

SMALL-FIRM NETWORKS: HYBRID ARRANGEMENT OR ORGANIZATIONAL FORM?

Jorge Renato Verschoore*

Alsones Balestrin**

Alexandre Perucia***

Abstract

In the field of organizations, one relevant question is whether or not to consider networks as organizational forms. On the one hand, Williamson (1985) says that networks are hybrid arrangements. On the other, authors like Powell (1990) argue that networks constitute themselves as organizational forms. Given this dilemma, the present article proposes the analysis of organizational characteristics of small-firm networks (SFN). To reach such objective, twelve SFNs in distinct stages of development were analyzed. The results show that SFNs constitute themselves as singular organization forms which boundaries and identities are delineated by strategy, structure, coordination, processes and relationships.

Keywords: Small firms. Cooperation networks. Organizational form.

Resumo

No campo organizacional, o questionamento se as redes configuram ou não uma forma organizacional estimula os debates sobre o tema. Por um lado, Williamson (1985) sustenta que redes são arranjos híbridos. Outros autores, como Powell (1990), argumentam que redes constituem uma forma organizacional. Diante dessa problemática, o presente artigo se propõe a analisar as características organizacionais das Redes de Pequenas e Médias Empresas (RPME). Para alcançar esse objetivo, foram analisadas 12 RPME em diferentes estágios de desenvolvimento. Os resultados evidenciam que as RPME constituem uma forma organizacional singular onde estratégia, estrutura, coordenação, processos e relacionamentos possuem fronteiras e identidades delineadas.

Palavras-chave: Pequenas empresas. Redes de cooperação. Forma organizacional.

* *Doutor em Administração, professor e pesquisador do Programa de Pós-graduação em Administração da Universidade do Vale do Rio dos Sinos. E-mail: jorgevf@unisinos.br*

** *Doutor em Administração, professor e pesquisador do Programa de Pós-graduação em Administração da Universidade do Vale do Rio dos Sinos. E-mail: abalestrin@unisinos.br*

*** *Mestre em Administração, pesquisador da Universidade do Vale do Rio dos Sinos. E-mail: aperucia@unisinos.br*

Introduction

Interest in organizational forms is all but a recent phenomenon. For more than 50 years, authors have studied the emergence and establishment of new organizational forms from different theoretical perspectives. (HANNAN; FREEMAN, 1986; PUGH, 1997) Such contributions helped understand the diversity of organizations making the competitive landscape thus encouraging further theoretical-empirical investigations. Although there is not a common definition for organizational form, a distinction about the different forms can be made, once the characteristics that identify an organization as a distinct entity and as part of a group of organizations are defined. (ROMANELLI, 1991)

Over the past decades, researchers have started to analyze interfirm networks (IN) as a new organizational form (GRANDORI; SODA, 1995), motivated by the debate on markets, hierarchies and hybrid forms, further analyzed by Williamson (1985). Some authors like Jarillo (1988) and Provan, and Fish and Sydow (2007) started to address networks as an organizational form. The INs, according to these authors, cannot be considered hybrid arrangements situated between markets and hierarchies since: a) they have a unique organizational rationale (POWELL, 1990); b) they are not understood from the perspective of market transactions (GRANOVETTER, 1985); and c) follow rules which differ from those of command and control, present in hierarchies. (PERROW, 1992) Notwithstanding, some authors argue that INs deliver advantages when compared with other organizational forms (CASTELLS, 1999; THOMPSON, 2003; TODEVA, 2006; KLEINDORFER; WIND, 2009), especially when considering the emergence of a world based on a network society. (RAAB; KENIS, 2009)

Such discussion encouraged the understanding of INs as a new organizational form that cannot be seen as loose ties mediating hybrid arrangements. Instead, they are organizations with a distinct flavor. (PODOLNY; PAGE, 1998) The INs, when seen as a dynamic organization (AHUJA; SODA; ZAHEER, 2012) is an entity comprising a set of organizations with multilateral relationships, which cooperate with one another in order to achieve common goals. This network is defined by some authors as whole networks, because such an entity is created and managed to achieve the goals defined by its members. (KILDUFF; TSAI, 2003; PROVAN et al., 2007; MARIANO, et al., 2012; ROTH et al., 2012)

In face of this problematic, the present study does not aim to end discussion on whether or not networks constitute an organizational form. The focus here is to point out the characteristics of a specific type of IN, known as small-firm networks (SFN) and understand the possibility of classifying it as an organizational form. In such SFNs, relationships are cooperative, power is de-centralized, and shared among SFN's stakeholders. And associated firms are in general part of one link of the production chain. Nevertheless, as understood by Perrow (1992) SFNs are generally immersed in an institutional environment, which includes local incentives, from government and commercial associations, such as economic information, training and support services. So this research will shed light on relevant questions for understanding the SFN phenomenon, such as: could SFNs be considered an organizational form? If this is the case, new approaches, built on the foundations of organizational theory, may be incorporated into the study of the SFN phenomenon and, therefore, other questions may become pertinent: what are the characteristics that make networks an organizational form? What are the elements that distinguish networks as hybrid organizational arrangements from networks as organizational forms?

To answer these questions, this study selected a group of SFNs, which represent a singular case in Southern Brazil (this is a region that features network cases that have been object of several investigations for more than a decade). The chosen SFNs are the result of a public policy called "Programa Redes de Cooperação - PRCRS" (Cooperation Networks Program), which is a public policy of the State of Rio Grande do Sul. (VERSCHOORE; BALESTRIN, 2011; WEGNER; PADULA, 2012) For ten years, this policy supported more than 200 SFNs. All INs created by the PRCRS comprise 3,000

firms, 45,000 jobs and more than R\$ 5 billion (US\$ 2.5 billion) in annual revenues. (HUNDERTMARKER, 2010)

In order to present the theory and empirical evidence found, this article is organized into five sections, besides this Introduction. The first two sections show the theoretical aspects that define networks as organizational forms, as well as the characteristics that allow the identification and classification of networks as singular organizations. In the third section, the study focuses on the research methodology. The analysis of major findings will be presented in the fourth section, and in the last section the study will discuss implications of the results, as well as the final considerations for this work.

Interfirm network as an organizational form

Identifying and classifying organizations have long been a recurring topic of study. Theoretical discussions and empirical research have fostered the debate on the origins of organization forms (HANNAN; FREEMAN, 1977, 1986) and, despite such debate, only in the past decades have scholars started to understand how organizations emerge and establish themselves. (ROMANELLI, 1991) There is no common definition for organizational form but, in general, it can be understood as "[...] those characteristics of an organization that identify it as a distinct entity and, at the same time, classify it as a member of a group of similar organizations." (ROMANELLI, 1991, p. 81) In this sense, the environment is traditionally seen as the major influence on the emergence as well as the extinction of organizational forms, since it causes managers to deal with their organization's boundaries in a flexible way. (VOLBERDA, 1996)

In the eighties, INs became a major topic of investigation, especially due to the emerging and wide set of competitive dynamics businesses had to start to deal with. (MILES; SNOW, 1986) Since then, the purpose of networks has become a provider of a pool of resources for its members through a dynamic structure, sustained by uniform and de-centralized mechanisms. This helps networks adapt themselves to the competitive environment, which is normally characterized by constant changes, increasing consumer expectations and increasing efficiency of industry practices. (JOHNSON-CRAMER; PARISE, S.; CROSS, 2007) The INs have the ability to achieve common goals of a group of organizations by joining their members' resources and fostering collective action. Thus, such networks can be defined as a set of repetitive transactions supported by relational and structural configurations that are characterized by dynamic boundaries. (TODEVA, 2006) One example of such dynamism is the changing number of associated firms in an IN, which can feature a higher or a lower number of members at a given moment. Considering this, the definition of organization boundaries becomes a key topic when debating Ins. (VAN NUENEN, 2007)

The scientific literature identifies two major concepts of organization boundaries in the context of INs. The first considers networks as intermediate or hybrid arrangements in which some characteristics of market and hierarchies are present. Authors who defend this perspective argue that networks do not constitute themselves as a particular form of organization, but a hybrid combination of structural elements of market and hierarchy. Thus, networks are considered an in-between organizational form, in a spectrum ranging from market and its loose coordination, to hierarchy and its tight control. (CASSON; COX, 1997; HENNART, 1993; WILLIAMSON, 1985) From a second perspective, networks are not situated in this middle range but are considered to be a new organizational form, featuring unique and distinctive characteristics when compared to the market and hierarchy relations. (BIRKINSHAW, 2000; POWELL, 1990; THORELLI, 1986)

Given this concept, INs are new organizational forms established to meet the collective goals of their member organizations. Moreover, INs provide conditions that also help member firms achieve their individual goals (KILDUFF; TSAI, 2003) and,

because of these two aspects, they are denominated whole networks (PROVAN et al., 2007). In a related definition proposed by Podolny and Page:

We define a network form of organization as any collection of actors ($N > 2$) that pursue repeated, enduring exchange relations with one another and, at the same time, lack a legitimate organizational authority to arbitrate and resolve disputes that may arise during the exchange. (PODOLNY; PAGE, 1998, p. 59)

Therefore, networks feature mutual agreements, complementary resources, power and reputation disputes, as well as trustworthy relationships. They combine common sense and conflict, collaboration and competition. (NOOTEBOOM, 2004) In this respect, the collective actions of a group of organizations create organizational boundaries properly delineated by a common identity. For example, "Industry associations sometimes produce a sense of collective identity and a sense of distinctiveness." (HANNAN; FREEMAN, 1986, p. 62)

The constant and recurring interactions, involving the dilemmas of collective action and coordination of member's individual interests as the network matures, give form to an organization with its own identity. (RAAB; KENIS, 2009) The formation of a common identity in the network follows a process that is similar to those found in the emergent social systems. In this perspective, distinct organizational forms are a consequence of cumulative interactions between entrepreneurs and organizations seeking to establish new social systems. (ROMANELLI, 1991) Therefore, the idea of INs as a new organization is supported by a collective organizational identity which is shared among its members, and that emerges from enduring relationships focused on the generation of competitive advantages when compared to other organizations outside the network. Such collective identity, thus, is also established as an institutional asset within the network's organizational boundaries, characterizing who is inside and who is outside. This reinforces the character of the entity that is represented by the network, outlining its singularity as an organizational form.

INs, when seen as organizations, combine specific network characteristics as well as characteristics that are common to organizations. For example, INs feature actors, relationships and interdependencies, as well as, strategy, structure, coordination and processes. The network's identity and its organizational boundaries are established by the initiatives of the network and its participants, through the symbols, institutions and actions that bring them together and through the results that keep them close and united. The next section details these major characteristics, identifying INs as a distinct entity and as a part of a specific group of organizations.

Characteristics of networks as an organizational form

As shown, INs can be understood not only as loose relationships, but also as a new form of organization that emerges as a consequence of the evolving and competitive nature of markets. (MILES; SNOW, 1986) Some studies have been advancing the scientific knowledge about INs as an organizational form. Based on organizational theory, such studies have contributed to the understanding of different characteristics that allow INs to be distinguished from other forms of organizations. (HIBBERT; HUXHAM; SMITH-RING, 2008; KALE; SINGH; BELL, 2009; KILDUFF; TSAI, 2003; PROVAN et al., 2007; THOMPSON, 2003; TODEVA, 2006; RAAB; KENIS, 2009)

The INs' strategy is one of the characteristics of an organizational form. Differently from the usual rationale of individual competition, present in classical strategy thinking (BARNEY, 1991; PORTER, 1986), INs' strategy assumes a predominantly collective emphasis (JARILLO, 1993) that combines competition and cooperation. (BRANDENBURGER; NALEBUFF, 1995) In this rationale, the individual strategy is something that leads, many times, to situations of conflict among members. Nevertheless,

this helps in delimiting the INs' boundaries, resulting in the formation of a common identity, since network strategy favors more collective action among member firms towards the INs competitive goals when compared to other organizations. (PARK, 1996; PROVAN; FISH; SYDOW, 2007)

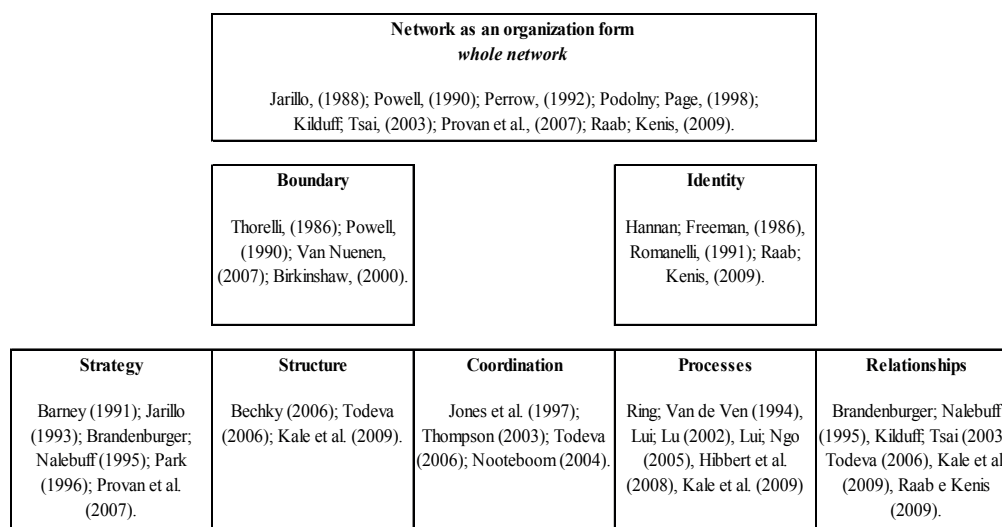
The second characteristic that distinguishes INs as an organizational form is structure. Networks feature dedicated structures comprising management capabilities intended to stand and overcome the difficulties that are inherent to the activities of cooperation among firms. (KALE; SINGH; BELL, 2009) However, differently from other organizations, network structures become established far more because of the dynamic relations among its member firms than because of stable hierarchies with permanent rules. This means that INs are structured mainly by the influences originated from member roles and routines that drive the behavior of each actor. (BECHKY, 2006) Despite not requiring a formal structure that defines its boundaries, the INs count on deliberated, besides emergent, actions that fortify a common identity. Examples are the selection of participants, rules for delegating roles, and creation of communication channels. (TODEVA, 2006)

The third aspect that allows INs to be characterized as an organizational form is coordination. Nooteboom (2004), for example, affirms that coordination is needed for the consolidation of an IN and its effectiveness for reaching organizational goals. That happens because the INs' coordination guides and controls the roles of actors and their collective practices. However, differently from individual organizations that often adopt hierarchical mechanisms, INs' coordination of member firms is sustained basically by social mechanisms such as reciprocity, socialization and reputation. (JONES; HESTERLY; BORGATTI, 1997) Therefore, the collective identity built by the IN works as guidance and control for common activities within the network, conducting member firms towards the achievement of its organizational goals. In other words, "the coordination of activities occurs through the identity which reveals a common purpose, collective result or interest, which everybody will work for." (THOMPSON, 2003, p. 31)

The fourth characteristic that distinguishes INs as organizational forms is processes. Every organization counts on process design to get a clear notion of the steps to be followed and of actions it should take to achieve its goals. In a peculiar way, INs' processes follow a more collective emphasis. The purpose of the collective processes is to make sure member firms follow the steps required for the success of cooperation, as well as for successful partner selection and efficient negotiation of collective actions. (KALE; SINGH; BELL, 2009) The studies that further analyze processes in the context of INs adopt, in most cases, a dynamic rationale of phases and stages, or even of life cycles, of cooperation. (HIBBERT; HUXHAM; SMITH-RING, 2008; RING; VAN DE VEN, 1994) These dynamics foster actions and cyclical reactions among member firms when conducting collective processes (LUI; LU, 2002; LUI; NGO, 2005) which can reinforce a common identity and, above all, contribute with the delimitation of organization boundaries, since such interactions will define those who are inside and those who are outside the network. (PROVAN; FISH; SYDOW, 2007; RAAB; KENIS, 2009)

Finally, relationships present in INs also allow them to be characterized as an organizational form. Relationships are among the major attributes of INs (TODEVA, 2006) including internal relationships, among its member firms, as well as external relationships, through connections with its stakeholders. Therefore, authors like Kale, Singh e Bell (2009), argue that INs' members need to develop relational competences that allow them to cooperate internally so they can better compete externally. (BRANDENBURGER; NALEBUFF, 1995) Relationships, thus, foster a collective identity, showing similarities among involved firms (RAAB; KENIS, 2009), as well as a conscious sense of the collective goals the network must seek as an organization. (KILDUFF; TSAI, 2003)

Figure 1 - Conceptual scheme for the analysis of a network as an organizational form



Source: elaborated by the authors.

The discussion herein supported the establishment of five characteristics (strategy, structure, coordination, processes and relationships). These will guide the analysis of networks as organizational forms, considering the dimensions of boundaries and identities. In this sense, the synthesis presented in Figure 1 has the purpose of guiding the methodological procedures of the research, which is the subject of the following section.

Methodology

This study follows a qualitative and exploratory approach with the unity of analysis being the IN, with two specific dimensions of an organizational form: boundaries and identities. Specifically in this article such dimensions will be further analyzed through five characteristics: strategy, structure, coordination, processes, and relationships. The empirical field of study is represented by the SFNs from Southern Brazil, which benefit from a local public policy that supports the formation, development and consolidation of networks. This policy is called "Programa Redes de Cooperação - PRCRS" (Cooperation Networks Program) and, during the past decade, supported the establishment of more than 200 networks (HUNDERTMARKER, 2010) turning the region into a reference on cooperation networks.

From this rich empirical pool of INs, twelve SFNs were selected. The choice of the twelve INs resulted from the discussions and definitions outlined with coordinators of the Network Cooperation Program from a meeting on September 2nd, 2009. The selection of SFNs took into account two criteria: i) its business sector and ii) its stage of development, which considers time of existence of the network, as well as its number of members. Such criteria were defined in order to collect a wider range of information and views about the SFNs. In conformity with these criteria, the selected networks cover the sectors of commerce (retail), industry, and services. They also represent networks in initial stage (formation), medium stage (maturing and growing up) and final stage (consolidated).

Data were collected from 60 in-depth, two-hour long, interviews, guided by a structured questionnaire and recorded with an audio device. Such data provided

evidence that was framed against the proposed theoretical scheme. For each SFN, interviews were conducted with five of its representatives (SFN's director and manager, SFN's secretary or treasurer of the network, and two SFN's firm representatives with no specific roles related to network management).

The profile of each SFN is presented in Box 1. For reasons of confidentiality, the twelve SFNs analyzed will be referred hereon by acronyms (SFN A, SFN B, SFN C, SFN D, SFN E, SFN F, SFN G, SFN H, SFN I, SFN J, SFN K, and SFN L).

Box 1 – Profile of selected SFNs

Net-work	Sector	No. of member firms			Years of existence		
		< 20	20 a 40	> 40	< 4	4 a 6	> 6
SFN A	Industry	■			■		
SFN B	Commer-ce (retail)		■				■
SFN C	Industry	■				■	
SFN D	Industry	■			■		
SFN E	Commer-ce (retail)			■		■	
SFN F	Commer-ce (retail)		■			■	
SFN G	Commer-ce (retail)		■			■	
SFN H	Service	■			■		
SFN I	Service		■				■
SFN J	Commer-ce (retail)			■		■	
SFN K	Commer-ce (retail)		■			■	
SFN L	Service		■			■	

Source: elaborated by the authors and based on interviews and documents from the SFN.

The data were treated through interview transcripts and content analysis. With these techniques, interpretations aligned with the proposed theory were found and organized, according to the unity of analysis as suggested by Hair and others (2005).

Results and discussion

Based on the analysis of the twelve SFNs it was possible to observe empirical evidence that reveals boundaries and identities in the networks. The evidence comes from empirical observations of strategy, structure, coordination, processes and rela-

tionships present in the SFNs that characterize these as organizational forms. Such observations foster the discussion to be presented in the next sub-sections.

Strategy

Regarding strategy, SFNs reflect an organization deliberately formed to achieve specific goals. According to a firm representative of SFN C

[...] Our objective was to bring several Rice Mills together [...] there is the Rice Association which plays an influent role in the sector [...] we feel that some decisions are not ideal and it is difficult for us to reach them as one small firm. So we create this SFN to build the power needed to be there and have a seat which is occupied by our network representative. (SFN C, 2009)

The evidence illustrates a “cooperate to compete” strategy (BRANDENBURGER; NALEBUFF, 1995) which is needed given the political power that characterize the decisions in this sector. This reveals clearly defined boundaries for this SFN and characterizes its group of small Rice Mills as an organization in order to face its competitors. (ROMANELLI, 1991)

The collective action, which is present in the elaboration strategy, is also observed in the SFN E and K. Regarding the case of SFN E, one of its members outlines “[...] we hold member meetings each two months. During these meetings, we define the most strategic points of the network”. (SFN E, 2009) In similar view, the collective practice of strategic planning is observed in the case of SFN K. The strategy development of this network is based on the participation of several member firms, as the representative of one of them states “[...] each team (marketing, innovation, expansion, etc.), which is formed by representatives of member firms, has its action plan and objectives defined; the team facilitator is responsible for controlling and supervising the process.” (SFN K, 2009) Such examples demonstrate strategy as a result of a predominantly collective process, being conceived by the group of member firms. (JARILLO, 1993) This is a relevant aspect that reveals the network’s own organizational identities and boundaries.

In parallel one can observe the cases of SFN A and J which also provide evidence of organizations formed with the purpose of reaching benefits for their members, such as higher bargain power and access to key suppliers. As the firm representative of SFN A states “[...] Our network seeks better deals, that is, we buy as a group of firms to reduce cost and to become individually more competitive.” (SFN A, 2009) That is an example of a deliberate strategy of collective action towards a higher bargain power when dealing with suppliers, seeking reduction of costs when acquiring products and services. Also, the firm representative of SNF J outlines: “[...] We try to negotiate discounts with the big brands. One of our goals was already accomplished with Adidas. Now we are dealing hard to achieve it with Nike.” (SFN J, 2009) In both cases, the IN’s act strategically on behalf of the member firms, seeking to secure better deals when buying from suppliers and to secure access to larger and well known suppliers. Here the INs are characterized as an organization formed by organizations, created and managed in order to achieve members’ common goals that would be hardly achieved by each member firm individually. (KILDUFF; TSAI, 2003; PROVAN et al., 2007)

The definition of common objectives by means of a collective strategy is not a simple task. The examples of SFN L and SFN B demonstrate this. According to one representative of SFN L:

[...] one of our four important strategic goals was to reach a national presence [...] it is something that does not depend only on one firm [...] we need power to convince the other member firms as well [...] the real problem may be the following: the network cannot be profit-oriented. It must be an organization that generates results for its member firms. Then any action we want to define must be shared in a meeting with

the other member firms so we can together decide and, if needed, divide costs if we reach an agreement. (SFN L, 2009)

In a similar way, the associate of SFN B outlines “[...] *First we conduct a study, we check if a given region could receive a new store so we can keep a balanced level of competition in the region and do not harm the member firm that is already established in that place.*” (SFN B, 2009) In both situations, one can observe that the strategy is collectively created and involves cooperation, as well as competition and conflict among the participants. This conforms to the theory concepts of Park (1996) and Provan, Fish e Sydow (2007) which delineate identities and boundaries in the organization.

Structure

In order to match the interest of its members, SFNs also devise structures to support collective actions. In the case of SFN L, this structure is represented by the network’s sales office, as mentioned by its member representative: “[...] *It is important to have a sales office [...] and benefit as a network from a dedicated sales team.*” (SFN L, 2009). The evidence of SFN D’s office is an example that clearly shows a group of organizations operating as a single organization, in form of a network. (PODOLNY; PAGE, 1998) In the example of the SFN H, instead, it is possible to illustrate the distinctive organizational characteristics through the structure, which identify and standardize the operations of its members, as cited by one of the SFN’s representatives: “[...] *We defined a network that makes strong investment in its image in order to minimize the lack of credibility consumers have on individual unbranded gas stations.*” (SFN H, 2009) Such evidence demonstrates a SFN with a sense of collective identity and a sense of distinctiveness of member firms and their network in relation to other organizations that do not belong to it. (HANNAN; FREEMAN, 1986)

Another example of structure is the IT system managed by SFN B. By using an IT system the network concentrate demand projections from all member firms facilitating better deals with large suppliers. This provides member firms with advantages of cost reduction when purchasing quality products that will be later resold to consumers with better margins. As one representative of SFN B cites: “[...] *this technology is password protected. You need an access-key that is only available to the member firms of the network. Product purchase is conducted entirely online. There are no telephone-base sales or external sales. It is only through the internet and it is a very effective system.*” (SFN B, 2009) Technology becomes an important element of the network structure; given the network system is an effective way to make feasible large transactions. Besides, it allows the associate to have access to high quality products with no need of directly negotiating with a supplier. Information structure is essential for the member firms, thus technology ends up becoming a mechanism which supports network governance. This can be verified by one representative of SFN B:

[...] our network management prepared a final proposal, approved in a network meeting. Today if one associate delays the payment of the network’s monthly fee, she/he will lose the status of member firm in the system. She or he can see all offerings but cannot access the deal and cannot make any transaction. (SFN B, 2009)

Such an example elucidates the network structure as a characteristic that seeks to overcome the difficulties that are inherent to cooperation. (KALE; SINGH; BELL, 2009) This characterizes the network as one organization in relation to its suppliers, delineating its organizational boundaries and defining the member firms that can effectively operate their businesses using the network structure and those that cannot.

Structure can be an important characteristic when building identity as well as communication among member firms in a network. The cases of SFN F and SFN

D illustrate these points. In the case of SFN F, one of its associates cites: “[...] we have a sales pavilion built by our members in a location near one big retailer of the sector [...] this is where the majority of the member firms get together [...] to sell our products.” (SFN F, 2009) Operating practically like a big company, the SFN D defines communication procedures among member firms that share information and business opportunities through an appropriated structure. In the operation of SFN D, the network keeps structures of shared information, containing their members’ processes, equipment and capabilities, as one representative of SFN D outlines:

[...] we have a list of machines each associate owns... as we know our members, we can figure out the characteristics of each member’s technologies and what each firm is capable of doing. When we face an order, we can quickly map out which member has an appropriate machine for each step of the production process. (SFN D, 2009)

It is possible to observe that the evidence supports the theoretical concept where structure delineates the collective identity in a network by means of deliberate or emergent actions that fortify the common sense of group and belonging, through the creation of communication channels. (TODEVA, 2006)

Coordination

Another element that characterizes a network as an organizational form is the coordination of its members. Coordination can be evidenced in SFN K’s planning which is the result of a collective action, as one representative of SFN K states:

[...] each team is responsible for one major department of the network management, such as marketing, innovation and expansion. Each team has its own action plan with detailed objectives; the team facilitator is responsible for controlling and supervising the activities. (SFN K, 2009)

Such collective coordination allows for a systematic monitoring of activities conducted in the network, as cited by a member representative of SFN K: “[...] we have one meeting every month to discuss with the network management planning status, task delays, and check achieved goals.” (SFN K, 2009) As demonstrated, consensus and conflict, collaboration and cooperation, become present within organizational boundaries (NOOTEBOOM, 2004), and distributing coordination in different activities is possible only with a collective identity in the network which reveals a sense of a “whole network”. (KILDUFF; TSAI, 2003)

The coordination among network members can be originated from shared interests and the existence of a common purpose. That is what is observed in some cooperation networks, as one representative of SFN C outlines:

[...] our first objective was to unify several Rice Mills [...] they represents those 20 small and medium Mills that have the same interest as the large ones [...] when we have a goal, like our Parboiled Rice Mill, we define, for example, who is responsible for machines, who will take care of formalization of this new organization etc. (SFN C, 2009)

In the same manner, the representative of the SFN I points out: “[...] we joined forces because we seek to exchange information [...] we make purchases together, high volume ones, coordinating transactions between suppliers and network members that wish to buy.” (SFN I, 2009) The evidence strengthens the theoretical background that points to coordination as a characteristic that delineates boundaries in the network. That happens because the network clearly establishes the firms its members can count on when performing an action of their interest, not considering the other ones that are not part of the network. (THOMPSON, 2003)

Processes

The INs keep processes that reflect the sense of identity of its member firms and as well as its organization boundaries. One of the key motivators of cooperation in SFN A is to achieve a quality standard for the launching of the network's wine seal, as one representative of its member firms outlines: "[...] with this seal we will have a quality standard [...] we expect the network's wine will have standards of cleanliness, hygiene and quality in wine production processes. We are developing a good practice manual." (SFN A, 2009) The evidence illustrates how processes support the building of an identity, in this case, in a form of a quality standard that will contribute for the success of cooperation among the network's member firms. (HANNAN; FREEMAN, 1986)

Another evidence of processes supporting network identity comes from the previously presented evidence of technology from SFN B. This technology systematizes the access of member firms to products that the network negotiates with large suppliers and is an essential requirement member firms must deal with when making any purchase in the network. One representative of SFN B comments: "[...] we have an online system where we handle our product purchases and payment requests to the network." (SFN B, 2010) All transactions from members are organized so the network can establish one, bigger, transaction with suppliers as cited by the network representative: "[...] all purchases are formatted online in our system [...] and we establish direct connection with our supplier." (SFN B, 2009) The SFN B, thus, aggregates through its process of online purchases, all demands of its members, facilitating the creation of big purchases that will be negotiated with key suppliers. This process infers the existence of a collective identity for the network members. (ROMANELLI, 1991)

How processes can reveal the definition of boundaries in a network organization can be observed in the examples of networks like SFN K and SFN G. As outlined by a firm representative of SFN K:

[...] we have a procedures manual which was developed by the expansion team [...] there are basic criteria that define which firm can join the network. For example, three or more years of existence, minimum revenues, outlet with a minimum distance of five kilometers in relation to a network outlet [...] so we have one store for at least 30.000 people in the region. (SFN K, 2009)

The case of SFN G reinforces this theoretical principle, as one representative of the network outlines:

[...] the network card system from SFN G represented a big advance [...] we have all member firms ready to accept purchases from consumers with this card [...] so consumers are able to buy in each drugstore as if she or he were buying from a one network organization [...] everybody will join. (SFN G, 2009)

In both examples, processes are capable of influencing the boundaries of the network, as observed in the cases of SFN K and SFN G. In the case of SFN K, the expansion process, with their geographic and technical criteria, and in the case of SFN G, with its card system that integrates the flow of transactions of all member sales in the network. Such empirical evidence is aligned with the idea that processes contribute with the delimitation of organizational boundaries, separating those that are in and those that are out of the network domain. (PROVAN; FISH; SYDOW, 2007; RAAB; KENIS, 2009)

Relationships

The last of the five characteristics of a network organization is relationships. The evidence in SFN D provides a good example of relationships, since its members

participate in different markets, each with a different seasonality. The period of high demand in the agricultural sector, for example, tends to be different from that of the nautical sector. SFN D's member firms use their relationships in the network to promote interdependent developments, as an SFN D representative illustrates: "[...] when one firm has excessive demand, it shares that demand with a firm facing low demand at that period and vice-versa. Both firms become more balanced." (SNF D, 2009) The evidence demonstrates the collective identity in a group of organizations (HANNAN; FREEMAN 1986) which encourages sharing information and developing business within the network.

In a similar way the collective sense is manifested in SFN F, as one of its representatives describes: "[...] we promote the integration among network members with informal gatherings like a lunch time during our network meetings." (SNF F, 2009) The associate of SFN E also outlines: "[...] every weekend we promote soccer matches and parties with network members." (SNF E, 2009) The relationships, as demonstrated by the evidence, favor the building of a collective identity, showing similarities among the network members and the definition of a group in the form of a network, aware of the collective objectives the network seeks as one organization. (KILDUFF; TSAI, 2003; RAAB; KENIS, 2009)

As relationships reinforce the collective identity, they also establish the firms that are part or not of the network organization which defines its boundaries. Observations from members' representatives offer support to this affirmation. The representative of SFN A, for example, outlines the importance of fostering relationships within the network when deciding for the acceptance of a new member: "[...] when the future member is invited to participate in a meeting, the relationship is reinforced with him, the objectives, the importance of information sharing [...] we make use of a little bit of sensibility to get the new member as involved in our network as possible." (SNF A, 2009) Such evidence reveals to the new member the conditions to be admitted in the network. The representative of SFN D, in the following evidence, outlines how this reflects a higher degree of relationship among network members:

[...] I was not able to manufacture a specific piece before. Now if I can't, some member of my network can [...] I can manufacture part of the piece and other network member finishes the service, and I can still sell this piece as if it were entirely produced by me. (SNF D, 2009)

The evidence demonstrates that the network's member firms need to develop individual and collective competences that enable them to cooperate internally and compete externally (BRANDENBURGER; NALEBUFF, 1995; KALE; SINGH; BELL, 2009) delineating the network as an organization in the face of its competitors. With the purpose of facilitating the understanding of the results found in this study, the evidence of identities and boundaries is synthesized in Box 2, considering each of the five characteristics that were analyzed.

Box 2 – Synthesis of the results

Characteristics	Evidence of identity and boundaries
Strategy	<p>Identity</p> <p><i>"[...] Our objective was [...] the Rice Association [...] we feel it is difficult for us to reach them as one small firm. So we created this SFN to build the power needed to be there." (SNF C, 2009)</i></p> <p>Boundaries</p> <p><i>"[...] Our network seeks better deals, that is, we buy as a group of firms to reduce cost and to become individually more competitive." (SNF A, 2009)</i></p>

Structure	<p>Identity <i>"[...] We defined a network that makes strong investments in its image in order to minimize the lack of credibility consumers have on individual unbranded gas stations."</i> (SFN H, 2009).</p> <p>Boundaries <i>"[...] If one associate delays the payment of the network's monthly fee, she/he will lose the status of member firm in the system. She or he can see all offerings but cannot access the deal and cannot make any transaction."</i> (SFN B, 2009)</p>
Coordination	<p>Identity <i>"[...] we have different teams for marketing, innovation and expansion. Each team has its own action plan with detailed objectives; the team facilitator is responsible for controlling and supervising the activities."</i> (SFN K, 2009)</p> <p>Boundaries <i>"[...] our first objective was to unify several Rice Mills [...] 20 small and medium Mills that have the same interest as the large ones [...] when we have a goal [...] we define, for example, who is responsible for machines, who will take care of formalization of this new organization, etc."</i> (SFN C, 2009)</p>
Processes	<p>Identity <i>"[...] with this seal we will have a quality standard [...] we expect the network's wine will have standards of cleanliness, hygiene and quality."</i> (SFN A, 2009)</p> <p>Boundaries <i>"[...] the network card from SFN G represented a big advance [...] so consumers are able to buy in each drugstore as if she or he were buying from a one network organization."</i> (SFN G, 2009)</p>
Relationships	<p>Identity <i>"[...] when one firm has excessive demand, it shares that demand with a firm facing low demand at that period and vice-versa. Both firms become more balanced."</i> (SFN D)</p> <p>Boundaries <i>"[...] it is an opportunity to access new markets and development of new products. For example, I was not able to manufacture a specific piece before. Now if I can't, some member of my network can."</i> (SFN D, 2009)</p>

The theoretical discussions developed in this study present two streams of thought regarding INs. The first one understands networks as an arrangement situated between markets and hierarchies. (WILLIAMSON, 1985) However, the evidence found for each of the five characteristics, synthesized in Box 2, supports the theory presented in the second stream of thought. The results consequently point that organizational identities and boundaries are present in the selected INs of Southern Brazil. These networks can be seen as organizations with a unique organizational logic as proposed by Powell (1990). The results also confirmed the premises of Granovetter (1985) regarding a view that goes beyond the transaction perspective and also demonstrated that the selected INs from Southern Brazil follow some rules which are distinct from the traditional hierarchical administration, as outlined by Perrow (1992).

Final remarks

This study sought to understand, in theoretical and empirical terms, how networks can represent an organizational form, taking into consideration the empirical evidence of SFNs from Southern Brazil. In theoretical terms the study demonstrated that the organizational form, when manifested in a network, is substantiated through two dimensions: boundaries and identities. Also these dimensions can be empirically observed through five major characteristics which are present in the context of cooperation networks: strategy, structure, coordination, processes and relationships.

Thus, in general terms, the evidence set forth by SFNs provides examples of the concepts presented in theory, illustrating this specific kind of network as a new organizational form that operates in its business environment. The examples that were analyzed illustrate the network as an organizational form with its boundaries and identities well delineated, which is a consequence of the development of collective strategy, and conciliation of conflicts and interests from the network's member firms. (BRANDENBURGER; NALEBUFF, 1995; JARILLO, 1993; PARK, 1996; PROVAN; FISH; SYDOW, 2007) The study also demonstrated that structure is a factor that defines identities and boundaries in the network by means of resources that support the management of difficulties that are inherent to the activities of cooperation and in formatting a common identity. (KALE; SINGH; BELL, 2009) In the evidence of coordination, the study observed that the networks promote mechanisms of coordination as a consequence of shared interest and the existence of a common purpose among its members. These findings are aligned with the background theory presented in this study. (THOMPSON, 2003)

Regarding processes, boundaries and identities are delineated with specific programs of expansion and certification that define member firms that are inside the network and those that are outside of the network. (KALE; SINGH; BELL, 2009; PROVAN; FISH; SYDOW, 2007; RAAB; KENIS, 2009) Finally, the aspects of relationships in the network promote a collective sense of those members that belong to the network, thus creating a collective perception of identity and competition in the business environment. Such findings are also in line with the theory presented in this study (BRANDENBURGER; NALEBUFF, 1995; KALE; SINGH; BELL, 2009) Such evidence demonstrates that SFNs feature well delineated identities and boundaries that set them as unique entities and also make them part of a group of similar organizations. (ROMANELLI, 1991) The understanding of these five elements (strategy, structure, coordination, processes, and relationships) in the empirical context of SFNs in Southern Brazil provides ground for further development of the body of knowledge on this particular form of organization.

It is worth noting the limitations of this research. The evidence focuses on SFNs from Southern Brazil. Therefore, it is not possible to imply that the findings of this study are applicable to the understanding of INs in general. Other forms of arrangements among firms, such as the keiretsu and chaebol, supply networks organized by automotive organizations, and even franchising and brand license arrangements, may or may not share the characteristics found in the empirical evidence of this study. Due to the particular market dynamics of the region, findings may be biased by a predominance of network strategies, structures, coordination, processes, and relationships that particularly adhere to the organizations competing in such environments. Also, the findings presented here are representative of little more than five percent of the SFNs available in the empirical field. Given this, the present study encourages new research endeavors seeking a larger set of such organizations to find more generalizable observations.

Finally, the characteristics of a network as an organizational form were empirically evidenced in this study. However, future investigations are encouraged regarding the potential of cooperation in the strategic agenda of organizational forms, including different arrangements of INs as well as SFNs created in other regions that foster such kind of organization in different sectors from those typically found in Southern Brazil, as well as in different forms of cooperation such as alliances, including relationships

among big companies. Thus, new possibilities are open for studies seeking to explore networks as a new organizational form, and relevant topics such as the internal aspects and the evolving dynamics of those organizations could be addressed.

References

- AHUJA, G.; SODA, G.; ZAHEER, A. The Genesis and dynamics of organizational Networks. *Organization Science*, v. 23, n. 2, p. 434-448, 2012.
- BARNEY, J. B. Firm resources and sustained competitive Advantage. *Journal of Management*, v. 1, n. 17, p. 99-120, 1991.
- BECHKY B. A. Gaffers, gofers, and grips: role-based coordination in temporary organizations. *Organization Science*, v. 17, n. 1, p. 3-21, 2006.
- BIRKINSHAW, J. Network Relationship Inside and Outside the Firm, and Development of Capabilities. In: BIRKINSHAW, J.; HAGSTRÖM, P. *The flexible firm: capability management in network organizations*. Oxford: Oxford University Press, 2000.
- BRANDENBURGER, A. M.; NALEBUFF, B. J. The right game: use game theory to shape strategy. *Harvard Business Review*, july-august, p. 57-71, 1995.
- CASSON, M.; COX, H. An Economic Model of Inter-Firm Networks. In: EBERS, M. *The formation of inter-organizational networks*. Oxford: Oxford University Press, 1997.
- CASTELLS, M. *A sociedade em rede*. São Paulo: Paz e Terra, 1999.
- GRANDORI, A; SODA, G. Inter-fim networks: antecedents, mechanisms and forms. *Organization Studies*, v. 16, n. 2, p. 183-214, 1995.
- GRANOVETTER, M. Coase revisited: business groups in the modern economy. *Industrial and Corporate Change*, v. 4, p. 93-131, 1985.
- HAIR, J. F. et al. *Fundamentos de métodos de pesquisa em administração*. Porto Alegre: Bookman, 2005.
- HANNAN, M. T; FREEMAN, J. The population ecology of organizations. *American Journal of Sociology*, v. 82, n. 5, march, p. 929-964, 1977.
- HANNAN, M. T; FREEMAN, J. Where do organizational forms come from? *Sociological Forum*, v. 1, n. 1, winter, p. 50-72, 1986.
- HENNART, J. F. Explaining the Swollen Middle: why most transactions are a mix of market and hierarchy. *Organization Science*, v. 4, p. 483-497, 1993.
- HIBBERT, P. HUXHAM, C.; SMITH-RING, P. Managing Collaborative Inter-organizational Relations. In: CROPPER, S. et al. *The Oxford Handbook of inter-organizational relations*. Oxford: Oxford University Press, 2008.
- HUNDERTMARKER, C. A. O Programa Redes de Cooperação do Rio Grande do Sul: dez anos de práticas colaborativas de gestão. In: ANTUNES, J.; BALESTRIN, A.; VERSCHOORE, J. *Práticas de gestão de redes de cooperação*. São Leopoldo: UNISINOS, 2010.
- JARILLO, C. *Strategic networks*. Oxford: Butterworth-Heinemann, 1993.
- JOHNSON-CRAMER, M. E.; PARISE, S.; CROSS, R. L. Managing change through networks and Values. *California Management Review*, v. 47, n. 3, spring, p. 85-109, 2007.

- JONES, C.; HESTERLY, W. S.; BORGATTI, S. P. A general theory of network governance: exchange conditions and social mechanisms. *Academy of Management Review*, v. 22, n. 4, p. 911-945, 1997.
- KALE, P.; SINGH, H.; BELL, J. Relating well: building capabilities for sustaining alliance networks. In: KLEINDORFER, P. R.; WIND, Y.; GUNTHER, R. E. *The network challenge: strategy, profit, and risk in an interlinked world*. New Jersey: Pearson, 2009.
- KILDUFF, M.; TSAI, W. *Social networks and organizations*. Thousand Oaks, CA: Sage, 2003.
- KLEINDORFER, P. R.; WIND, Y. The Network imperative: community or contagion. In: KLEINDORFER, P. R.; WIND, Y.; GUNTHER, R. E. *The network challenge: strategy, profit, and risk in an interlinked world*. New Jersey: Pearson, 2009.
- LUI S. S.; LU, Y. Managing the inter-firm cooperation process: exploratory case studies of hong kong architects and contractors. *Asia Pacific Journal of Management*, v. 19, n. 4, p. 502-523, 2002.
- LUI, S. S.; NGO, H. An Action pattern model of inter-firm cooperation. *Journal of Management Studies*, v. 42, n. 6, p. 1123-1153, 2005.
- MARIANO, E. B.; GUERRINI, F. M.; REBELATTO, D. A. N. Análise da relação entre estrutura e desempenho de redes interorganizacionais colaborativas. *Gestão & Produção*, v. 19, n. 3, p. 471-479, 2012.
- MILES, R. E.; SNOW, C. C. Organizations: new concepts for new forms. *California Management Review*, v. 28, n. 3, spring, p. 62-73, 1986.
- NOOTEBOMM, B. *Inter-firm collaboration, learning and networks: an integrated approach*. London: Routledge, 2004.
- PARK, S. H. Managing an interorganizational network: a framework of the institutional mechanism for network control. *Organization Studies*, v. 17, n. 5, p. 795-824, 1996.
- PERROW, C. Small-firms networks. In: NOHRIA, N.; ECCLES, R. G. *Networks and organizations: structure, form, and action*. Cambridge: Harvard University Press, 1992.
- PODOLNY, J. M.; PAGE, K. L. Network forms of organization. *Annual Review of Sociology*, v. 24, p. 57-76, 1998.
- PORTER, M. *Estratégia competitiva*. Rio de Janeiro: Campus, 1986.
- POWELL, W. W. Neither Market, Nor Hierarchy: network forms of organization. *Research in Organizational Behaviour*, v. 12, p. 295-336, 1990.
- PROVAN, K. G.; FISH, A.; SYDOW, J. Interorganizational networks at the network level: a review of the empirical literature on whole networks. *Journal of Management*, v. 33, p. 479-516, 2007.
- PUGH, D. S. *Organization theory: selected readings*. London: Penguin Books, 1997.
- RAAB, J.; KENIS, P. Heading toward a society of networks: empirical developments and theoretical challenges. *Journal of Management Inquiry*, v. 18, p. 198-210, 2009.
- RING, P. S; VAN DE VEN, A. Developmental processes of cooperative interorganizational relationships. *Academy of Management Review*, v. 19, n. 1, p. 90-118, 1994.
- RIO GRANDE DO SUL. Secretaria do Desenvolvimento e dos Assuntos Internacionais. *Redes de cooperação: a força da união*. Porto Alegre: SEDAI, 2009.

- ROMANELLI, E. The evolution of new organizational forms. *Annual Review of Sociology*, v. 17, p. 79-103, 1991.
- ROTH, A. L. et al. Diferenças e inter-relações dos conceitos de governança e gestão de redes horizontais de empresas: contribuições para o campo de estudos. *Revista de Administração (FEA-USP)*, v. 47, n. 1, p. 112-123, 2012.
- THOMPSON, G. F. *Between hierarchies and markets: the logics and limits of network forms of organization*. Oxford: Oxford University Press, 2003.
- THORELLI, H. B. Networks: between Mmarkets and hierarchies. *Strategic Management Journal*, v. 7, p. 37-51, 1986.
- TODEVA, E. *Business networks: strategy and structure*. London: Routledge, 2006.
- VAN NUENEN, M. Beyond boundaries: a cognitive perspective on boundary setting. In: GÖSSLING, T.; OERLEMANS, L.; JANSEN, R. *Inside networks: a process view on multi-organisational partnerships, alliances and networks*. Cheltenham, UK: Edward Elgar Publishing, 2007.
- VERSCHOORE, J. R.; BALESTRIN, A. Outcomes in small-firm networks: a quantitative study in the southern brazilian context. In: JOHANSON, M.; LUNDBERG H. *Network Strategies for Regional Growth*. Houndmills: Basingstoke, UK: Palgrave Macmillan, 2011.
- VOLBERDA, H. W. Toward the flexible form: how to remain vital in hypercompetitive environments. *Organization Science*, v. 7, n. 4, p. 359-374, 1996.
- WEGNER, D.; PADULA, A. D. Quando a cooperação falha: um estudo de caso sobre o fracasso de uma rede interorganizacional. *RAM. Revista de Administração Mackenzie*, v. 13, n. 1, p. 145-171, 2012.
- WILLIAMSON, O. *The economic institutions of capitalism*. New York: The Free Press, 1985.

Submissão: 22/8/2012
Aprovação: 30/3/2014

