the forced facilitation pattern. In each of these governance patterns, different types of relational governance (R) and formal governance (F) are combined in various ways over time. In what follows, we discuss the interplay between different types of relational and formal governance per governance pattern. To remind the reader whether a specific type of governance is relational or formal, we add a prefix R or F in the text. Additionally, we elaborate on the explanatory mechanisms for the governance patterns and its implications for the network and its members. Table 3 summarizes all aforementioned findings.

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4.1. Network Governance Pattern 1: The Relational Celebration Pattern

The relational celebration pattern merely relied on *relational governance* (\mathbf{R}), as the focus was on getting in touch with potential network members (R-reaching out) and organizing regular meetings with those partners to create mutual exchanges (R-engaging). As shown in Table 3,

² An overview of these analyses is available upon request, for more information please contact the first author.

this pattern characterized a number of cases. In Case 3, researchers in different organizations joined forces to develop a novel aircraft material – even in the absence of inter-organizational ties. In Case 11, a number of tourism businesses formed a network to enhance their business potential in an environment where tourism was growing really strong. The same goes for Case 6 "where four organizations joined competencies together to produce arguably the most successful fair trade product in the world" (Davies, 2009, p. 114). In the aforementioned cases, the implementation of relational governance seemed to follow from shared network objectives among network members (explanatory mechanism) while enhancing the collaboration among network members (positive implication), as illustrated in Quote 1.

Quote 1: "We're here for the common purpose, which is, we like living here, that's the main thing, everybody wants to live here and so having a business here is just an added perk. So that's why it was an easy thing to do to get organized and it gave us a monthly get together." (Kelliher, Reinl, Johnson, & Joppe, 2018, Case 11, p. 6)

In the relational celebration pattern, networks actors only applied *formal governance* (*F*) after a period of collaboration. In Case 3, for instance, the network of researchers from different organizations collaborated for more than a decade before they established an organization to coordinate the development of novel aircraft material (F-setting-up). In Case 11, the network members got their by-laws together after two to three years (F-contracting). In these cases, we contend that the networks used formal governance (here, setting-up a new organization and entering contractual arrangements) to celebrate a successful collaboration (explanatory mechanism), as illustrated in Quote 2.

Quote 2: "that was, you know, very advantageous just to get together once a month just to see each other and talk and see how people were doing. So it started out more social than anything and then it just evolved and about two or three years later we got our by-laws together." (Kelliher et al., 2018, Case 11, p. 7)

Although the sequence of relational and formal governance appeared to have positive implications for Case 11 (here, the realization of the business potential), this did not hold for

Case 3 and Case 6 (mixed implications). In Case 3, we observed that not all network members agreed with establishing a new organization that restricted the involvement of other members (F-setting-up). In Case 6, network members – who founded three joint ventures (F-setting-up) without specifying how these ventures would manage costs – disagreed about the method to avoid cost increases due to opportunistic behaviors (explanatory mechanism). As a matter of fact, some network members called for formalizing the way in which network members interacted with one another (F-contracting), while others focused – as illustrated in Quote 3 – on establishing trustful relationships among the network members (R-engaging).

Quote 3: "This over-reliance on keeping partners happy rather than managing them has led to two problems. Firstly, Cafédirect [one of the organizations] have, in the eyes of EE2 [interviewee], abused the trust Equal Exchange[one of the organizations] have put in them, ..., Cafédirect bypassed them and supplied directly to Equal Exchanges Customers. Secondly, ... too much effort being put into building trusting relationships that the simple things like costs were not being appropriately managed." (Davies, 2009, Case 6, p. 122)

The case analyses suggested that network members in Case 6 did not resolve disagreement about the formal governance terms while the opposite was true for Case 3. Here, one of the network members was unhappy with the decision to restrain the number of network members. Following this unhappiness (explanatory mechanism), this network member left the network and asked other network members with a shared desire to develop novel aircraft material to join a network in which the involvement of other partners was not restrained (R-engaging). Driven by not only similar objectives but also similar views on how to achieve these objectives, a number of network members left the collaboration and established a new organization (F-setting-up). In other words, an unhappy network member repeated the *relational celebration pattern with a new set of members* (see Quote 4), which may have contributed to launching novel aircraft materials (positive implication).

Quote 4: "Interorganizational ties were broken in persistence episodes, but individuals used their autonomy and hierarchical or expert power to maintain interpersonal ties in which beliefs about technological developments were shared. These ties helped to create or recreate formalized interorganizational relations — under the condition that a new fit with the organizational strategy emerged." (Berends, van Burg, & van Raaij, 2011, Case 3, p. 955)

4.2. Network Governance Pattern 2: The Competitive Protection Pattern

In the competitive protection pattern, organizations applied *relational governance* (*R*) but not to achieve a shared business objective. Instead, the case analyses suggested that this pattern was – as shown in Table 3 – initiated by focal organizations in search of complementary resources to survive in competitive markets (explanatory mechanism). In Case 7, for instance, a focal organization wanted to create disposable tweezers but "it was necessary for the innovator to overcome the technical problems and find investors" (Gardet & Fraiha, 2012, p. 222). In a similar vein, the focal organization in Case 1 strived for developing a packaging method for processed food, but lacked financial and human resources. Faced with increased competition, focal organizations were found to get in touch with potential partners for face-to-face meetings or phone conversations (R-reaching out) or attract members within new markets (R-engaging). The focal organization in Case 8, for example, decided "to develop a pilot project directed at low-income homeowners" (Gutiérez, Márquez, & Reficco, 2016, p. 61), thereby needing the help of non-profit organizations to connect with possible new customers.

Although relational governance increased the number and strength of network ties, the case analyses revealed that networks were not free from tensions and conflicts among its members (mixed implications). In Case 7, one of the network members accused a legal partner of betraying his trust, because "she was jealous of my idea and wanted little by little to take my place within the project" (Gardet & Fraiha, 2012, Case 7, p. 227). In Case 2, the network actors noticed: "The thing was growing and growing, and it started to need some discipline" (Alvarez,

Pilbeam, & Wilding, 2010, p. 175) and those in Case 14 argued that "the norm of reciprocity ... was being violated by some of the hinderers" (Sydow 2004, Case 14, p. 211).

To protect themselves against tensions and conflicts (explanatory mechanism), these networks complemented relational governance – as shown in Table 3 – with *formal governance* (**F**). In Case 2, the network actors signed Terms of Agreement (F-contracting) and also installed periodic performance reviews (F-enforcing). Likewise, the focal organization in Case 8 "evolved towards a more vertical, command-and-control style of decision making" (F-enforcing), whereas "the original relation…was based on consensus building among independent organizations" (Gutiérrez, Márquez, & Reficco, 2016, p. 62). In Case 7, the contract between the focal organization and the legal partner was terminated (F-de-contracting).

Formal governance, however, did not always reduce tensions and conflicts (mixed implications). In Case 14, for instance, network actors had founded an association (F-setting-up) and afterwards invested in reflexive monitoring (F-enforcing), but the reflexive monitoring system caused feelings of unequal contribution to the network. In response to these concerns about the formal governance terms (explanatory mechanism), the focal organization replaced the reflexive monitoring system by a more holistic and subjective evaluation procedure (F-contracting). By *revising the formal governance terms*, the network strengthened the ties among its members (positive implication).

In other cases, concerns about the formal governance terms resulted in *repeating the competitive protection pattern in a new network*. In Case 4, the focal organization in a network of universities and educational institutions was – in light of a call for accreditation by the government – urged to revise the formal governance terms (here, assessing offshoring activities). Prompted by the need to revise the assessment of offshoring activities, the focal organization decided to de-contract some of the members (F-de-contracting) and invest time in a limited sets of network members (R-engaging) for establishing an integrated strategic business

net (F-setting-up) to keep track of offshoring activities (F-enforcing), as illustrated by Quote 5. By doing so, the new network received accreditation (positive implication).

Quote 5: "The AUQA announcement ... prompted Curtin to critically assess all its offshoring activities, which instigated the introduction of a more strategic approach to offshoring. It could be argued that Curtin consciously moved from being a member of a networking organization to being the initiator of a strategic business net." (Butler & Soontiens, Case 4, p. 483)

In Case 7, a couple of network members with concerns about the formal governance terms also left the network (F-de-contracting), but the *remaining network members* – instead of the members who left the network in Case 4 – *repeated the competitive protection pattern*. By repeating this pattern with the same members, they managed to establish trustful relationships among the network members (positive implication)— even to the extent that there was no real need for a new agreement to create the disposable tweezers: "*the exchange relation with the industrial provider was transformed little by little into a partnership, without the need for a new agreement*" (Gardet & Fraiha, 2012, p. 227).

In Case 5, the formal governance terms did – in contrast with Case 4, 7, and 14 – not cause tensions and conflicts among the members of a network in the furnishing industry but high levels of reciprocity and trust blinded the network members to novel ideas and interesting partners in the external environment and hence weakened their competitive position (mixed implication). To strengthen the competitive position of the network (explanatory mechanism), network members were de-contracted (F-de-contracting) and new partners were attracted as formal members (R-reaching out and F-contracting). By repeating the competitive protection pattern with another set of network members, this network enhanced its innovativeness and hence its competitive position (positive implications), as illustrated by Quote 6.

Quote 6: "Our mission is to generate product innovation relentlessly, and therefore ... Strong ties are valuable reference points, but we must not avoid continuously building a large number of new alliances with design firms that have the potential to carry us on

new paths. It's a matter of bargaining power. . . . Above all, it's a matter of flexibility." (Capaldo, 2007, Case 5, p. 601)

4.3. Network Governance Pattern 3: The Forced Facilitation Pattern

The forced facilitation pattern started with establishing new organizational entities to develop and promote networks (F-setting-up), which reflected *formal governance* (F). In Case 13, the new organizational entity included a consortium with public and private stakeholders "to develop a platform that pools data so researchers can rely on larger sample sizes to gain new insights into diseases and treatments" (Reypens, Lievens, & Blazevic, 2019, p. 6). In the other cases with a forced facilitation pattern, the new organizational entity involved a network administrative organization (NAO) with a director and staff dedicated to building a network and managing its activities (see Case 9, 10, 12, and 15). In all aforementioned cases, formal governance was initiated or funded by the government to tackle societal or economic challenges in the area for which the government was responsible (explanatory mechanism). In Case 12, for instance, the NAO aimed to "encourage government and industry of the benefit of industrial symbiosis as a key policy tool in helping the UK to achieve a sustainable economy" (Paquin & Howard-Grenville, 2013, p. 1627). In Case 10, in turn, governmental grants were oriented towards establishing European-style networks in the US wood-manufacturing industry to stimulate small business development (see Quote 7).

Quote 7: "In late 1990, a state economic development council applied for and obtained a large grant to develop European-style ... networks ... for small business development. The initial grant included multiyear funding for network operations, such as staff and office space, and for projects such as trade shows and catalogs." (Human & Provan, 2000, Case 10, p.335)

Although the establishment of new organizational entities contributed to attracting members (positive implications), this type of formal governance did not suffice to attract more network members. To reach a critical mass in terms of number of network members to achieve

the societal or economic objectives (explanatory mechanism), most new organizational entities engaged – as shown in Table 3 – in *relational governance* (*R*) but the success of relational governance varied across cases (mixed implications). More particularly, the case analyses revealed that a number of networks focused on a specific type of relational governance, which slowed the growth of the network and hence reduced the chance of tackling the social and/or commercial objective. In Case 12, for instance, a lot of time was invested in improved relationships among existing members (R-engaging) while limiting the attention for new ones (R-reaching out). This governance decision led to a drying pipeline for projects. In Case 10, the network focused on attracting new members (R-reaching out) without taking the relationships among existing members into consideration (R-engaging). As illustrated in Quote 9, internal support for the network was limited and they did not obtain new grants.

Quote 9: "Overall, most Beta-net members felt that while network management had done a good job of promoting the network's interests, the benefits to members were not always clear. In the beginning, the network director's focus on external issues, especially network promotion and external fundraising, held great promise. But as the network began to mature, it was not clear how its external orientation would translate into tangible benefits to members. Within a year after initial data collection, Beta-net's primary external funding base collapsed." (Human & Provan, 2000, Case 10, p. 336)

Conversely, balancing different types of relational governance may contribute to achieving the network objectives. In Case 9, for instance, the NAO director together with the board paid a lot of attention to soliciting small wood manufacturers to join the network (R-reaching out) and initiating monthly board and membership meetings to strengthen the relationships among these manufacturers (R-engaging). At first, this focus on attracting and keeping network members was at the expense of safeguarding a central location that was available for all members (R-facilitating), but a substantial government grant allowed the NAO director to buy an additional facility that contributed to a modest increase in the number of network members. In Case 13 and Case 15, the NAO director combined the different types of

relational governance over time, which contributed to achieving the network objectives (i.e., establishing a platform for pharmaceutical firms in Case 13 and developing a political agenda with citizens in Case 15).

5. DISCUSSION

5.1. Theoretical implications

By exploring how governance in inter-organizational network evolved over time, this research advances the literature on governance in inter-organizational networks (Sydow, 2017; Zaheer & Soda, 2009) and contributes to a better understanding of governance dynamics (Dagnino et al., 2016; Latusek & Vlaar, 2018). Indeed, while previous studies have investigated how networks evolve over time, this study highlights the role of governance in evolving networks. Our meta-ethnographic analysis of longitudinal case studies shows that networks combine relational and formal governance in different ways over time, thereby constituting three governance patterns. In the relational celebration pattern, network actors reach out and engage new actors to establish a shared goal (relational governance). A successful collaboration after a period of time is celebrated by contracting and/or establishing a new organizational entity (formal governance). In the competitive protection pattern, focal organizations reach out and strengthen their ties with other actors to complement their resources to survive in competitive markets (relational governance). To protect themselves against tensions and conflicts, these networks complement relational governance with formal governance (here, contracting and enforcing). The forced facilitation pattern arises when central authorities establish new organizational entities to develop and promote networks to tackle societal or economic challenges (formal governance). To reach a critical mass for achieving the network objectives, different types of relational governance are balanced (here, reaching out, engaging, and facilitating). By unraveling the interplay between different types of relational and formal governance, this research contributes to the debate on mutual relationships between formal and relational governance (Argyres, Bercovitz, & Zanarone, 2020; Mellewigt, Hoetker, & Lütkewitte, 2018; Walter et al., 2015).

Next, this research also provides insight into why the different governance patterns emerge in inter-organizational networks (Dagnino et al., 2016; Latusek & Vlaar, 2018). In line with the network dynamics literature (e.g., Ahuja et al., 2012; Sydow, 2017), this research showed that the competitive protection and the forced facilitation pattern are shaped by a combination of exogenous factors (respectively, competitive pressure and societal/economic challenges) and endogenous factors (respectively, tensions and conflicts among network members and a lack of network members). The relational celebration pattern, in turn, is merely shaped by endogenous factors, in that a shared objective induces relational governance and a successful collaboration results in formal governance. By showing how endogenous and exogenous factors shape governance in networks, this research contributes to a better understanding of network dynamics as an overlooked aspect in the network literature (Soetanto, 2019).

Finally, this research also contributes to the network performance literature (Popp et al., 2014; Sydow et al., 2017) by considering the implications of different governance patterns. Specifically, this research suggests that the relational celebration and competitive protection patterns can generate favorable outcomes for the network and its members if disagreement about the formal governance terms is eliminated by revising these terms or repeating the pattern with a subset of the network members. In case of the forced facilitation pattern, favorable network outcomes emerge if different types of relational governance are balanced. Taken together, each of the network governance patterns can generate favorable network outcomes if endogenous and exogenous factors are carefully managed, which enhances our knowledge about relational and formal governance practices (Coltman, Bru, Perl-Ajchariyawong, Devinney, & Benito, 2009; Poppo et al., 2016; Villena et al., 2019).

5.2. Managerial implications

This research identified three governance patterns that may contribute to strategic decision-making in inter-organizational network. If network members have a shared goal, for example, a relational celebration pattern might generate favorable outcomes for the network and its members if internal tensions and conflicts are tackled by repeating the pattern with a new set of network members. In case of competitive pressure, the competitive protection pattern calls for complementing relational governance with formal governance to protect the network against internal tensions and conflicts, thereby making sure that all network members agree with the formal governance terms. If external actors - such as governments - wish to increase and facilitate collaboration to tackle societal or economic challenges without being a member of the network, the forced facilitation pattern is appropriate. This pattern can have favorable outcomes if a new organizational entity – such as a NAO – is established and a manager is appointed to balance different types of relational governance (here, reaching out, engaging and facilitating). By doing so, external actors may contribute to the network performance, which is still a very big challenge in public management (Cristofoli & Macciò, 2018).

5.3. Limitations

Although the meta-ethnographic approach allowed us to empirically investigate the governance dynamics in a wide range of inter-organizational networks over time, this research method has limitations. Meta-ethnographic research relies on secondary data (i.e., case study analyses and interpretations of other researchers). As such, this research method is subject to the quality of these case study analyses and interpretations. Although case study quality was checked with the theoretical and methodological rigor criteria of Doyle (2003), future research can validate our findings by adopting alternative research methods. One path to these ends involves longitudinal case study research where primary data are gathered about governance dynamics in multiple inter-organizational networks over time. In addition, survey research among

members of inter-organizational networks can provide useful information about governance dynamics and its implications for the network and its members. Finally, researchers may consider applying a fuzzy-set qualitative comparative analysis to primary or secondary case study data on governance dynamics in inter-organizational networks.

6. CONCLUSION

This study aims to generate a better understanding of how and why governance in interorganizational networks can change over time and its implications for the network and its
members. Based upon a meta-ethnographic analysis of 15 longitudinal case studies, we
unraveled three governance patterns: the relational celebration pattern, the competitive
protection pattern, and the forced facilitation pattern. Each of these patterns is shaped by
complex combinations of endogenous and exogenous factors and may result in favorable
outcomes for the network and its members if a number of conditions – such as agreeing upon
the formal governance terms – are satisfied. By detailing these governance dynamics and their
implications, the present research advances the literature on network governance (Sydow, 2017;
Zaheer & Soda, 2009) and network dynamics (Dagnino et al., 2016; Latusek and Vlaar, 2018),
while also assisting practitioners and policy makers with strategic decision-making in interorganizational networks.

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FIGURE 1. Search Strategy Flow Chart

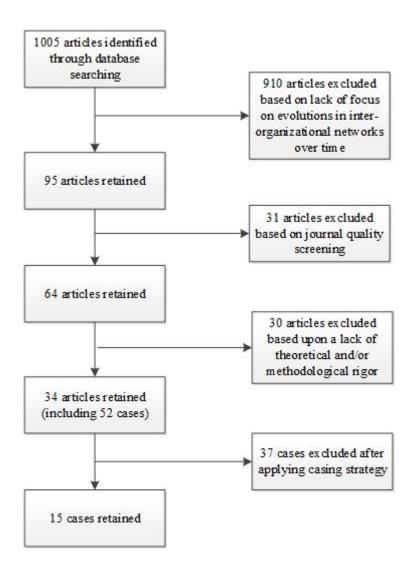


TABLE 1. Case Characteristics

Case	Author	Theory	Data	Time Period	Industry	Network Goal
Case 1	Aaboen et al. (2013)*	Resource based view	I-D	4 years	Food	Commercial
Case 2	Alvarez et al. (2010)	Institutional theory	I-D	5 years	Fair trade	Commercial and social
Case 3	Berends et al. (2011)	Social network theory	I-D	22 years	Aircraft	Commercial
Case 4	Butler & Soontiens (2015)	Dynamic capabilities	O-D	8 years	Teaching	Commercial
Case 5	Capaldo (2007)*	Social network theory	I-O-Q- D	6 years	Furnishing	Commercial
Case 6	Davies (2009)	Social capital theory	I-O-D	9 years	Fair trade	Commercial and social
Case 7	Gardet & Fraiha (2012)	Social Network Theory and Transaction Cost Theory	I-O-D	2 years	Sustainable medical devices	Commercial and social
Case 8	Gutiérrez et al. (2016)*	Resource based view	I-Q-D	7 years	Construction Materials	Commercial and social
Case 9	Human & Provan (2000)	Institutional theory	I-O-Q- D	5 years	Secondary wood- products	Commercial
Case 10	Human & Provan (2000)	Social exchange theory	I-O-D	5 years	Secondary wood- products	Commercial
Case 11	Kelliher et al. (2018)*	Institutional theory	I-O-Q- D	1 year	Tourism	Commercial
Case 12	Paquin & Howard- Grenville (2013)	Orchestration in multi- stakeholder networks	I-O-D	5 years	Public sector	Commercial and social
Case 13	Reypens et al. (2019)	Service dominant logic	I-O-D	3 years	Health care	Social and Commercial
Case 14	Sydow (2004)	Structuration theory	I-O-D	10 years	Insurance brokers	Commercial
Case 15	Tello-Rozas et al. (2015)	Service dominant logic	I-O-D	3 years	Public sector	Social

Note. *=this article relies on a multiple case study design, but not all of these cases are included in our analysis; I=interview data; O=observational data; Q=quantitative data; D=documents and/or other secondary data.

TABLE 2. Different Types of Formal and Relational Governance

RELATIONAL GOVERNANCE	(R)	FORMAL GOVERNANCE (F)		
Types and definitions	Illustrative evidence	Types and definitions	Illustrative evidence	
R-Reaching out = increasing the number of ties in the network by communicating about the network and/or getting in touch with potential network actors	"Using an existing data base of the wood industry published by a state agency, the director traveled the state "contacting and recontacting" wood manufacturers to join Beta-net." (Human & Provan, 2000, Case 10, p. 335)	F-Setting-up = establishing new organizational entities, such as an association, a joint venture, a consortium, or a network administrative organization	"NSP is a network – a platform of collaborations coordinated by a small non-profit entity and a designated number of working groups that give life to and continuously energize the network." (Tello-Rozas et al., 2015, Case 15, p. 1073)	
R-(Dis)engaging = increasing or decreasing the strength of the ties among network actors (respectively R-engaging and R-disengaging) by discussing the collaboration and/or getting to know one another through repeated or intense contacts or company visits	"Although historically only linked by Equal Exchange UK, the companies have visited one another and 'shared ideas on the future of fair trade for a number of years" (EE3) [interviewee]. (Davies, 2009, Case 6, p. 116)	F-(De-)contracting = entering or terminating a legally binding agreement with two or more network actors (respectively F-contracting and F-de-contracting), such as intellectual property agreements, by-laws, or contractual arrangements	"At the time of the program launch, at the end of 2003, a short Memorandum of Understanding was signed by Nespresso with Rainforest Alliance to develop training sessions, a farm assessment tool and a traceability system." (Alvarez et al., 2010, Case 2, p. 176)	
R-Facilitating = helping network actors with practical issues by providing a room to meet one another and/or preparing meeting reports	"To facilitate the debate between public managers and universities on public policies for São Paulo's downtown and the possibilities of social participation and control programs, the NSP network is organizing the seminar "Public Policy for the Center: Current Context and Social Participation" at its facilities" (Newsletter, March 10, 2008). (Tello-Rozas et al., 2015, Case 15, p. 1082)	F-Enforcing = forcing network actors to comply with a more "command-and-control style of decision-making" or an agreement by launching incentives and sanctions	"The first formal evaluation of the network took place only at the end of 1995, i.e. after more than three years of collaboration within InBroNet. The aim of this evaluation was to formally check on the active contributions being made by the single network members to the development of the network and to establish whether one of the members had violated the norm of reciprocity." (Sydow, 2004, Case 14, p. 212)	

TABLE 3. Overview of Network Governance Patterns along with the Implications for the Network and its Members

Network Governance Pattern: Description and its Explanatory Mechanisms	Cases: Implications for the Network and its Members
RELATIONAL CELEBRATION PATTERN = focus on relational governance (reaching out and/or engaging) in response to shared objectives among network members with formal governance (setting-up and/or contracting) to celebrate a successful collaboration after a period of time COMPETITIVE PROTECTION PATTERN = relational governance (reaching out and/or engaging) in response to search for complementary resources to survive in competitive markets is complemented by formal governance (enforcing and/or contracting) to protect the network against internal tensions and conflicts	Case 3: a network of researchers from different organizations relied on a relational celebration pattern and developed novel aircraft material, but only after repeating this pattern without members who disagreed with the formal governance terms. Case 6: a network of complementary organizations relied on a relational celebration pattern and established a new venture that successfully provided fair trade products all over the world, but only when establishing new organizations (F-setting-up) is complemented with agreements (F-contracting) to avoid opportunistic behaviors (here, bypassing of a partner and financial damage). Case 11: businesses engaged in a rural micro tourism network with a relational celebration governance pattern enhanced their business potential. Case 1: a focal organization manufacturing valves and a Japanese partner developed and launched a new food packaging method to customers following a competitive protection pattern. Case 2: a network of sustainable coffee suppliers relied on a competitive protection pattern and developed a sustainable AAA program for the distribution of fairly produced coffee and hence induced a general feeling of satisfaction among its members, but only after revising the implementation of formal governance a couple of times (here, by signing a more detailed version of the Terms of Agreement and the further development of the Tool for Assessment of Sustainable Quality). Case 4: a set of universities and educational institutions gained accreditation from the government but only after repeating the competitive protection pattern (here, de-contracting from a loose collaborative arrangement and searching for a limited number of engaged partner to establish an integrated strategic business net pivoting on a focal organization and its resources). Case 5: networks of dyadic alliances between furnishing manufacturers and industrial design firms followed a governance pattern of competitive protection and enhanced the innovation performance of the network but only after re

Description of Network Governance Pattern and its Explanatory Mechanisms	Cases: Implications for the Network and its Members
(continued)	Case 8: the focal organization adopted a competitive protection governance pattern and developed a partnering capability to launch products within a new market, thereby reaching its changed goal of program growth and cost control but only after disengaging and de-forcing network members who did not fit anymore with this new business goal and repeating the competitive protection pattern. Case 14: more than 10 years of quite successful collaboration in an association of industrial insurance brokers to deal with deregulation and increased competition followed from a competitive protection pattern in which the formal governance mechanisms were revised a number of times until all network members felt engaged.
FORCED FACILITATION PATTERN = formal governance (setting-up) to develop and promote networks for tackling societal or economic challenges with financial aid from the government is followed by alternating different types of relational governance (reaching-out, facilitating and/or engaging) to reach a critical mass for achieving the network objectives	Case 9: the wood-industry manufacturing network orchestrated by a NAO stimulated small business development by reaching more members over time, but only after a period of trial and error wherein reaching out, engaging and facilitating are balanced. Case 10: the wood-industry manufacturing network orchestrated by a NAO did not stimulate small business development in the end, because limited attention was paid to balancing engaging and facilitating activities. Case 12: the NAO set up to facilitate sustainable industrial symbiosis had reached part of its goal by assisting organizations in making new contacts and developing projects, but a drying pipeline for projects emerged when the relational governance was not balanced (here, engaging a limited number of known organizations in establishing projects). Case 13: a consortium of pharmaceutical firms and the government proceeded in developing a platform that pools data since the deliverables and milestones were enacted, but only after involving all network members (here, a shift from more central orchestrated governance to bottom-up managed governance occurred). Case 15: the NAO, which was founded to create a democratic space for citizens to involve in social and sustainable actions, achieves its goal as they developed a political agenda which in turn can lead to social and political change, but only after balancing reaching out and engaging to empower citizens and attract important actors in the field.

Note. * = governance mechanisms in *bold italics* and explanatory mechanisms in *italics*.