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Understanding organizational change for alliancing

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Abstract

Purpose – The purpose of this paper is to examine an organization's operational alignment in the process of alliance formation.

Design/methodology/approach – A literature study was conducted on the strategic importance of assessing and aligning organizations' operations for alliancing. Furthermore, an instrumental case study was conducted to provide insight in the degree of operational alignment required for a maritime organization to form a service alliance.

Findings – Managers indicate a complex set of organizational capabilities required for improving operating process to successfully execute their alliance strategy. Two improvement trajectories were found to be used by alliance managers for aligning operations with alliance strategy: development of a corporate alliance infrastructure, and nurturing a collaborative business culture.

Research limitations/implications – The research is limited to one public organization establishing a vertical service alliance with one of its suppliers.

Originality/value – The paper introduces a new conceptual model of the alliance formation process, addressing the cyclical character of the pre-formation stage in which intra- and interorganizational management considerations alternate.

Keywords Organizational change, Alliance management, Alliance capability, Alliance formation, Business-to-business cooperation

Paper type Research paper

1. Introduction

The need of organizations to invest in (supply chain) cooperation has increased over the past decade, in particular in knowledge-intensive industries (Boje, 1991). Arguments include the extended lifetime of complex technological systems and decreased budgets. This makes supply chain players more than ever depending on each other's knowledge to optimize maintenance to maximize system availability and minimize total costs of ownership. Interorganizational cooperation goes by many names, ranging from pure transactional exchanges as simple, discrete, one-time events, to highly relational new organizational forms such as networks or joint ventures (Kale and Puranam, 2013; Geyskens *et al.*, 2006). Theoretical perspectives as provided by interorganizational cooperation theory (Oliver, 1991; Jones and Lichtenstein, 2008) and alliance theory (Dyer *et al.*, 2001), or by the extended resource-based view (eRBV) (Caldwell and Howard, 2010), offer conceptual foundations for interorganizational cooperation.

While alliances proliferate, little is known of whether and how they work in practice. Hence, this paper focuses on this form of interorganizational cooperation. With an alliance, two independent organizations join forces with the intention of increasing the organizations' strategic value by means of reinforcing or complementing each other's critical capabilities for an extended period of time (Nag *et al.*, 2007; Kleemann and Essig, 2013). The potential of an alliance strategy is believed to be considerable: if implemented correctly, it can dramatically improve an organization's market position or public performance (Parker and Van Alstyne, 2005). As such, it becomes important for an organization to understand how it can improve its overall alliance performance.

This, in combination with the high alliance failure rate (Lowe *et al.*, 2016) triggered numerous alliance researchers to explore critical factors influencing alliance performance. Scholars have focused in particular on the interorganizational relationship level, providing a vast amount of literature in which among other things trust, communication, cultural compatibility, and balance of power and control emerged as pivotal factors affecting performance (Lunnan and Haugland, 2008; Kale *et al.*, 2002; Arino *et al.*, 2001). Though, considering the organizations involved, it is critical to understand how the intraorganizational managerial processes, routines, tools, and mechanisms underlying affect the interorganizational level performance (Ireland *et al.*, 2002). Studies exploring the intraorganizational level addressed the concept of alliance capability to explain the difference between organizations' alliance management success. They identified specific firm characteristics and studied rare, valuable, and difficult to imitate resources at the organizational level to explain performance difference between organizations' alliance portfolios. These studies in particular underscore the importance of having alliance experience to realize potential learning effects that might enhance alliance performance, and as such stress the importance of underlying management techniques and mechanism referring to, e.g. the creation of a dedicated alliance function and an open and interactive business culture to gather, generalize, institutionalize, and disperse knowledge about alliance management (Clegg *et al.*, 2002; Kale and Singh, 2009; Draulans *et al.*, 2003). This literature contributes to the picture that most important for alliance success is the skill of alliance partners in managing alliances (Draulans *et al.*, 2003). This skill or alliance competence – referring to the organizational ability for finding, developing and managing alliances – has a direct positive effect on the success of an alliance (Lambe *et al.*, 2002).

However, the contrast between studies on alliance capability focusing particularly on developing alliance knowledge on one hand, and internal learning processes on alliance management on the other hand is striking (Draulans *et al.*, 2003). With the latter processes, some even assume alliance capability to be a proxy for alliance experience (Kale *et al.*, 2002). Internal learning processes may be an important practice in which most organizations lack alliance experience (Gulati *et al.*, 2012).

The notion of alliance capability is rooted in theoretical perspectives that approach the subject form knowledge and integration issues, such as the competence-based view of the firm, the learning organization, absorptive capacity, and the knowledge-based theory of the firm (Sluyts *et al.*, 2010). Consequently, the examination of the organization as a complex transformation system – that undertakes an alliance as organizational change to survive and prosper in the future – came almost irretrievably into oblivion. Little research attention has been devoted so far to exploring from an organizational change perspective organizations' way of working and necessary reorganization for successful alliance performance. In addition, since in general there is within organizations insufficient alliance management capacity available (Mamavi *et al.*, 2015), we argue that too little is known about necessary modifications to organizational design and capabilities for organizational change in order to become effective in meeting the alliance objectives. This contributed to the study's rationale to explore the organizational practice of implementing an alliance strategy as a strategic reorientation. We are interested in learning more of organizational competencies necessary for an organization's functioning to the alliance strategic need.

The paper is structured as follows. Section 1 introduces the concept of strategic alliances, organizational change/ alignment, and the theoretical gap this paper is addressing. Section 2 reviews alliance management literature and discusses organizational aspects to be considered when assessing an organization system's current performance in relation to its participation in alliance formation. Section 3 describes the empirical research

performed, followed by Section 4 which discusses the findings regarding an organization's alliance implementation issues and their causes to be addressed by organizational change management.

The main contribution of this research to scholarly literature is to explore strategic alliance performance by connecting organizational change management and alliance management literature. These two streams tend to be addressed as stand-alone areas, but according to our knowledge they have not yet been combined in alliance literature. By insights given into organizations' way of organizing work and required changes, this paper contributes to the emerging literature on alliance performance management, and helps to explain why some alliances form at a slow pace or even fail.

2. A review of alliance performance management

2.1 Rethinking strategy: the role of interorganizational relationships (IORs)

Interorganizational cooperation has been a well-established phenomenon for several decades, but there is an increased scientific interest in alliances since the 1990s (Douma, 1997). An important reason for this increased interest is shifting views on organizational strategy. Within the mainstream literature regarding business innovation, competitive success was attributed to the generative capability of a single, stand-alone organization. Starting by Porter's (1980) market-based view, organizations were considered entities capable of creating value on their own. They compete with others by developing an excellent product or service and a generic strategy. Subsequently, Shapiro (1989) suggested that organizations require capabilities to enhance their competitiveness. On the basis of these resource-based approaches and following the premise that competitive advantage is always temporary, theorizing on capabilities to act competitively shifted toward dynamic capabilities (Pagani, 2013). Dynamic capabilities reflect the organization's ability to integrate, build, and reconfigure internal and external competencies to cope with rapidly changing environments (Teece *et al.*, 1997). This view provides the basis of the relationship strategy. A relationship strategy concerns a strategic focus where the individual firm balances its interests and actions in interaction with others for the collective needs of supply chain organizations (Ford and Gadde, 2002). Similarly, Wilkinson and Young (2002) stress that strategic options result from the organization's capability to apply knowledge within its environment (Wilkinson and Young, 2002). It contributes to the rise of the eRBV: a view in which organizations form IORs to gain access to complementary resources and skills that reside in other companies (Pintelon *et al.*, 2006). Increasingly (IORs) are being viewed as a type of strategic driver, a "conditio sine qua non" for business success (Loebbecke *et al.*, 2016). Hence, there exists a close interplay between the overall strategy of the company and the role of IORs in that strategy (Parker and Van Alstyne, 2005).

IORs exist in different types, e.g. in- or outsourcing relationships, networks, alliances, joint ventures, and mergers and acquisitions (Albert and Whetten, 1985). Others argue that forms of relationships can be differentiated by the intensity of cooperation (from low transactional to high relational) and type of interdependency (from horizontal or pooled interdependency to vertical or sequential interdependency) (Toor and Ogunlana, 2010). Similarly, Kale and Puranam (2013) distinguish between purely transactional exchanges and highly relational exchanges. The first can be characterized as simple, discrete, one-time partner transactions. The latter concerns the pooling of critical capabilities and intertwinement of operations, requiring intense management involvement, for strategic value enhancement over prolonged periods of time, by the establishment of new organizational forms such networks or joint ventures. The differentiation between forms of IORs is conceptually depicted in Figure 1.
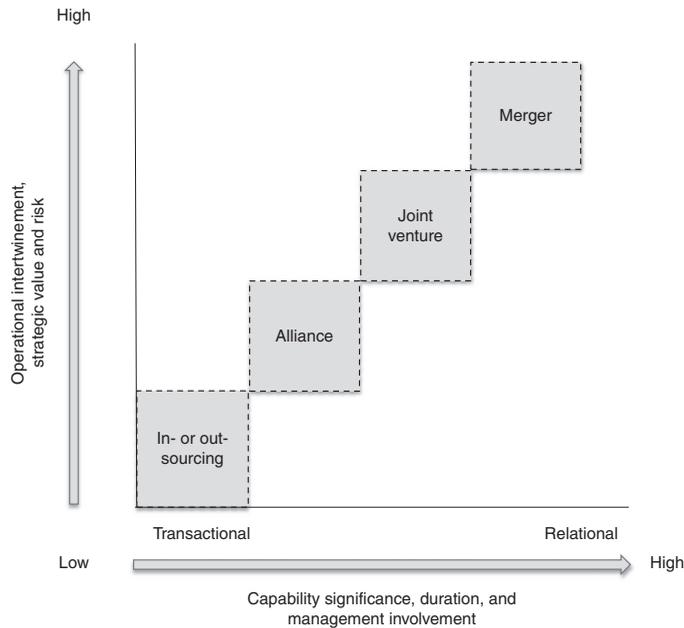
Figure 1.
Forms of interorganizational relationships

As can be seen in Figure 1, forms of IORs differ in the degree to which they are intertwined or separated from partners' operations, and as such in the strategic potential and risks of the long-term endeavor (Cropper *et al.*, 2008).

An alliance is positioned in between truly transactional exchanges and highly relational exchanges (Kale and Puranam, 2013; Geyskens *et al.*, 2006). The main reason why organizations pursue a strategic alliance is to fill in critical capabilities gaps for sustaining or increasing their strategic business value (Cropper *et al.*, 2008). Alliances offer organizations relatively fast and flexible access to necessary complementary resources, competencies, knowledge, new markets, or they enable cost and risk reduction for a prolonged period of time (Dyer *et al.*, 2001; Das and Teng, 2000; Inkpen, 1996). To this end the organizations involved share (a subset of) their own capabilities (Berends *et al.*, 2011).

Since alliancing concerns a strategic reorientation, redesign, and realignment of organizational components is usually necessary to a certain degree. Organizations adapt their processes, structures, and resources that are interconnected with the alliance (Andreeva and Ritala, 2016; Bamford *et al.*, 2003; Susini, 2004). In addition, readiness to change a certain way of working is required to guarantee low resistance and the chance of a successful implementation (Imran *et al.*, 2016). The interconnection of the organization with the alliance is visualized in Figure 2.

2.2 Organizational change as part of alliance capability

Substantial research has been carried out to explore the phenomenon of alliances in terms of their performance and factors to improve their success. Alliance researchers have thereby focused in particular on the interorganizational (both business and personal) relationship as a unit of analysis (Tjemkes *et al.*, 2012; Parker and Van Alstyne, 2005; Das and Teng, 2003; Van Aken *et al.*, 2016). Their studies explored basic mechanisms for working together, joint decision making, and governing the alliance relationship. Moreover the role of alliance managers has been examined as well as the activities deployed throughout the
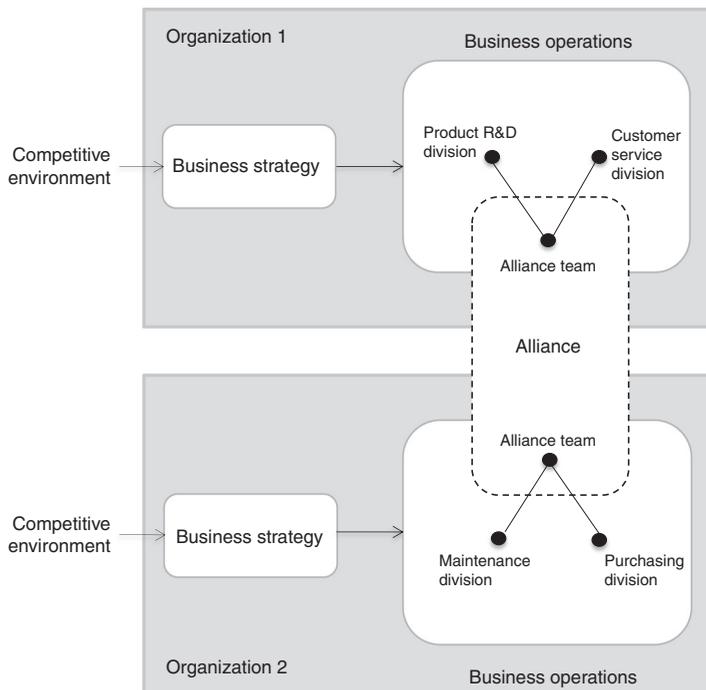
Figure 2.
Organizations
and alliancing

alliance development process, also referred to as the alliance lifecycle (Montfort, 2007; Tjemkes *et al.*, 2012; Mckelvey, 2004; Kaplan and Norton, 2004; Das and Teng, 2002; Sluyts *et al.*, 2012). According to their findings, relational characteristics such as mutual trust, cultural similarities, objectives compatibility, balance of power and control, and interorganizational learning have significant effects on performance (Kale *et al.*, 2000, 2002; Lunnan and Haugland, 2008; Franco, 2011; Schilke and Goerzen, 2010).

Other alliance researchers have explored drivers of an organization's ability to successfully manage alliances. Referred to as alliance capability, they explored organizational competencies (series of activities and processes) which can positively influence alliance outcome (Sluyts *et al.*, 2010). Their studies in particular focused on developing alliance capability by means of learning past collaborative experience to overcome future challenges (Anand and Khanna, 2000; Simonin, 1997). Alliance capability literature exemplifies that organizational learning capability is developed by combining competencies at the organizational, group and individual level to effectively capture, institutionalize, and share alliance management know-how within organizational boundaries (Zollo and Winter, 2002; Hsu and Chang, 2014; Argote, 2013; Von Krogh *et al.*, 2012).

Organizational capabilities are described as important higher order resources, competencies or multi-level spanning capabilities. They are coordinated by business processes and managerial activities, and include valuable resources, knowledge, and skills (Helfat and Peteraf, 2003; Vesalainen and Hakala, 2014). Since an organizational capability usually acts as a co-specialized element in the organizational system (Vesalainen and Hakala, 2014), we argue that alliance capability not only depends on the organizational learning capability. Developing successful alliance management also requires leveraging organizational learning for changing management practice. As such, we wonder which practice should be developed in conjunction to organizational learning?

3. Methodology

3.1 Context and design

Our empirical research is designed to explore which "other" capabilities – referring to higher order competencies – are necessary for organizational change in favor of organization's alliance performance. We used a qualitative instrumental case study to explore the thoughts of key members of an alliance management team. An instrumental case study design was used to obtain new insights for which the case plays a facilitating role (Rai and Tang, 2014; Yin, 1989; Eisenhardt, 1989). The case study involved a maritime public organization attempting to establish service alliances with some of its system suppliers. These alliances were meant to implement condition based maintenance to enhance the operational availability of ships and to reduce the capital costs of its fleet. Their service alliance objectives are to group partners' technological expertise and to increase the utilization of resources by providing services for customers of their suppliers. The organization operating within the maritime industry was selected on the basis of its expertise of conducting operational assessments (due to government regulation to assess service alliance possibility for every new system purchase), expected (future) dependence on alliances, and accessibility to do research. The organization participated in a larger research project to which the researchers were contributing. The project's ambition comes from supply chain partners requiring more than ever knowledge alliances to optimize systems' functionality and service maintenance (Kerkhof et al., 2016). In addition, interorganizational cooperation in this particular maritime sector has been problematic for years (Levering et al., 2013). The organization of study employs 2,400 people on an average annual budget of 113 M Euros. The number of system repairs currently amounts to 12,000 per year. For reasons of confidentiality, the name and a more detailed description on the company not included.

3.2 Research process and data collection

The scope of the case study was limited to the first half year of 2014. During this period, the organization was restructured at the corporate level, implementing a new ERP system, and in the pre-formation phase of forming a service alliance with a major manufacturer of, among other things, radar systems. Data of various sorts were collected, including semi-structured in-depth interviews with key members of the alliance management team, informal conversations with senior managers, and corporate documents.

In-depth interviews as a qualitative interview technique enables gathering of detailed information from a relatively small number of respondents (Boyce and Neale, 2006). In total 15 key managers with knowledge pertaining to and roles within the process of alliancing were interviewed. We relied on purposeful sampling, starting with the CEO, and subsequently included other managers recommended by interviewees. Managers were screened on the basis of, first, having at least ten years of experience within the organization to ensure their ability to offer a representative operational assessment, and, two, representing a cross section of functional areas and hierarchical levels, such as purchasing managers, service managers, lawyers, senior executives, and operational engineers, to obtain a comprehensive view (see Table I).

Interviews were set up by a semi-structured protocol to increase the reliability of the research (Yin, 2009). The interview questions were structured based on the design determinants of the organizational system functionality (Cummings and Worley, 2010). The interview protocol was written in the interviewee's native language to prevent misperception of research questions. The questionnaire included questions such as:

- What are the objectives of the organization to adopt a service alliance strategy?
- How does the organization currently perform with respect to achieving these objectives?

Management level	Interviewee role	Number of interviews	Organizational change
Strategic level	CEO and former CEO	2	
	Staff member	1	
	Managing director	1	
	Chief alliance unit	1	
	Chief procurement	1	
	System project leader	2	**829**
Tactical level	Purchasing manager	1	
	Logistics manager	1	
	System maintenance planner	3	Table I.
Operational level	Operational manager	2	Overview of
Total number of interviews		15	interviews

- How does the organization manage the change of inputs incidental to alliancing? Are there implications for the way work is currently organized (with regard to the design components)?

- Which specific higher order competencies are important to modify the organizational system's functionality (to make the design components fit each other) to produce the desired alliance outcomes?

The interview questions were distributed beforehand to allow the interviewees to reflect on them. The interviews lasted approximately 1.5 hours and were conducted individually. This enabled people to feel comfortable when expressing their views. Verbatim transcriptions were made during these interviews and along with a draft of the case study report sent to the interviewees afterwards to verify the correctness of the information. Some comments were received and transcripts were adjusted accordingly, then filed and used for analysis.

We examined a broad range of corporate documents and maritime sector newspapers as secondary data. Publicly available information from the organization's intranet was also collected.

3.3 Data analysis

First, since the data analysis perspective applied determines one's findings, we modified Cummings and Worley's (2005) model for diagnosing the organization level. That is, we combined it with Ainsworth and Feyerherm's (2016) model for organizing the transorganizational system, to cater for alliance characteristics. As such, we modified the organization level model based on the changed inputs and outputs by alliancing, to study its implications for the organizational system in a sense that there may need to be changes to or realignment of design components and higher order competencies for this purpose. The resulting model for diagnosing an organization's alliance capability is depicted in Figure 3.

The model shows both the new inputs and outputs by alliancing, and the organizational design components that play a role. As can be seen, an organization's input content is changed as a result of the arrival of new stakeholders, investments required for alliance development, the inclusion of complementary resources and knowledge from the alliance partner, and entering a new sales market. These inputs are organized by the design components to produce the desired output. An organization's output includes among other things its external reputation, intellectual property, and – considering the alliance objectives – the achievement of additional profits or cost reduction. Furthermore, output includes the sustainment of product or service delivery, and development of new knowledge and innovation. Furthermore, Figure 3 shows that transformation design components include strategy, technology and tactics, structure, culture, human resource

system, and measurement and information systems. Strategy represents an organization's strategic objectives, intent, and functional policies, providing explicit direction, and setting priorities for decision making concerning organizational activities. Technology and tactics concern the way in which inputs and strategy are converted into operations, and includes methods, coordination among tasks, and equipment. Structure represents the organizing mode to allocate and coordinate work. Measurement systems include methods of assessing process activities and their impact on performance. Information systems include methods and tools used to specifically collect, categorize, and distribute information throughout the organization. Human resource systems include mechanisms for selecting, developing, and evaluating employees' skills, knowledge, and behavior. Finally, organization culture represents the basic norms and values shared by organization members, guiding thoughts and actions (Cummings and Worley, 2005; Ainsworth and Feyerherm, 2016).

Second, based on the developed model for diagnosing an organization's alliance capability, we analyzed how inputs impacted the transformation design components. We analyzed the data by means of a post-coded content analysis method (Bauer and Gaskell, 2000). This method helped to summarize the data into meaningful category themes. We first highlighted words within the data referring to either the inputs or design components. Successively we categorized the finding based on their coherence to higher order competencies required for organizational change.

3.4 Research quality

To secure data quality, we considered completeness of the data, consistency, and construct validity (Henneberg and Mouzas, 2008). Concerning completeness of the data, we interviewed in total 15 key managers with knowledge pertaining to and roles within the process of alliancing, corresponding to approximately 75 per cent of the focus group. To secure consistency, primary data gathered by the interviews were triangulated with the information from corporate documents (Yin, 2009). Validity was effectuated by assessing whether the capabilities were indeed coordinated by business processes and managerial activities, and included valuable resources, knowledge, and skills (Vesalainen and Hakala, 2014). To secure the accuracy of research findings, we verified the capabilities discovered by means of informal conversations with senior managers.

4. Research findings

4.1 Alliance inputs' implications for design components

There was a general consensus among the managers interviewed that there was a need to adjust the organization design components given the inputs (see Figure 3) by alliancing to produce the desired output. Current organizational deficiencies manifesting in alliance
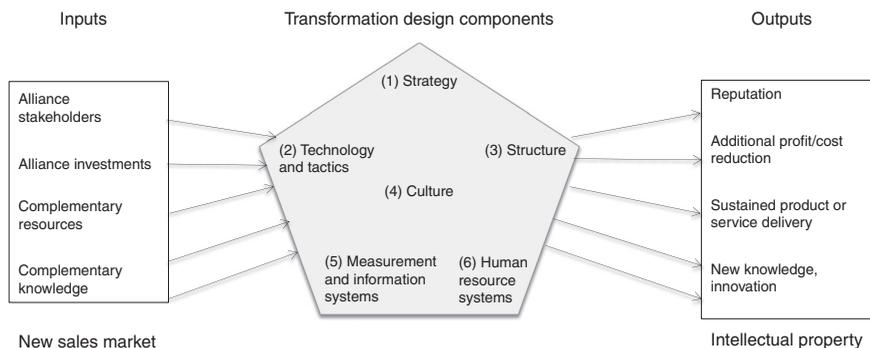
Figure 3.
Input-transformation-output model for diagnosing alliance capability

performance ineffectiveness, were associated with, first, absence of unambiguously defined and imposed alliance objectives. Consequently, explicit managerial direction and priorities for decision making concerning organizational activities were missing. Second, the organization seemed to lack knowledge for developing a business plan in which details of how to achieve organization's alliance objectives would be elaborated. Third, a strong fragmented organizational structure focused on department's task accomplishment, making performance assessments and decision making at the alliance level difficult. Fourth, a mismatch of the business cultures due to an internal rather than an external focus and as such a complacent and somewhat careless attitude as regards to exploiting partners' resources and knowledge. Fifth, insufficient level of collecting, mining, and sharing performance data as well as alliance expertise and knowledge. And finally, the organization seemed to lack skills for selecting and developing marketing and stakeholder management skills to pursue partnership opportunities. Moreover, the organization can be characterized as having insufficient alliance knowledge for dealing with counter-productive regulations to control acquisition as well as the levying of alliance investments.

4.2 Capabilities required for organizational change

As a result, a set of interrelated capabilities emerged during our analysis to change organizational practices in favor of alliance performance. These capabilities involve allocation of resources, specific knowledge, activating processes and activities. Specifically, the organizational capabilities concerned: "development of alliance management skills," "effective information infrastructure," "adequate strategic decision-making," and "Learning capability" (Figure 4).

Before elaborating on the capabilities, we want to note that this bundle of capabilities can positively influence organizations' alliance management success. Its rests heavily on the development of employee skills (by experience or training) and an effective organizing mode to coordinate knowledge for interorganizational cooperation as well as performance information. Capabilities enable the specification and sharing of strategic alliance objectives as well as measurement of progress. New capabilities emerge as a result of allocation of valuable resources, knowledge, and skills and coordination.
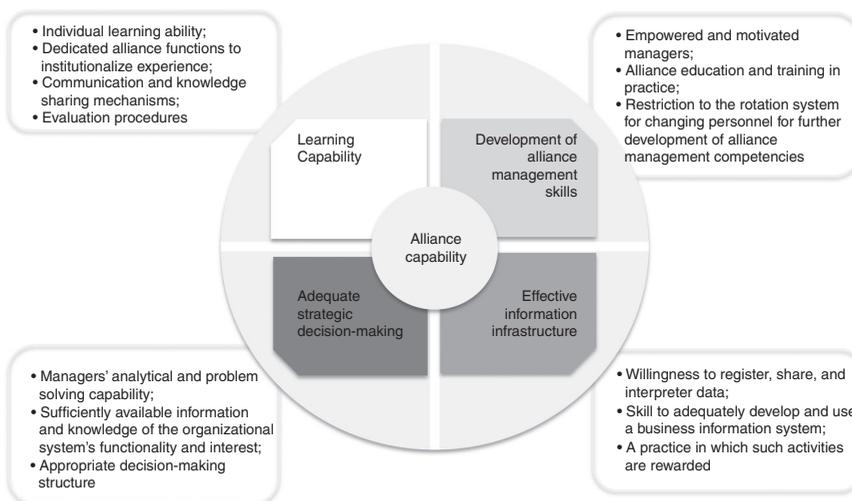

Figure 4.
Unpacking alliance capabilities

With respect to the specific capabilities mentioned, "development of alliance management skills" rested among other things on empowered managers, alliance education and training in practice, and a restriction to the rotation system for changing personnel (common in large commercial and military organizations) for further development of alliance management competencies. An "effective information infrastructure" depended on the willingness to register, share, and interpreter data, the skill to adequately develop and use a business information system for this purpose, and a practice in which such activities are rewarded. "Adequate strategic decision-making" rested on managers' analytical and problem solving capability, sufficiently available information and knowledge of the organizational system's functionality and interest, and an appropriate decision-making structure. "Learning capability" stemmed from several arguments made during the informal conversations with senior managers supported our interview results. They pointed out the importance of personalities and skills to negotiate with alliance stakeholders, to be able to define alliance milestones and go through a business planning process, and to institutionalize alliance experience in clear alliance directives and procedures. Similarly, they highlighted a general restraint to register, share, and organize (performance) information of systems as well as departments. Furthermore, senior managers acknowledged their strategic weakness in both providing explicit directions to and setting organization priorities for the alliance. This seemed to be caused by a lack of reliable business information to support decision making, and an unclear and complicated alliance decision-making structure. The latter structure resulted on one hand in unawareness of responsibility distribution, and on the other hand to a tendency of people with no responsibility to interfere in the decision-making process.

5. Discussion and conclusions

This paper investigates from an organizational change perspective the organization as a complex transformation system. We focus on an organization forming an alliance and requiring particular capabilities for ensuring alliance performance. There is much research on alliance capabilities. Nevertheless, most research focuses on processes within the organization that foster knowledge dissemination and integration. Current work provides insight in the development of alliance capability by means of building on alliance experiences (Anand and Khanna, 2000; Kale and Singh, 2009; Zollo and Winter, 2002; Draulans *et al.*, 2003). Notwithstanding their significant contribution, limited attention has so far been paid to explaining how a learning capability is converted into a way of working that increases an organization's alliance effectiveness. In addition, limited insight has been provided in alliance capability differences between organizations with similar experience. As a consequence, studies on alliance capability have been criticized for not clarifying the content and process of developing an alliance capability (Heimeriks, 2005; Gulati, 1998). Hence, there is a need for a comprehensive understanding of how firms can internalize alliance experience and knowledge mechanisms to develop their organizational system in such a way to improve their alliance management.

This paper explores the organizational practice of implementing an alliance strategy as a strategic reorientation, with a view to reveal organizational competencies necessary to fit an organization's functioning to the strategic needs of an alliance. As results of this case study suggest, organizations require a set of interacting alliance capabilities that facilitate the development of alliance management practices and consequently performance outcomes.

5.1 Results placed in a larger context

Although the findings reveal a set of organizational capabilities considered necessary to change the organization for the benefit of alliance management, two key questions remain. First: how should organizations develop such capabilities? Derived from our findings we suggest two organizational change trajectories to be used concomitantly in favor of

developing the four capabilities. A directive and imposed top-down implemented change, as well as a development oriented bottom-up approach. As depicted in Figure 5, the two trajectories promote development of three types of organizational capital (organization, information, and human) which we derived from our data analysis.

Implementing an alliance strategy challenges the organization to adapt and realign its forms of capital. The two trajectories to change an organization's diverse forms of capital are in line with earlier research (Bamford *et al.*, 2003; Beer and Nohria, 2000). Where we suggest a top-down directive change, Beer and Nohria (2000) refer to a "hard" approach, and where we suggest a bottom-up approach, they call it a "soft" approach. Substantively, the trajectories both affect the development of human, information and organizational capital, however the methods differ. The relevance of implementing both approaches is backed by Bamford *et al.* (2003), stressing in accordance with our results the importance of developing alliance targets, guidelines, and decision-making structure, together with employee's expertise and a collaborative business culture. Our results suggest that an organization's ability to leverage its prior experiences might include its ability to carry out these two change trajectories. This underscores the suggestion that alliance capability is a difficult resource at the organization level (Gulati, 1998).

Furthermore, regarding the momentum of carrying out these two change trajectories, a second question is: when to put these trajectories in motion? Elaborating on what is known
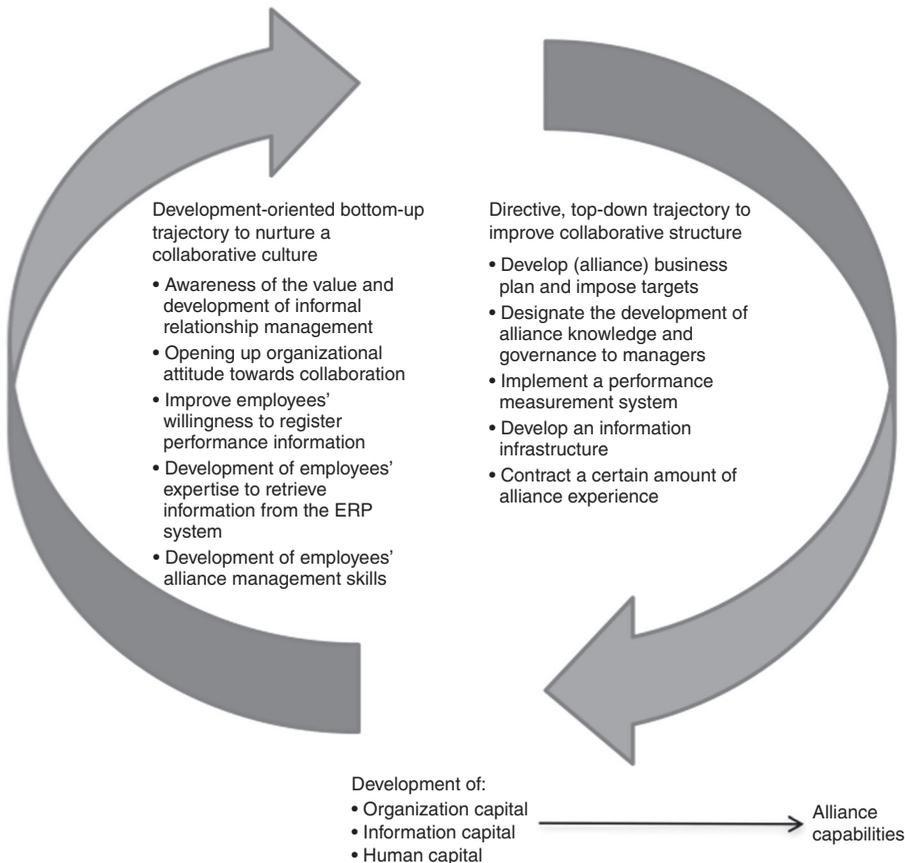

Development-oriented bottom-up trajectory to nurture a collaborative culture

- Awareness of the value and development of informal relationship management
- Opening up organizational attitude towards collaboration
- Improve employees' willingness to register performance information
- Development of employees' expertise to retrieve information from the ERP system
- Development of employees' alliance management skills

Directive, top-down trajectory to improve collaborative structure

- Develop (alliance) business plan and impose targets
- Designate the development of alliance knowledge and governance to managers
- Implement a performance measurement system
- Develop an information infrastructure
- Contract a certain amount of alliance experience

Development of:
- Organization capital
- Information capital
- Human capital

Alliance capabilities

Figure 5.
Organizational change trajectories for alliance capabilities

of consecutive management activities in alliances (Das and Teng, 2002), it seems appropriate to include the activity of performing an introspection of alliance readiness and capabilities as early as possible in the alliance development process. This is because the development of capabilities generally takes a long time (Capasso *et al.*, 2005). Taking this into account can explain why alliance formation can be a cumbersome process and why seeds of failure may be sown in an early stage (Mitsuhashi and Greve, 2009).

5.2 Theoretical and practical implications

Referring to the main conclusions of this study, several contributions can be identified. First, alliance research has fallen short of clearly defining critical components and their interrelationship that underlie the development of an alliance capability. The analysis of this study has sought to uncover the process that lies at the roots of alliance capability. This study has found that alliance capability is related to organizational change capability. In addition, our results contribute to organizational learning theory, by finding a set of capabilities essential to make use of prior experiences. Our results shine light on these intra-firm capabilities that facilitate the transition of alliance experience into better alliance management performance. We build on and expand the few research attempts to explain how organizations leverage their alliance experience and develop their alliance management practice (Sarkar *et al.*, 2009; Simonin, 1997; Kale *et al.*, 2002). By suggesting that the intra-firm antecedents play a role in alliance management success, the results help to address our insufficient understanding of the components of an alliance capability (Ireland *et al.*, 2002). This study complements thereby current literature conceptualizing alliance capability management as organizational resources or instruments to be implemented at the edge of the organization to relate to its alliance partner and dynamic environment (Draulans *et al.*, 2003). Specifically, our results show far-reaching internal implications of alliance formation, e.g. for culture, information technology, leadership skills, HRM. This frames alliance management not only as a cross-organization coordination process (Gittell and Weiss, 2004; Lewin *et al.*, 2011), but also as a process that needs to be strongly embedded within the organization (Jones and Lichtenstein, 2008). In an era of disruptive innovation and increasing interorganizational networking (Nylén and Holmström, 2015; Yoo *et al.*, 2012), our findings contribute to a new field of alliance research by stressing that introspection and the development of change capabilities complements externally-oriented efforts of an organization.

There are also a few important managerial implications. Practitioners can benefit from this study's insights as it increases awareness of intraorganizational changes in relation to alliancing. We emphasize on processes to translate an alliance ambition into operationalized plans. These would better prepare organizations for their final decision on starting up an alliance or not. In addition, a set of capabilities is suggested with which organizations can embed their lessons learned to turn knowledge into action and with that develop their alliance management ability. In addition, in line with other studies, the results suggest the importance of certain alliance management resources and mechanisms, such as conducting trainings for the development of alliance management skills, and implementing an alliance database for capturing, sharing, and disseminating alliance knowledge – all in support of strategic alliance decision making (Teece *et al.*, 1997; Mandal *et al.*, 2003). However, the study's results extend current wisdom by giving an idea of the interrelationship between internal processes and mechanisms that underlie successful alliance management at the organizational level (see Figure 4). Insight in these internal processes was missing (Heimeriks, 2005), yet they seem useful for managers to make sense of scholars' diverse alliance management suggestions.

5.3 Limitations and future research

Despite the contributions of this study, it is subject to several limitations. First, this study does not verify the extent to which the suggested capabilities are actually needed. Instead, this study

presumes that managers' consideration given to these capabilities reflects their need. It would for example be interesting to investigate whether this set of capabilities is adequate. Second, although the validity of the set of capabilities is verified in various ways, the interrelationship between capabilities is implicit. According to our results, they facilitate alliance management only when they are together. Future research should try to extend our analysis by empirically verifying the interaction effects among the suggested capabilities. Third, interesting for future research is also to examine the relationship between the organizational capabilities and inter-firm antecedents of alliance performance. Fourth, presence of the capabilities for proper alliance management does not necessarily guarantee successful alliance performance. Further research could explore the enactment of capabilities. Last, given the instrumental case study used, more research is required to validate and substantiate our findings on necessary capabilities for alliance management by type of organization or industry.

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