

When Network Capabilities Influence Business Survival? A Review

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The objective of this article was to identify and analyze in the management theory the network capabilities that have relevance or are contributory to the business survival. It is known that alliances between companies can be strategic elements for organizations and/or management, used as a means to generate mutual gains and increase competitiveness. However, although alliances produce benefits, having the ability to manage such alliances and/or organizational networks may be more complex for management, as organizational forms are expanded in these organizational configurations. Thus, in order to fulfill the objective of this research, a systematic review of the literature was used to identify the concepts, to delimit the concept of competitiveness and business survival, and to analyze the influences of the network capabilities to the management of companies and in other aspects of the alliances that contribute to organizational survival. The research results show that network capabilities can contribute to organizational competitiveness when increasing efficiency in network management, improving the production, transfer and appropriation of knowledge in learning processes, and also allowing the centrality of the organization in the network, with broad spectrum of vision and network exchanges. In addition, the survival of participating network organizations can be positively influenced by network capabilities due to reduced opportunism and transaction costs in alliances between business partners, as well as minimizing losses in the use of available and/or shared external resources on the network.

Keywords: Network Capabilities; Strategic Alliances; Competitiveness and Business Survival

1. Introduction

The set of determinants that are related to business performance are mainly focused on the influence of internal factors to the organization (entrepreneur and enterprise) and external ones related to the environment (market). In this context, management studies show the potential of relationships and of interorganizational alliances to improve business performance and survival (Bojica & Fuentes, 2012). The actions of the relationship and of the organizational alliances integrate individual (house) organizations to the environment (market), when they seek to promote synergy and symbiosis in different contexts (micro and macro environment). There are studies that affirm that interorganizational relations allow access to resources, markets and technologies (Gulati, Nohria, & Zaheer, 2000; Inkpen & Tsang, 2005; Bojica & Fuentes, 2012), as an important source of competitive advantage (Dyer & Singh, 1998) and to maintain the company's entrepreneurial activities (Ahuja, 2000; Teng, 2007).

Management theory emphasizes business networks as organizational forms (Hakansson & Snehota, 1989; Powell, 1990) with specific strategic assumptions (Zhang & Gregory, 2011; Zhang, Gregory, & Neely, 2016), where it is believed that the organization will have differentiation in terms of benefits in internal results if there are assertive external links with network partners (Nohria & Garcia-Pont, 1991). Therefore, companies use organizational networks as a means to achieve stronger performance, expand markets and provide better solutions to consumers (Koen, 2005). However, the theory shows that for organizations to obtain the expected results from organizational networks, it is necessary to use specific capabilities to execute the routines of access and use of resources and external capabilities (Helfat & Peteraf, 2003; Ritter, Wilkinson, & Johnston, 2004; Walter, Auer, & Ritter, 2006). Thus, the creation and use of organizational networks do not guarantee better business performance, especially in dynamic and competitive markets (Davis & Eisenhardt, 2011). There is theoretical and empirical evidence on the need for network management capabilities in the focal organization to achieve strategic objectives with organizational networks (Foss, 1999). Relationships and alliances depend on specific conditions for organizational performance.

It is observed that network capabilities that help the focal organization to achieve an acceptable level of practice or routine in accessing and using resources in the organizational network, at reliable levels of network functionality (Foss, 1999; Ritter, Wilkinson, & Johnston, 2004; Walter, Auer, & Ritter, 2006; Mitrega, Forkmann, Ramos, & Henneberg, 2012). Thus, the purpose of this research is that these capabilities are relevant to business performance and survival (Dyer & Singh, 1998; Ahuja, 2000; Teng, 2007; Bojica & Fuentes, 2012). However, this research has identified two streams of studies organized in management theory that address network capabilities, and in both does not address the conditions under which network capabilities impact business survival, objectively. The first flow emphasizes network creation and development mechanisms (Anand & Khanna, 2000; Kale, Dyer, & Singh, 2002), and the second one focuses on identifying the constituent elements of network capabilities (Sarkar, Aulakh, And Madrek et al., 2012), but there is a gap in organizational or network conditions in which network capabilities improve organizational survival.

There are a large number of studies dealing with network relations, their concepts and applications, however, it is necessary to organize this previous theory to generate better scientific contributions, fact that the present study proposes to analyze previous studies on network relations, seeking the evidence on the influence of networking capabilities on business survival. For this, the methodological strategy used in this study is the systematic review of the literature, with meta narrative approach (Greenhalgh et al., 2005), whose purpose is to achieve the following objectives: (1) to identify the theoretical concepts of network capabilities presented by management literature; (2) to analyze the dimensions of network capabilities that contribute to organizational survival; and (3) to integrate the results on the dimensions of the network capabilities to the organizational conditions of network performance. These objectives seek to answer the following research questions: When do network capacities influence organizational survival?

Thus, in addressing network capabilities and their influences on the competitiveness and survival of organizations in general, the article contributes to the knowledge about network partner management, which can be the differential for competitive advantage and organizational survival. For this, in addition to this introduction, the article is divided into: (2) the method; (3) the theoretical analysis; (4) the organization of data; and (5) the final considerations.

2. Method

Scientific theories are transitory, not definitive truths (Popper, 2005; Khun, 1970). Thus, there are logical and methodological aspects that allow us to identify whether there is a scientific truth or its refutability (Popper, 2005), whether through scientific revolutions (ruptures) or paradigm shifts (continuity) (Khun, 1970). Thus, when studying a particular scientific subject, we often encounter contradictory (eg Tsai, 2009) or complementary results (Walter *et al.*, 2006). To clarify possible theoretical controversies or to group complementary theoretical results there is a coherent methodological strategy that relies on quality studies to describe, explore and/or explain scientific facts, the Systematic Review of Literature (SRL). SRL is a type of well-defined research strategy focused on identifying, selecting, evaluating and synthesizing the relevant evidence available in previous studies. Therefore, this research adopts SRL as a research strategy to promote a comprehensive, non-biased, replicable review and generate an original contribution.

2.1. The Operationalization of the Systematic Review of Literature

SRL is widely used in management studies (Cook, 1997, Tranfield, Denyer, & Smart, 2003) and, therefore, is used to identify research gaps, generate new evidence in filling gaps, assess the quality of evidence and synthesize them (Zurynski, 2014). In this study, this occurred through qualitative content analysis, used to identify textual material and synthesize important topics and concepts (Santos, & D'Antone, 2014; Cullinane, & Toy, 2000). The question of research was based on the selection of the theoretical data, when an explicit selection technique was used to identify and choose the relevant publications, to critically evaluate and analyze the identified data, and finally to report the pooled results of relevant publications (Zurynski, 2014).

The search for the texts was carried out in the Scopus database, within the theme of network capacities, restricted to texts published in scientific journals, by abdicating textbooks, conferences, seminars and internet articles, widely used in systematic reviews literature (see Wolf, 2008). In addition, only the periodicals of the Administration and Business area were included (see Table 1) and articles classified QUALIS Capes A1 (quadrennium 2013-2016) of the Sucupira Platform were selected. It was decided to limit the research to periodicals of the field of Administration and Business because the term "network capacities" is also used in other areas, such as Computer Science and Computer Science, but refers to different objectives.

Table 1 lists all journals that had the unit of analysis (articles) extracted from the text (Cullinane, & Toy, 2000). The search was performed for the following selected terms: "network capabilities", "partnerships capabilities", "network strategy", "network competence", "alliance capability", "alliance competence", "network management" e "network capability". The database presented a high volume of articles of low relevance and, after preliminary analysis, it was decided to select the articles by number of citations. The first hundred articles were selected, where the first one had 1,934 citations and the hundredth had 46 citations.

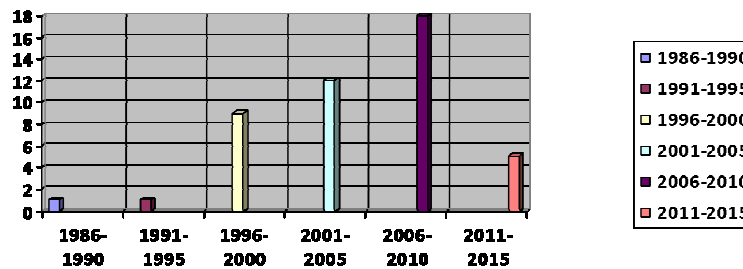
Table 1: Number of Articles per Periodical

Periodical	Number of Articles	Relative Percentage
<i>Strategic Management Journal</i>	9	19,56%
<i>Industrial Marketing Management</i>	8	17,39%
<i>Research Policy</i>	3	6,52%
<i>Journal of Public Administration Research and Theory</i>	3	6,52%
<i>Journal of Business Research</i>	3	6,52%
<i>Journal of Business Venturing</i>	2	4,34%
<i>Journal of Small Business Management</i>	2	4,34%
<i>Academy of Management Journal</i>	2	4,34%
<i>International Journal of Project Management</i>	1	2,17%
<i>British Journal of Management</i>	1	2,17%
<i>International Small Business Journal</i>	1	2,17%
<i>School of Management and Governance Working Paper</i>	1	2,17%
<i>European Journal of Innovation Management</i>	1	2,17%
<i>Small Business Economics</i>	1	2,17%
<i>Organization Studies</i>	1	2,17%
<i>Long Range Planning Journal</i>	1	2,17%
<i>R&D Management</i>	1	2,17%
<i>Journal of Business and Industrial Marketing</i>	1	2,17%
<i>Journal of Marketing</i>	1	2,17%
<i>Marketing Theory</i>	1	2,17%
<i>Academy of Management Perspectives</i>	1	2,17%
<i>Journal of Management Studies</i>	1	2,17%

Search: Elaborated by the authors based on the research.

In the selection of articles, the analysis began with the reading of the title and the abstract, for complete texts in English, without temporal restriction. Figure 1 presents the purified view of the search by classifying the articles by their publication dates, grouped in quinquennial, in order to present a chronological view of the reviewed articles.

Figure 1: Line Chart by Date of Articles



Search: Elaborated by the authors based on the research.

The titles and abstracts of the texts were examined to identify if they approached the network capacities and, when only the reading of the summary did not allow to evaluate if it was related to the scope of the study, the introduction, the review of the literature and the final considerations. It should be emphasized that the evaluation was composed of the identification of the main points addressed by the authors of the studies and organized into three groups of macro approaches: elements of the network capabilities, analysis of the variables that compose them and their effects. At this stage of the research, 46 articles were selected for review, classified and analyzed according to the protocol constructed by the authors, as presented below.

2.1.2. Content Classification

The research protocol was developed to analyze the selected articles, composed of the coding categories: problem and / or hypothesis, objectives, method used, theoretical delimitation, method, desired solutions, type of industry, whether theoretical or empirical research, suggestions for future research, network capabilities addressed, influence of network capabilities on the business (if applicable) and observations deemed necessary by the analyst of the text - reader researcher. In addition, in the same spreadsheet were coded year, title, authors, impact factor and keywords of the analyzed works. After the construction of the decoding scheme of the articles and coding of the data to be extracted, the selected articles were divided into three parts and analyzed by three researchers. At the end of the coding process, the researchers compared their results and resolved any doubts that emerged during the decoding process, when the research propositions were used to define the categories of analysis that were stuck during the decoding process by human decoders (researchers), instead of softwares.

Finally, it is stated that the joint work led to the classification of the different studies in a similar way by the researchers involved and, in this research, it is sought to give greater transparency on the selection of content and the decoding process, so that the efforts can be replicates (Santos, & D'Antone, 2014). Chart 1 highlights the classification of articles by research method used and this information is important to identify the methods that are being used by the academic community, so that future research on this topic use methodologies consistent with current literature.

Chart 1: Search Classification

Articles	Methods Used
Thorelli, 1986; Moller, 1999; Kash, 2000; Kogut, 2000; Gulati, 2000; Meier, 2001; Freel, 2002; Ritter, 2002; Moller, 2002; Moller, 2004; Moller, 2006; Shipilov, 2006; Street, 2007; Moller, 2007; Swaminathan, 2009; Wittmann, 2009; Moller, 2010; Rampersada, 2010; Ospina, 2010; Yang, 2011; Heimeriks, 2015.	Theoretical
Thorelli, 1986; Larson, 1991; Gomes-Casseres, 1997; Duysters, 1999; Agranoff, 1999; Ritter, 1999; Anand, 2000; Rothaerm, 2001; Meier, 2001; Barnir, 2002; Freel, 2002; Ritter, 2002; Kale, 2002; Moller, 2003; Draulans, 2003; Ritter, 2003; Ritter, 2004; Shipilov, 2006; Walter, 2006; Hagedoorn, 2006; Dittrich, 2007; Kale, 2007; Capaldo, 2007; Ojasalo, 2008; Schreiner, 2008; Swaminathan, 2009; Kale, 2009; Ozcan, 2009; Wittmann, 2009; Kampersada, 2010; Moller, 2010; Carranza, 2010; Yang, 2011; Tang, 2011; Paquin, 2013; Kohtamaki, 2013; Heimeriks, 2015	Empirical

Search: Elaborated by the authors based on the research.

The previous chart (Chart 1) demonstrates that there is a great deal of theoretical articles on this research topic and that they are constructed in the same period of time evolution of the empirical articles (1986-2015). Another relevant aspect for this analysis is to know which business area the empirical studies are applied to. The following describes the types of companies that were analyzed by the previous studies, since knowing the type of company, identifies the influence of the network capabilities in each business segment (Chart 2).

Chart 2: Classification of Articles by Type of Business

Articles	Type of Business
Ojasalo, 2008	Technology SMEs
Kohtamaki, 2013	Manufacturing Company
Dittrich, 2007; Duysters, 1999; Kale, 2009; Moller, 2003; Ozcan, 2009; Schreiner, 2008; Gomes-Casseres, 1997	Technology Company
Tang, 2011; Barnir, 2002	SMEs from different sectors

Articles	Type of Business
Paquin, 2013; Kale, 2002; Draulans, 2003; Kale, 2007; Ritter, 2004; Larson, 1991; Anand, 2000	Several companies from various sectors
Hagedoorn, 2006; Rothaerm, 2001	Biochemical and Pharmaceutical Industry
Agranoff, 1999	Public companies
Ritter, 2003; Ritter, 1999; Kogut, 2000	Engineering Companies
Capaldo, 2007	Furniture industry
Walter, 2006	Spin-offs

Search: Elaborated by the authors based on the research.

Thus, after identifying the practical and operational focus of the studies on the capabilities of networks and their industries, the results are analyzed from the data identified and extracted from the reviewed articles, as discussed below.

3. Data Analysis and Results

In this topic of the study the conceptual framework constructed from the literature review is presented, it presents the concepts of competitiveness and organizational survival that served as basis for the realization of the cut in the analyzed theory, identifying the elements of the management that influence management, competitiveness and organizational survival, and, finally, a future research agenda is proposed.

3.1. Conceptual Chart

The results of the analyzed articles have several elements to highlight, but the variety of concepts for the term network capacity is the starting point. There is a huge variety of meanings for the term in the area of management and encompass many types of relationships where they conclude that alliances and organizational networks are part of a management's success and that the impacts of management capabilities are relevant to the business. Chart 3 summarizes the grouping of network capabilities concepts, where 24 articles present the concept and 22 other articles do not present it clearly.

Chart 3: Conceptual Chart of Network Capabilities

Concept	Author	Year
Network competence is related to participation in the creation, development and use of network, managing the economic resources and relationships with the partners, capable of generating synchrony.	Thomas Ritter	1999
Network management competency is the management of the network's core set of resources, existing complementary assets and the ability to learn, which include knowledge and skills, so that skills and / or abilities are coordinated.	Don E. Kash; Robert W. Rycroft	2000
The capacity of network management is the coordination of the organizational structure in a competitive positioning, using inimitable resources and capabilities, in terms of the costs and the dynamics of constraints and benefits.	Ranjay Gulati, Nitin Nohria e Akbar Zaheer	2000
Establish organizational links between organizations for the expansion of the market, sharing of costs, technologies, knowledge, co-development, among others.	Prashant Kale; Jeffrey H. Dyer; Harbir Singh	2002
Alliance capacity are relationships between organizations for the achievement of joint objectives or the use of resources among themselves for the achievement of particular objectives.	Anat BarNir; Ken A. Smith	2002
Alliance Competency is a bidirectional construction where the specific tasks of relationships are related, involving: initiating, expanding, and coordinating all sides to take on later tasks such as planning, organization, personnel, and control.	Thomas Ritter; Ian F. Wilkinson; Wesley J. Johnston	2002
Network capabilities are characterized by network organizational	Kristian Möller, Arto Rajala,	2002

Concept	Author	Year
relationship management, such as reciprocity between partners in sharing value systems, defining and coordinating responsibilities of members.	Senja Svahn	
Network competency part two basic elements, execution of tasks and qualifications. Regarding the first one, it is related to the beginning of the partnership relationship involving exchanges of knowledge and other resources, coordination, division of management tasks, planning of new engagements, organization of contributions and of specific partners, personnel for management and development and finally control. And the qualifications are related to the skills of network management qualifications, technical qualification, social qualifications and lastly the degree of network competence as control of network management processes.	Thomas Ritter, Hans Georg Gemündenb	2003
Network capacity is the coordination of resources and alignment of objectives such as partners, relational skills for building relationships with partners, knowledge of partners for greater effectiveness of objectives and strategies, and effective internal communication for effective coordination and better control of tasks.	Achim Walter, Michael Auer e Thomas Ritter	2006
Network competencies consist of routines specifically dedicated to the transfer of interorganizational knowledge, sharing of experiences.	Antonio Capaldo	2007
The concepts of network and alliances come together when linked to the achievement of organizational objectives, as they deal with the integration of one or more organizations to accomplish objectives that they would probably not be able to achieve alone due to lack of resources.	Christopher T. Street and Ann-Frances Cameron	2007
Network competency involves specific tasks of relationship, initiation, exchange or sharing, coordination, inter-relational tasks, planning, organization, personnel, control, specialized qualifications and social qualifications.	Jukka Ojasalo	2008
Network competency is capacity building bonds between interdependent companies aimed at increasing the portfolio and further increasing performance by the accumulation of organizational ties.	Pinar Ozcan, Kathleen M. Eisenhardt	2009
Alliances management capacity is a building that requires skills that refer to initiation, such as initiating alliances that do not compete with others within the same portfolio, starting with an appropriate and effective selection of the partners, establishing adequate mechanisms for the level and application of the alliances, and, finally, coordination of activities and knowledge flows.	Melanie Schreiner, Prashant Kale, e Daniel Corsten	2008
Network competency is the management of relatively loose groups, in organizations that can be members of government, university, and industry, continually collaborating to achieve common goals.	Giselle Rampersad a, Pascale Quester, Indrit Troshani	2010
Network capabilities are dependent on factors such as knowledge, experience, and management techniques ranging from choosing the right partners to how to manage the joint resources.	Johan Draulans, Ard-Pieter deMan e Henk W. Volberda	2013
Network Capabilities is conceptualized as the integration of organizational experiences aligned to the mechanisms of routines and capabilities when mutually connected.	Koen Heimeriks e Geert Duysters	2015

Search: Elaborated by the authors based on this research.

As for the concept of network capabilities, it has been noticed that in the last three decades there has been evolution and expansion of the concept, migrating from alliance management to all forms of connection management and links with different actors in relationship networks. Although the emphasis or approach of authors who conceptualize network capabilities is different, in a general perspective, they all relate to the concept similar or complementary elements in the context of multi-actor relationship management around complementary goals. Within the objectives of complementarity the exchange of knowledge, raw materials, joint innovation, development of production together, introduction to the new market, among others, always aiming to increase the efficiency of their

individual tasks (Heimeriks *et al.*, 2015; Kale *et al.*, 2002; Draulans *et al.*, 2013; Anand *et al.*, 2000; Moller *et al.*, 2006; Ritter *et al.*, 2003; Capaldo 2007; Kash *et al.*, 2000; Dittrich *et al.*, 2007; Hagedoorn *et al.*, 2006; Barnir *et al.* 2002; Hagedoorn *et al.*, 2000; Ojasalo, 2008; Rampersada *et al.*, 2010; Ritter *et al.* 2002; Street *et al.*, 2007; Dittrich *et al.*, 2007). And this can generate a greater power of competitiveness for the collective of the alliance (network) or for the companies individually.

The most comprehensive concept, and according to the individual concepts of the authors studied, is a cooperation between organizations that aims, first of all, to meet the individual objectives of the focal organization and, later, the joint objectives, through exchanges or sharing of resources and capabilities. Complementarily, there are authors that focus more on the concept of alliance, as can be seen in table 3, as type of relations and according to specific objectives between connected parts (Moller, & Rajala, 2007; Moller, & Svahn, 2006; Moller *et al.*, 2002; Ritter, 1999; Walter *et al.*, 2006).

Thus, the conceptual synthesis constructed and adopted by this study is: “network capacity is the attribute that the organization must have in order to manage the creation, maintenance, development and use of strategic alliance, in addition to closing it if it is required. The relationships can have as objectives the exchange of experience, the joint innovation, the sharing of resources, be it technological or know how, the definition of managerial tasks within the network, among others, and is expected to have fundamental value for the business. This should be achieved by building relationships between enterprises for mutual development purposes and benefits for both parties whose network capacities should drive the production and absorption of learning, the use of all the resources made available by the actors involved in the as an element of the company's strategy and an impact factor in the competitiveness and survival of the organization”.

3.2. Competitiveness and Business Survival

The concept of organizational competitiveness has a definition in the surroundings of the productive and commercial system, as an opportunity for survival or growth in new or competitive markets, under two strands: competitiveness seen as market performance or as productive efficiency (Morais & Luz, 2010). Thus, it has long been known that the global challenge of companies lies in the ability to build relationships around “new technologies, new markets and new methods of management or the redesign of business processes and total integration of value chains of the company, customers and suppliers” (Mota, 1995, p.12), as a competitive and sustainable character in the short term. Therefore, there is no novelty in this, but the novelty is in understanding how the capabilities of networks are or can be inserted and contextualized in this conjuncture of competitiveness and survival of companies. It is necessary to analyze if the network capacities are elements favorable or promoters of both types of competitive forces and contribute to the survival of the companies in environments of intensity of relationships.

It is also worth noting that business survival rates depend on the stage of development and the individual attributes of the company (Agarwal & Gort, 1996). In general, the attributes of the company are related to the internal environment of the business (microenvironment), but are not limited to this, since there are external dimensions (macro environment) that contribute to the reduction or increase of the company's survival (Araújo, Morais & Pandolfi, 2019). There are variations in the effect of the type of activity on performance (technology, consultancy, trade, health and biotechnology, and others) and the economic size of the organization (types in Brazil: EIRELI, LTDA, S/A; and size: small, medium, large) (Agarwal, 1996; Agarwal, 1997; Gimeno, Folta, Cooper, & Woo, 1997). And, the management theory emphasizes that the organizational orientation to the relationship and the alliance in several economic sectors (e.g. ver Street, & Cameron, 2007; Copaldo 2007; Lee, Lee, & Pennings, 2001; Mahmood, Zhu, & Zajac, 2011), are mechanisms to stimulate the company's competitiveness (Kothandaraman, & Wilson, 2001).

Therefore, when analyzing the competitive character of the company, be it in markets or production, and its survival, it is noticed that an efficient network of partners can represent in competitive differential and the survival of the business. This is incorporated by network theory from the studies of Hakansson & Snehota (1989) and Powell (1990), where these authors state that

organizational networks have specific strategic objectives (Zhang & Gregory, 2011; Zhang, Gregory & Neely, 2016) and it is expected that there will be benefits from external links with network partners (Nohria & Garcia-Pont, 1991). Although this has been identified in theory, the way or when it happens explicitly and deliberately by the company that intends to integrate or form an organizational network, it is not clear when the network management capacity impacts the competitiveness and survival of the business. Thus, the next topic of this study highlights the elements of the network capacities that influence the management of the networked companies and what the identified results that can represent in favor of the competitiveness and the survival of the business, resulting from the management of the network, both present in previous studies.

3.3. Influence of Network Management on Management, Competitiveness and Survival

This study identifies that companies that own and utilize network capabilities in network management or alliances can have more harmony in network management and participation in strategic alliances. It is network capabilities that elevate the strategic management level of the relationship in alliances or network, allowing organizations to achieve the goals with the network or organizational alliances through interaction with their stakeholders. It should be emphasized that a network or the set of alliances between companies allows the participating organizations to be connected also to the forms of management, the innovations emerging between the players and the new processes, so that the defendants are better served if there is symbiosis in the network (well managed), a fact that can promote competitiveness in the market environment in which it is inserted.

In this context, it is identified in the literature review that team members can learn more quickly by working together as a coherent unit (Yang *et al.*, 2011), through the management of joint work (Kohtamaki *et al.*, 2013), the integration between different units (Kohtamaki *et al.*, 2013, Draulans *et al.*, 2003) and learning sharing (Kohtamaki *et al.*, 2013, Moller *et al.*, 2006, Draulans *et al.* 2003, Kash *et al.*, 2000), so that it is possible to improve both the productive efficiency and market share. Network capabilities can be the result of experiences in organizational alliances that the company and its agents have previously had and enabled them to implement new business partnerships. Thus, it is possible that the more relationships and network interactions a company has, the more likely it will be to achieve better competitive and survival performance in the long run.

It is observed that the company in network or in alliances acquires other resources and capabilities that will impact in the acquisition and improvement of its performance, but only when it has levels of network capacities capable of promoting the development of the strategic networks that it manages, otherwise, the network may just be the medium for a flow of disordered and conflicting resources. Therefore, network competencies allow companies to use their resources in an efficient manner, with a greater set of solutions for the contingencies that are demanded during their network relationship processes, either from the experience acquired in their daily management of partnerships, relationships, interaction, or, mainly, the learning that it extracted from the other organizations that make up its network (Wittmann *et al.*, 2009). Therefore, the maximization of efficiency in the use of resources occurs because the company will have the ability to access and use other resources external to its own, making it possible, as an example, to improve and adapt to changes in the company's business context, higher quality and less effort, to access the markets of its partners, among others.

On the other hand, it is worth noting that in order to fully exploit the knowledge coming from the network, actions must be taken to develop network capability, to build a joint agenda and to communicate fluently among network players (Moller, 2010; In order to achieve this, it is important to note that, in the case of network managers, they need to be synchronized with the cultural, organizational, organizational, environments around the project in the network (Yang *et al.*, 2011). It is identified that learning about the orchestration of organizational networks requires an accumulation of resources and experiences, such as databases of business resources, regional knowledge, collaborative know-how,

knowing how to identify the right partners and how to work with them (Ospina *et al.*, 2010), through the promotion of decision-making between autonomous entities with different aspirations (Ospina *et al.*, 2010) to grow together (Ozcan *et al.*, 2009; Larson, 1991). Therefore, in order to achieve these basic objectives with the organizational network, the management company must always be in contact with the network components so that they can manage all the learning that the network can promote, integrate complementary knowledge of different partners and appropriate new ones knowledge gained during the execution of the project, so that it maximizes the efficiency in the use of the resources of the company so that it increases its competitiveness as a result of its network action.

Therefore, if the objective of the companies to form networks with alliances between business partners (Kale *et al.*, 2007; Draulans *et al.*, 2003; Kale *et al.*, 2002; Meier *et al.*, 2001; Agranoff *et al.*, 1999; Duysters *et al.*, 1999) and other stakeholders in general (Moller *et al.*, 1999) is value creation (Anand *et al.*, 2000), networking necessarily needs to be on the priority list and should not be considered as an auxiliary management activity (Ritter *et al.*, 2003), but a strategy of the organization (Hagedoorn *et al.*, 2006; Moller *et al.*, 2002). Thus, this study contributes to the identification of several aspects, which are relevant to the understanding and explanation of the nature of network capacity management.

Alliances are widely diffused in today's business landscape, in the face of increasing competition and technological development (Kale *et al.*, 2009). Kohtamaki *et al.* (2013) argue that the existence of network capacities increases the non-linear impact that supply has on sales growth. IBM is an example of a company that has developed into networks that it has formed with its strategic partners, transforming itself from hardware manufacturing company into a global service provider (Ospina *et al.*, 2010). It is possible to say that companies are deeply interrelated through their mutual dependence on resources and competencies and the positions in the network and the roles of the companies in the network depend on the relationships they have with other companies and their knowledge on how to manage multi environments (Moller *et al.*, 1999). In addition, the elements of competitive advantage and survival of the company as a result of the company's participation in organizational networks seem to be more related to the management capacity of the network than to the action "being in an organizational network".

Considering organizational networks as a significant source of sustainable success and accessibility for companies in networks in the market (Street *et al.*, 2007), it can be said that this is an essential organizational platform in which all other aspects of the company can become more strategic, flexible and facilitate the rapid adaptation to the emergence of innovation patterns (Ritter *et al.*, 2004; Freel, 2002; Ritter *et al.*, 2002; Kash *et al.*, 2000). It is worth mentioning that network capabilities depend on the position and functions of the actor on the network and their previous experiences (Moller, 2010) and the actions of a network orchestrator change in response to a growing set of dilemmas arising from the need to generate and manage the work value, which is one of the network capabilities (Paquin *et al.*, 2013). Both the experience and the capabilities of the alliance are important antecedents of the alliance's performance (Heimeriks *et al.*, 2015; Swaminathan *et al.*, 2009) and, consequently, it is believed that companies with more experience in alliances and investing in alliance, have higher success rates (Kale *et al.*, 2002), therefore, will have greater competitiveness.

It is also worth noting that the success of the alliance is influenced by a combination of resources (alliance skills, idiosyncratic resources, and cooperation resulting from relational resources) that affect positional advantage in a network and, in turn, its success (Wittmann *et al.*, 2009; Walter *et al.*, 2006; Ritter *et al.*, 2003). The strategic alliance resources of the companies, expressed through their centralized alliance and their efficiency in the choice of partners, have the predictable power expected in relation to the probability of a future formation of partnership by these companies (Hagedoorn *et al.*, 2006; Moller *et al.*, 2002). No factor of the organization itself can be disregarded in the search for good network capability (Ritter, 1999). In this way, the specific objectives of analyzing the dimensions of the network capabilities that contribute to organizational survival and of integrating the results on the dimensions of the network capacities and the organizational conditions of performance are achieved, as shown in the following chart.

Chart 4: Influence of Network Capabilities on Business Survival

When	Result
Raises the level of alliance and network management	Facilitates achievement of objectives through interaction that produces effective results.
Invests in dedicated role with partners	Improves the level of partnerships and minimizes risks with the opportunism of partners.
Creates or transfers knowledge about new forms of management, innovation in processes/products/services	Broad productive (efficiency) and market (maintenance/expansion/mutation) opportunities.
Increase the pace or share learning	Improves productive efficiency (do better) and market share (better choices).
Achieve excellence in finding good partners	Minimize transaction costs, better share the burden and increase success in the long run (survival).
Creates barriers to the disordered flow of resources and minimizes conflicts, both resulting from the effects of the network	Maximizes time and capital gains with the best use of resources and capabilities, thereby improving efficiency and minimizing short-term survival risks by creating a barrier to short-term resource dumping.
Occupy a central position in the network or alliance	Access more and better partner resources connected directly to the hub, without dependence on third parties, and improves the productive efficiency (do better) and market share (better choices).
Manage learning	Improves efficiency through the integration of complementary knowledge and the appropriation of new knowledge.
Access and use external resources	Improves and enhances production due to access to internally unavailable resources and promotes adaptation on the market by modifying or reconfiguring products.

Search: Elaborated by the authors based on this research.

Thus, in the same way that an organization's capacity to develop alliances has an important contribution to increase the success of the alliance (Ozcan *et al.*, 2009; Draulans *et al.*, 2003), it is identified that these same capabilities contribute significantly to the competitiveness and survival of companies, especially in contexts of scarcity and resource dependence. Two other critical elements for network success are trust and alliance learning, because in the first case participants should engage in trustworthy practices such as keeping promises, frankness, and integrity (Rampersada *et al.*, 2010; Larson, 1991), while learning allows managers to translate resources into results more efficiently (Kale *et al.*, 2007; Meier *et al.*, 2001), a fact that reflects on the success of network management and thus increases the chances of survival from the company. Therefore, it is identified that network capabilities contribute to organizational survival and allow organizations to achieve superior performance and improve performance, as a result of well-managed networks.

3.4. Research Agenda

The construction of the research agenda is due to the identification and collection of suggestions of the revised works, besides the own contribution of this analysis. To organize the findings on future research, the themes were grouped in two ways: thematic and temporal. The suggestions of future studies by interest within the same theme or similar, in the time interval were grouped. The results of the analyzes allow us to state that, in the studies evaluated, there were three orientations for the research agenda: interests in continuing studies on topics (deepening), presenting new inquiries and propositions (evolution) and/or simply comparing different business contexts of the already researched (contingencies). Thus, different authors and epochs suggest similar future research, which may mean that research has obtained similar results and understandings throughout the evolution of the field, but there are also points not clarified or solved in the theory of network capabilities, especially in specific areas such as the case of the contribution of network capabilities to competitiveness and business survival.

Next, we present the emergence map of the literature review, organized according to the research propositions the time period they were published, where 19 articles of the sample analyzed in this research do not point or suggest propositions for future studies. In this way, there is a need to investigate the individual elements that are added to the companies that seek to expand their network capacities and, in addition, to identify the differences in the impact of network capabilities for small and large companies (1997- 2008). Among the elements, the coordination, the structure, the life cycle, the investments and the costs, the attraction and rotation of partners, dynamic capacity development (Ritter, 2004; Ojasalo, 2008), in specific typologies of networks.

It is also necessary to identify the responsibilities and the impact that can be caused by the managers of the companies in the network, and how the capacity of networks is linked to the strategy of the company (1997-2010) (Gulati, 1995; Jones *et al.*, 1997; Ritter, 2003; Dittrich, 2007; Ojasalo, 2008). Another interest in future research is to investigate possible types of organization of organizational networks and how they behave (1999 - 2008) (Moller, 2004; Street, 2007). In addition, it is necessary to identify the competences that exist within the network, what the characteristics of each competency and what the individual influences for the network management. Besides that, it is important to conduct studies similar to those already existing in other sectors, places, cultural patterns or even with the number of different samples (2001 - 2011) (Kumar *et al.*, 1993; Sarkar *et al.*, 2001; Wu e Cavusgil, 2006; Moller, 2010). For example, individuals, organizations, comparative studies among networks, position and role of varied actors. Although network activities and their effects share similarities across all societies (Child and Rodrigues, 2005), replication in regions/countries helps to improve the generalization of the conceptual chart and conclusions (Tang, 2011).

Finally, there is interest in investigating what happens with network relationships over time and what the individual influences of each component (2002 - 2015). For example, identifying the importance and effects of network capabilities in combination with other organizational and how they align with the service solution and the strategies (Kohtamaki, 2013), the governance of networks in strategy, the demands (unity-diversity) (Sazcarranza, 2010), in addition to network orchestration and its evolutions (Paquin, 2013).

Chart 5: Research Agenda

Level	Focus	Example of Questions
Individuals	Managers	How do personal relationships, trust and reputation impact different types of network? What are the variables that influence the learning that develops the network capabilities? When do managers decide to protect themselves from environmental influences and when do they decide to exploit them? What conditions lead a manager to dedicate resources to network management?
Company	Management Structure	When and in what network types should the hierarchy be avoided or minimized? How to proceed with authority and coordination in network operation? How should the hierarchy be addressed to maximize the efficiency and effectiveness of the network? What is the impact of management as the degree of network hierarchy decreases?
	Small business	How do small firms derive value from external relationships and what are the main risks involved in engaging in external relations? How do companies identify, assimilate and apply knowledge in alliances? What and how is the contribution of specific actors (stakeholders) to individual performance?
	Internationalization	What is the role of network capability in the internationalization of a company?
	Performance	What are the measures of the impact of network capabilities on company performance?
	Technology	What is the relationship between a company's capabilities and the degree of technological entanglement?
Diads	Similarities/differences	What and how do network capabilities impact small and large enterprises? What is the effect of network partners on the strategic change of the company?
Networks	Characteristics	What are the characteristics related to the management/use of different networks, particularly the comparison between international and cross-cultural networks?

Level	Focus	Example of Questions
		What is the effect of restructuring networks and under what conditions do they promote the adaptation or strangulation of the enterprise? How do relations arising from restructuring develop over time? What is the impact of network capacities on the performance of production, adaptation and innovation networks? What is the relevance of different cultural patterns in the sharing of knowledge and creation of multicultural business networks? What is the impact of efficient service to customer needs for network success?

Search: Elaborated by the authors based on this research.

This chart is able to demonstrate, at least in part, the future of research on network capabilities with a focus on competitiveness and organizational survival, especially as regards its impacts, components and link to the management of individual companies, such as the network itself.

4. Final Considerations

Most corporations operating in competitive markets use organizational networks as a strategy to increase results and reduce costs. Based on this principle, this research aimed to understand when network capabilities act in competitiveness and business survival. For this, a systematic review of literature (SRL) has been used to define the concept used in theory, a component that reflects the understanding of networks as complex relationships that are ambiguous and involve specific tasks, with predetermined goals and shared responsibilities.

In general, interorganizational integration, through networks, is directly linked to the need for complementary resources, essential for the success of the network and determining the individual performance of the organizations that are part of the network. It was identified in the results that the network capabilities influence the results of the management of the companies, that can become more harmonious in the management and participation in strategic alliances. To do this, individuals must acquire the skills to work together, manage shared jobs, integrate knowledge and develop learning in order to use resources efficiently. However, there must be resources and experiences involved in this process, allowing the adjacent growth of the entire network with the objective of creating and adding value to the companies participating in the alliance.

This study identifies that the increase of the business alliances is due to the panorama of increasing competition and technological development in the global market. Because companies are deeply connected through their bilateral subordination of resources, the formations of networks depend on the links they need to each other. The network is the organizational platform essential for flexible strategies that facilitate rapid adaptation to the emergence of several new market standards (Ritter et al., 2004; Freel, 2002; Ritter et al., 2002; Kash et al., 2000). Thus, network capabilities depend on the position and function that the company occupies in the alliance, so the experience in managing organizational networks improves the chances of success in forming new strategic alliances, since managers will be able to translate resources into results, fact that leads the organization to longevity and competitiveness.

This study contributes to the organization of the theory that addresses network capabilities, whose analysis is in the role of network management capabilities for organizational survival and competitiveness. It is noted that there are contributions in identifying the concept for the term network capabilities, verifying the strategic positioning of network capacities for organizations that operate in organizational networks, and highlighting the importance of network experience as a relevant attribute for network management. Network capabilities act on corporate alliances as links that strengthen and maximize competitiveness, contribute to business survival, and are a strategic differential and resource amplifier. In addition, this study allows managers of companies of different sizes and segments to

identify the relevance of building business networks due to the positive impacts of successful networks on the competitiveness and survival of organizations.

Regarding the limitations of the research, the empirical analysis for the verification of network capacities in business segments and parts of business, where the results could be verified in companies with or without network capacity, in alliances. Another aspect would be to study the network capabilities from the level of business maturity and the network capacity itself to the survival of the company as determinants of its development and growth sustainably. Future research could also verify the impact of network capabilities on meeting individual strategic planning, i.e., changes strategic aggressiveness, strategic cycle time, and so on. This research is theoretical, therefore, the validation of the findings in case studies and/or field surveys could measure individual performance and network management.

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