

# Extending alliance management capability in individual alliances in the post-formation stage

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## ABSTRACT

Strategic alliances are increasingly important to firms, yet many alliances do not achieve their goals. This lack of success can be attributed to poor mitigation of risks related to performance and to managing relationships. Current conceptualizations of the capability to manage the post-formation stage of alliances overly focus on mitigation of relationship management risks, and as a result do not fully address both types of risks. We draw on Social Exchange theory, the Resource Based View and Transactions Costs Economics to extend the conceptualization of alliance management capability (AMC) by adding specific justice-related activities and resource management skills to the extant conceptualizations. We focus our attention on the post formation stage. We test our hypotheses using a sample of 154 Indian firms engaged in strategic alliances in the IT industry and we find support for our extended conceptualization of AMC and a strong positive association with alliance performance. We also demonstrate that our extended conceptualization provides additional explanatory power in relation to alliance performance than the original AMC. Implications for managers and opportunities for future research are explored.

## 1. Introduction

The strategic importance of alliances for organizations across different industries (Balboni, Marchi, & Vignola, 2018; O'Dwyer & Gilmore, 2018) is evidenced from industry reports showing that organizations are increasingly entering strategic alliances as they seek to address challenges in the global environment (Saada & Gomes-Casseres, 2019; Vitasek, 2020). However, alliance failure rates remain high (Gomes, Barnes, & Mahmood, 2016; Wang & Dyball, 2019), with Whitler (2014) reporting a failure rate of 60% from one global study, and Simoons (2018) noting a failure rate of up to 80%. While alliances may terminate naturally, or indeed have a planned termination date (Rahman & Korn, 2014), this does not account for the high reported level of failure. Alliance failure is a multi-faceted problem (Yang, Sivasdas, Kanf, & Oh, 2012), and is defined as when the alliance partners do not achieve the goals they set for the alliance. The reasons for failure can be attributed to risks that alliances face (Das & Teng, 2001a, 2001b) and have been partly attributed to poor alliance management (Nielsen & Jolink, 2015; Schreiner, Kale, & Corsten, 2009). Extant research posits that crafting a capability to better manage the dynamics and risks inherent in the post-formation stage of alliances is posited as a solution

to the failure problem (Kohtamäki, Rabetino, & Möller, 2018; Leischnig, Geigenmüller, & Lohmann, 2014; Robson, Katsikeas, Schlegelmilch, & Pramböck, 2019; Schilke & Goerzen, 2010; Schreiner et al., 2009; Wang & Dyball, 2019; Wang & Rajagopalan, 2015). This capability can be understood as a set of skills and activities required by alliance partners to deal with issues that arise in this stage (Forkmann, Henneberg, & Mitrega, 2018; Gulati, 1998; Schreiner et al., 2009). These skills and activities are typically grouped together as an Alliance Management Capability (AMC) though the constituent elements of this capability are not always agreed upon in the literature (Kohtamäki et al., 2018; Nielsen & Jolink, 2015; Schreiner et al., 2009; Wang & Rajagopalan, 2015).

The literature has distinguished between capabilities to manage individual alliances and those needed to manage alliance portfolios (Schilke & Goerzen, 2010). This paper focusses on individual alliances recognizing that the capability to manage alliances can be developed from experience and prior alliance success/failure. We concentrate on what is typically the longest stage of the alliance life cycle: the post-formation stage, addressing a research gap identified by Albers, Wohlgezogen, and Zajac (2016) relating to how alliances are managed inside the firm. While we acknowledge that the pre-formation stage can also impact alliances negatively (Wang & Rajagopalan, 2015), the post-

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formation stage is typically the longest stage of the alliance life cycle, and where value is derived from the alliance for partners.

The post-formation stage tends to face two specific types of risk, performance risk and relational risk (Gomes et al., 2016). In the post-formation stage, Schreiner et al. (2009) have developed a set of three skills (coordination, communication and bonding) for individual alliances in the post-formation stage, which they term AMC. Wang and Rajagopalan (2015), in a review paper on alliance capabilities, suggest two additional skills (learning and exiting). Kohtamäki et al. (2018), in a wider review of alliance capability literature suggest a different type of AMC. Based on extant research (Gomes et al., 2016; Niesten & Jolink, 2015; Wang & Rajagopalan, 2015), we contend that the current conceptualizations necessitate extension to better manage alliance performance heterogeneities, consequently enhancing the alliance success rate. While relationship management skills are clearly well researched and understood, and contribute to mitigating relational risk (Gomes et al., 2016), current literature often overly focuses on these skills (Forkmann et al., 2018). This paper addresses this gap in the AMC literature, through inclusion of skills to mitigate performance risk. While the literature is not silent on these issues, methods to mitigate both types of risk are often siloed, thus conceptualizations of AMC tend not to include activities and skills around resource management and justice, which we suggest are essential for the successful management of an alliance on a day-to-day basis.

We conceptualize, and empirically validate, an extended conceptualization of AMC, suitable for the post-formation stage, to mitigate the performance and relational risks that contribute to alliance failure, drawing upon Social Exchange Theory (SET), the Resource Based View (RBV) of the firm, and Transactions Costs Economics (TCE). SET (Blau, 1964; Cropanzano, Anthony, Daniels, & Hall, 2017) is apposite as the management of alliances occurs in a relationship context (Cao & Lumineau, 2015; Musarra, Robson, & Katsikeas, 2016). This complements our view that economic transactions, such as alliances, are embedded in social relations (Luo, Liu, Yang, Maksimov, & Hou, 2015). A key proposition of SET, that we draw on, is that for all actions taken, the more they are rewarded, then the more likely that action is to be taken again (Cropanzano et al., 2017). Alliances are typically formed to access, and exploit, shared and/or joint resources (Cao & Lumineau, 2015; Gomes et al., 2016; Niesten & Jolink, 2015) and thus the RBV provides opportunities to enhance our understanding of how alliances manage these resources (Kraaijenbrink, Spender, & Groen, 2010). Stemming from the RBV tradition (Chiambaretto & Wassmer, 2019; Forkmann et al., 2018), the literature on capabilities informs our framework in that what firms do with resources is as important as which resources they have (Sirmon, Hitt, Ireland, & Anitra, 2011). Reviews of alliance capabilities (Forkmann et al., 2018) inform our motivation to extend AMC outside of the relational domain. We draw on TCE to help explain why firms make choices around developing various capabilities. TCE (Williamson, 1985) tends to be mainly applied in the pre-formation stage when alliance governance is the core focus. However, partners in an alliance make investments of resources in alliances, and these alliance-specific investments (Liu, Liu, & Li, 2014) may have limited value outside the alliance. It thus behooves the alliance partner to develop skills to effectively manage the alliance to reduce the chance of opportunistic behavior (Trada & Goyal, 2017), and get the most value from alliance-specific assets (Liu et al., 2014).

We begin by outlining that the focus of our paper is to identify activities and skills that together form an alliance management capability to mitigate performance and relationship risks. We develop our rationale for the seven activities and skills that are the core of our extended AMC conceptualization, underpinned by two meta-analysis papers, and a review of relevant literature. Following this, we discuss alliance performance and build our hypothesis which is a comparison of our extended model and the AMC model developed by Schreiner et al. (2009). We then turn to our Methods and present our Results. We develop our contributions in our Discussion section and provide implications for

managers. The paper concludes with limitations and proposed research directions.

## 2. Theoretical framework and hypothesis development

We contend that alliance management is fundamentally about managing risk, a topic that has received significant attention in the literature (Das & Teng, 2001a, 2001b; Gomes et al., 2016; Latusek & Vlaar, 2018). There are two types of risks in the post-formation stage namely relational risk and performance risk (Das & Teng, 2001a, 2001b; Gomes et al., 2016). Relational risk arises from the possibility of an alliance partner not committing itself fully to an alliance and/or deliberately working in a selfish manner at the expense of its alliance partner (Das & Teng, 2001a). Performance risk arises due to a possibility of alliance objectives not being met despite the partners working well together (Das & Teng, 2001b). Performance risk may occur due to factors that are within a firm's control or external to the firm. Consequently, we, in line with literature on alliance capabilities and existing conceptualizations (Kohtamäki et al., 2018; Niesten & Jolink, 2018; Schreiner et al., 2009), extend the set of firm-level activities and skills that comprise AMC which provide the firm with skills and activities to mitigate relational and performance risk.

In a review paper analyzing 100 empirical alliance capability articles, Wang and Rajagopalan (2015) identify five skills in the post-formation stage for individual alliances. Three of these five (communication, bonding, and coordination) are directly from Schreiner et al. (2009) and relate to building relationships (communication and bonding) and coordinating resources and activities. These are important skills and reviews of AMC typically contain these aspects (Kohtamäki et al., 2018; Niesten & Jolink, 2018) in one form or another. The fourth skill is related to four intra-firm learning processes (Kale & Singh, 2009): articulating, codifying, sharing and internalizing knowledge. We posit that these learning processes are fundamentally about how to best manage the resource base available to the alliance to generate successful outcomes, and thus while we draw on Kale and Singh (2009) and related works, we turn our attention to development of skills for effective resource management. This is in line with TCE, as efforts to better use transaction-specific assets create value for alliance partners (Liu et al., 2014), and answers a call from Forkmann et al. (2018) to extend alliance capabilities outside their traditional domain of relationship-oriented skills.

We further suggest that for knowledge to be shared effectively an organization should develop a set of activities to ensure that this knowledge is shared fairly, and thus we advance the importance of fostering activities within the organization to demonstrate justice in alliance management. Justice has also been found to be a key factor in mitigating against relationship dissolution (Yang et al., 2012) and it has been shown to enhance relationship performance (Bouazzaoui, Wu, Roehrich, Squire, & Roath, 2020; Lumineau & Oliveira, 2018). Perceptions of injustice may also, using a TCE logic, foster opportunism (Trada & Goyal, 2017) and conflict (Narasimhan, Narayanan, & Srinivasan, 2013). The final skill noted by Wang and Rajagopalan (2015) is that of knowing when to exit (Simonin, 1997). We agree that this is an important skill, however we suggest that it is not essential for alliance management on a day-to-day basis, therefore we view it as an independent alliance-related skill, outside of our extended conceptualization of AMC.

In another significant review paper, Kohtamäki et al. (2018) develop a taxonomy of three alliance capabilities, alliance management capability, alliance integration capability and alliance learning capability, which include eight sets of skills, processes and structures. These encompass both individual alliances and portfolios of alliances. The paper stresses, quite rightly, the importance of structures, such as interfirm councils (Lorenzoni & Lipparini, 1999), however our goal is to consider alliance management from a process view to help firms recognize the skills which ultimately may be embedded in such

structures, therefore while we do not include these structural elements in the measurement of our AMC conceptualization, we do draw upon them to operationalize our dimensions. Upon reviewing the twenty-one individual processes, skills and structures arising from the eight sets, it is clear that the three skills identified by Schreiner et al. (2009) and reiterated by Wang and Rajagopalan (2015) are present, though not all are within the specific alliance management capability heading. Kohtamäki et al. (2018) place strong emphasis on developing skills to share knowledge. We contend that our introduction of a set of activities to develop fair procedures and fair sharing of outcomes, that is distributive and procedural justice, is in line with their work in this area. Kohtamäki et al. (2018) also consider how adaptation is required to adjust relationships to cope with change (Niesten & Jolink, 2015) and specifically note, in the context of knowledge, the importance of combination. We draw upon these skills in our paper reflecting that knowledge of how to manage resources is at the center of AMC, and thus we posit that a skill to adapt resources to changing circumstances and a skill to combine resources to achieve a goal are key to the management of alliances.

The key argument in this paper is that alliance management capability is a firm level capability that includes seven separate, yet related, skills and activities: coordination, communication, bonding, distributive justice, procedural justice, resource combination and adaptation. We claim that these seven, in combination, serve to mitigate relational and performance risk in an alliance context. The idea of combining skills to form AMC is well understood in this literature (Kohtamäki et al., 2018; Schreiner et al., 2009; Wang & Rajagopalan, 2015), and we follow this approach, as illustrated in Fig. 1. Schilke (2014a) confirms the appropriateness of a second order conceptualization approach in an alliance context. The AMC components proposed in this paper have been

categorized by their theoretical underpinnings, namely social exchange, organizational justice, and resource management, to facilitate better understanding of the conceptual model. The next sections discuss these firm-level skills and activities in more detail leading to the development of the core hypothesis.

### 2.1. Social exchange

The extant literature on alliances has used different theoretical lenses (He, Meadows, Angwin, Gomes, & Child, 2020) but SET has proved popular (Cao & Lumineau, 2015; Musarra et al., 2016). SET suggests that governance is inherently relational in an alliance context, and this is particularly pertinent to the post-formation stage. The key ideas of social exchange are unspecified obligation and reciprocity (Blau, 1964). The AMC concept developed by Schreiner et al. (2009), with its constituent skills of communication, coordination, and bonding, helps organizations to make social exchange work in practice, through encouraging the development of obligation and reciprocity. Our attention now turns to explaining each of these factors.

#### 2.1.1. Coordination

In an inter-firm context, Gulati et al. (2012, p.537) define coordination as the “deliberate and orderly alignment or adjustment of partners’ actions to achieve jointly determined goals”. The coordination aspect of AMC entails a firm having the skill to effectively manage the interdependencies between partners via clear division of tasks and responsibilities (Schreiner et al., 2009). This expertise is required even if there are minimal concerns between partners (Dan & Zondag, 2016; Min, 2017) since an alliance entails considerable interdependence of

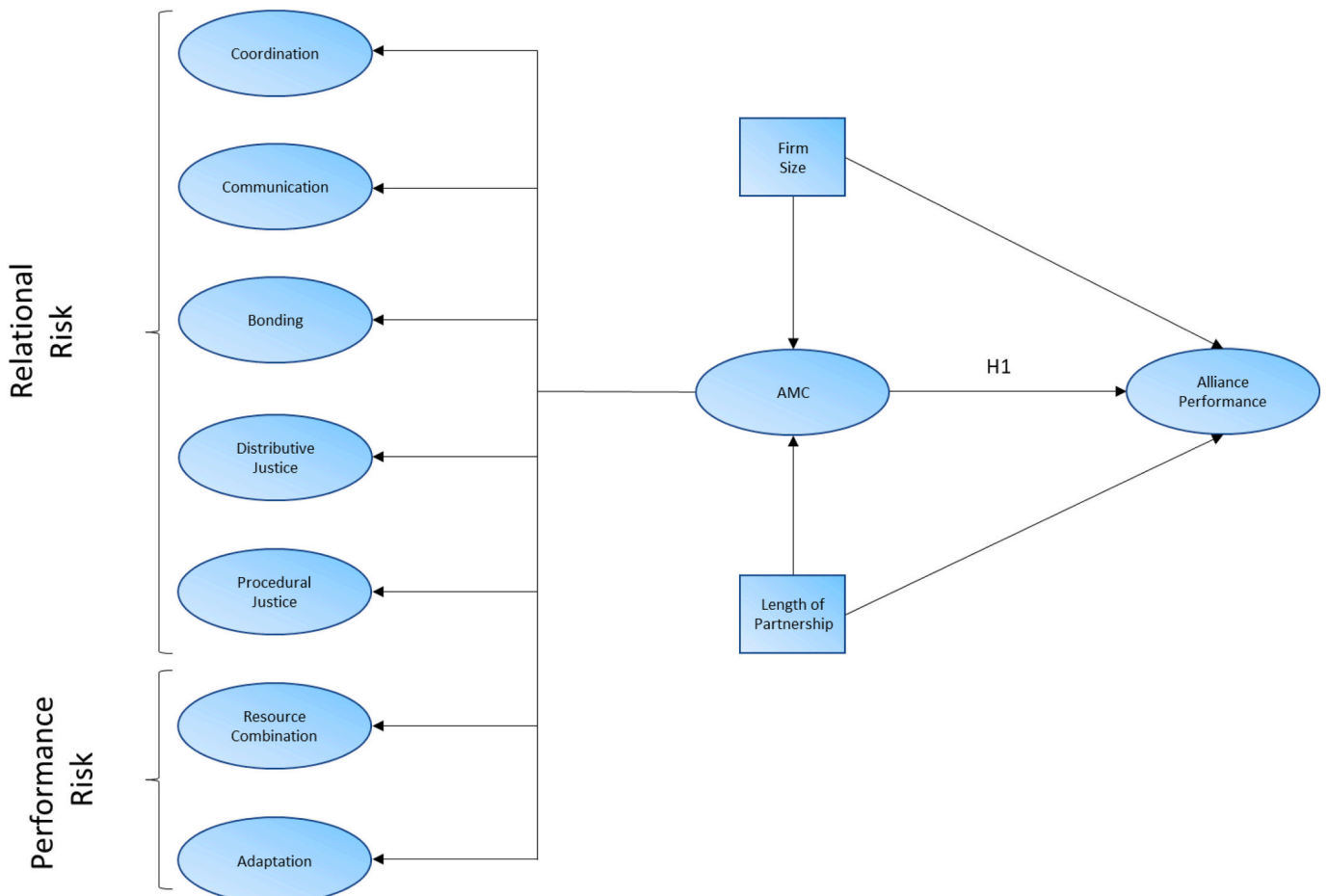


Fig. 1. Hypothesized model of alliance management capability and alliance performance.

tasks without the proper structure available in hierarchies (Gulati & Singh, 1998). While much of the initial coordination mechanisms may be formal or contractual (Contractor & Reuer, 2014), as alliances develop, how coordination is enacted between partners assumes more import. A coordination skill can be embedded in formal processes to deal with customer queries that permit the alliance partners to deal with routine decisions in an efficient and effective manner. A clear coordination process is core to the success of an alliance as how partners deal with changes in their internal and external environments requires continual adjustment to maintain their focus on achieving their goals.

### 2.1.2. Communication

In an alliance, it is important to periodically share information between alliance members to enhance day-to-day decision making (Schilke & Lumineau, 2018). To complete a joint task effectively and efficiently, firms need to pass complete and relevant information to their partners in a timely manner (Schreiner et al., 2009). This communication can be carried out in both formal and informal ways. Firms in an alliance need to establish formal communication protocols, such as weekly meetings, to provide a platform that encourages trust, information sharing, and learning between partners (Muthusamy & White, 2005; Schreiner et al., 2009) and to provide opportunities to discuss risks and challenges with each other. In addition to formal ways, alliance partners can for example organize team events and plan informal activities together to develop opportunities to communicate. This skill to communicate is often tested throughout the alliance as circumstances change.

### 2.1.3. Bonding

The bonding aspect of AMC, as conceptualized by Schreiner et al. (2009), refers to the strong psychological bonds between the boundary spanners of an alliance. As an alliance brings together two or more individual firms, there is ample scope for misunderstandings to occur. The bonding aspect of AMC provides for a focal firm to build strong bonds with its partner by responding to its needs and showing respect for, and appreciation of, its views (Schreiner et al., 2009). Muthusamy and White (2005) discuss the dilemma present in alliances in that on one hand learning new knowledge is often the primary objective of firms entering alliances whereas on the other hand they need to protect their own knowledge to save themselves from possible opportunism. While some of this protection is gained in the early stages of the alliance through contracts and formal agreements, building strong bonds between firms goes a long way towards having effective conflict resolution processes and the fostering of better relationships (Li, Jiang, Pei, & Jiang, 2017). Conflict can increase the costs of doing business and can potentially reduce the opportunity to extract value from shared resources (Liu et al., 2014; Trada & Goyal, 2017), thus developing a skill to create bonds between alliance partners can be an important source of value for an alliance. This skill is not developed overnight and evolves through repeated interactions. Ensuring that the focal firm does more than required for an alliance partner to be satisfied, by for example attending to their requests as priorities, can evoke norms of reciprocity that lead to strong bonds.

## 2.2. Justice

Significant research has been undertaken on justice in organizations (Crawshaw, Cropanzano, Bell, & Nadisic, 2013; Holtz & Harold, 2011) and in inter-organizational relationships (Bouazzaoui et al., 2020; Narasimhan et al., 2013), and justice is conceptualized in line with SET. Justice is a comparative perception in that it occurs when an alliance partner feels that they are being treated differently. This paper argues that managing this perception of justice is an activity that organizations can develop and use with partners in an alliance. The development of these activities is fostered through the codification of practices and procedures, that demonstrate to partners that they are being treated with justice. This can have a positive impact on alliance success

(Bouazzaoui et al., 2020). Trada and Goyal (2017) outline how both distributive and procedural injustice can increase opportunism. Incorporation of justice has the added benefits of reducing transactions costs (Luo, 2008) in line with TCE, and of reducing the possibility of alliance termination (Yang et al., 2012). We, in line with Trada and Goyal (2017), focus on distributive justice and procedural justice.

### 2.2.1. Distributive justice

In an alliance context, distributive justice (DJ) requires that the rewards emanating from the alliance are fairly shared between the partners (Luo, 2007, 2008; Melkonian, Monin, & Noorderhaven, 2011). In terms of a process therefore, it behooves the alliance partner to establish and maintain procedures and policies that ensure fairness in sharing rewards (Crawshaw et al., 2013). Partners devote time, resources, and effort to the successful functioning of an alliance, and a DJ activity should ensure that this expenditure is sufficiently rewarded (Ariño & Ring, 2010). In the post-formation stage, contracts often do not cover all eventualities. An activity to ensure fairness in sharing rewards, and negative outcomes should they occur, is essential in building a good relationship between the parties in the alliance, and should, we posit, play a part in extending the life of the alliance and mitigate against alliance failure (Yang et al., 2012). Given that justice is perceptual in nature, especially in the case of non-monetary rewards where the outcomes are not visible to both parties, a DJ activity becomes more relevant since it conveys to the partner that the focal firm is not taking undue advantage when there is asymmetric information. Trada and Goyal (2017) find a direct link between unfair procedures and opportunism thus highlighting the importance of this skill for the effective functioning of an alliance. Developing a DJ skill requires a significant degree of openness and transparency between partners, which can be challenging especially at the earlier stages of alliances.

### 2.2.2. Procedural justice

Ensuring success of an alliance through reduction of the risks of opportunism and other negative behaviors (Huo, Wang, & Tian, 2016) requires the expertise to develop and maintain procedural justice (PJ). Rather than focusing on outcomes which is the purview of DJ, PJ concentrates on the decision-making procedures themselves (Luo, 2008; Melkonian et al., 2011). Crafting procedures that ensure fairness in decisions is an important skill in the successful management of alliances, as it reduces anxiety and stress levels for alliance partners. A PJ skill therefore ensures the alliance partners can create strong relationships based on clear procedures (Trada & Goyal, 2017). A process to develop these clear decision-making procedures can be developed over time or through learning from alliance partners who already have this capability. Alliance partners could consider, for example, giving access to each other's supply chain management system to demonstrate the fairness of decision-making procedures around prioritization of orders.

## 2.3. Resource management

Managing alliances successfully entails not only having the skill to enhance the relationship between alliance partners but also the skillset to manage resources to attain higher levels of performance outcomes (Albers et al., 2016; Jiang, Jiang, Cai, & Liu, 2015; Styles, Patterson, & Ahmed, 2008). Research, building on the Resource Based View (RBV) of the firm (Wiklund & Shepherd, 2009), has added significantly to our understanding of resource management and its effects on performance (Chiambaretto & Wassmer, 2019; Kunc & Morecroft, 2010; Sirmon, Hitt, & Ireland, 2007). The underlying proposition of the RBV, in this context, is that two separate firms with an identical set of resources and external environmental conditions can achieve significantly different outcomes owing to their different resource management processes (Kraaijenbrink et al., 2010). The available resource base thus represents only potential value creation. The actual realized value is dependent on how effectively the available resource base is utilized (Kauppila, 2015; Wiklund &

Shepherd, 2009). Alliance capabilities are built upon the RBV in that they consist of a set of competencies and processes which together create resources that identify competitive advantage (Forkmann et al., 2018; Kohtamäki et al., 2018; Kraaijenbrink et al., 2010). It is our contention that a skillset to manage resources more effectively is key to reducing the risk of alliance failure and is at the root of the skills around knowledge management (Kale & Singh, 2009) that are noted in other conceptualizations of AMC.

Sirmon et al. (2007) argues that resource management consists of three separate stages: namely structuring, bundling and leveraging. Structuring refers to gaining access to a pool of resources via acquiring resources externally or developing them internally. Bundling represents resource combination activities to develop capabilities and the process of making changes to keep up with the changing environment. Finally leveraging refers to the efficient utilization and deployment of these resources to generate value. In the post-formation stage, the partners have already been chosen and thus the resource base is already present, that is the structuring stage (Sirmon et al., 2007), is essentially complete. While this process may be ongoing throughout the alliance, the core aim of the post-formation stage is to optimally combine resources and adapt them according to dynamic environmental conditions (Chiambaretto & Wassmer, 2019; Sirmon et al., 2011; Sirmon, Gove, & Hitt, 2008; Wang & Zajac, 2007). A firm level skill to combine resources to create value is widely supported in the literature (Chadwick, Super, & Kwon, 2015; Galunic & Rodan, 1998) and is related to the bundling and leveraging elements of resource management (Sirmon et al., 2007). The capability to adapt in accordance with changing external dynamics (Nadkarni & Herrmann, 2010) permits the bundling and leveraging aspects to be more effective when adjustment is needed due to external change. Thus, two distinct firm-level skills to manage resources, in the post-formation alliance stage, can be identified: (1) resource combination and (2) adaptation.

### 2.3.1. Resource combination

Researchers have discussed the importance of complementary resources in an alliance context (Chiambaretto & Wassmer, 2019; Fang, Lee, Palmatier, & Guo, 2016; Sirmon et al., 2008; Wang & Zajac, 2007) to obtain positive performance outcomes. In this context Wiklund and Shepherd (2009) contend that although the degree of resource complementarity is important, it is the organization level skill of combining complementary resources that ultimately decides performance of an alliance. We posit that an ability to combine resources effectively and efficiently, both their own and those of the alliance, provides a firm with the ability to achieve positive performance outcomes. Developing this skill is challenging and may take time to develop, as understanding the resource base available will not be immediate. As a result, we contend that this is a skill that is built and maintained in the post-formation stage of an alliance because this is where partners can use processes and procedures to store their knowledge of each other and the resources available. Once this skill is developed, it is then transferable to other alliances the organization engages in. Alliance partners can either keep resources for themselves or deploy them in the alliance (Levinthal & Wu, 2010). Understanding how resources complement each other could improve the level of integration between alliance partners, and across different alliances, and is a foundation for more effective alliances (Sirmon et al., 2011). To foster this skill, firms need to undertake resource audits to understand which resources are potentially being under-utilized (Chiambaretto & Wassmer, 2019) and focus on the opportunity costs of not using certain resources to their advantage (Levinthal & Wu, 2010). Ensuring that the alliancing facing personnel work well together and understand the resource base available will go a long way towards the development of this skill (Chadwick et al., 2015).

### 2.3.2. Adaptation

Adaptation, in an alliance context, can be internally oriented or

externally oriented. Internal adaptation is required as the motives of partners may change over time. The coordination skill, as described earlier, deals with internal, to the alliance, adaptation challenges via the skill to align actions (Gulati, Lawrence, & Puranam, 2005; Schreiner et al., 2009). The adaptation skill, in this paper, thus is a skill to manage changes to utilization of resources due to changes in external conditions. Environmental change may require a reformulation of strategy to achieve the stated objectives of an alliance (Schilke, 2014b). In an alliance, combining complementary resources is not a guarantee for success unless the complementary resource base is effectively adapted to the environment. An adaptation skill, therefore, involves a focal firm having the ability to reconfigure activities and procedures in accordance with the changing external environment (Gibson & Birkinshaw, 2004) to meet the challenge of dynamic conditions more effectively. Even in times of stable environmental conditions, alliance partners can be slow to fully commit their resources and thus the bundles of resources that may be available to the alliance may change over time thus requiring adaptation (Sirmon et al., 2011). Building this skill requires the alliance partners to continually scan the environment and to work with each other to best adapt their unique and shared resource bases to meet the ensuing challenges. For example, in times of heightened competition, a firm in an alliance may change its supply chain processes to enable rapid internationalization by the alliance partners for a joint product to support entry to new markets.

In summary, a firm level capability to manage the post-formation management stage of an alliance requires skills to coordinate, communicate and bond with its alliance partner. These are complemented by procedures that are just and fair and the organization requires the capability not only to develop clear decision-making procedures (PJ) but also to ensure that rewards are shared equitably (DJ). Finally, alliances are created to get access to resources so that alliance partners can achieve common goals. However, access to resources is not enough, capabilities to combine resources in different ways and to adapt to changes in the resource base of the alliance are required.

### 2.4. Alliance performance

There is clear evidence that the higher the level of AMC, the higher the level of alliance performance (Kaupilla, 2015; Kohtamäki et al., 2018; Niesten & Jolink, 2015; Rothaermel & Deeds, 2006; Schilke, 2014a; Wang & Rajagopalan, 2015). As a result, we contend that our second order conceptualization of AMC will be positively associated with alliance performance. The focus of this paper is on an extended conceptualization of AMC, so as a result, we construct our hypothesis to test if our extended conceptualization has a greater level of association with alliance performance than the original conceptualization of AMC developed by Schreiner et al. (2009). The hypothesis is as follows:

**Hypothesis 1.** The extended AMC conceptualization has a higher level of association with alliance performance than the Schreiner et al. (2009) AMC conceptualization.

## 3. Method

### 3.1. Sample firms and respondents

We chose alliances from Indian IT-services firms in India for our sample using three different sources. Firstly, Capitaline (a digital industry database) was used which is well established in the Indian market and has been used in previous studies on alliances on Indian firms (Krishnan, Martin, & Noorderhaven, 2006). Secondly, the NASSCOM Annual Report was used to identify member companies. NASSCOM is a trade body consortium with major Indian companies in the IT space as its members. Thirdly, the websites of large technology vendors were searched to find their partners from the Indian IT industry. Together, these provided details of 994 alliances. The firms were telephoned to

establish to confirm the existence of the alliance and to get the contact details of the person responsible for the alliance. LinkedIn was used to verify their details where possible. 117 firms (17.8%) were removed due to the alliance no longer being in existence or the firm declined to participate in the study. Our survey was mailed to 817 firms, and we received 187 responses of which 43 were incomplete. This gave a final response rate of 18.8%, comparable to similar alliance studies using a key informant methodology (Kauppila, 2015; Leischnig et al., 2014; Schilke, 2014b; Schilke & Goerzen, 2010).

Additionally, to validate the competence of the respondents to complete the survey the recommendations of Kumar, Stern, and Anderson (1993) were followed. Three validation items were included in the survey: (i) Length of the respondent's tenure with the firm (measured in years), (ii) respondent's knowledge of the firm's alliances and length of time the respondent had been involved with the alliances in question. The average term of the alliance for this study was 5.4 years. In addition, the respondent firms were experienced in managing alliances with the mean number of partnerships of about 8.6. This suggests that the respondents were well informed about the alliances in question. The alliance managers were asked to answer questions based on their key partnership. This was to ensure that the partnership was strategic in nature and not primarily a buyer-vendor relationship. Non-response bias was assessed in three ways. Firstly *t*-tests for differences between early and late responders indicated no significant differences, at the 5% level, for any of the constructs under investigation. Secondly, using information from the NASSCOM database, the sample was assessed based on size (number of employees) and age, and no significant differences, at the 5% level, were found. Finally, we tested to see if the complete responses differed from the incomplete ones and no significant differences were found in terms of size or age.

### 3.2. Measurement

Multi-item scales were adopted from previous studies with some minor contextual modifications, as per Appendix 1, and were refined through a series of seventeen interviews with industry experts, academics, and alliance managers. There are challenges in measuring capabilities as they are embedded in routines, decision making procedures, and even in structures such as manuals and joint decision-making groups. However, in a cross-sectional study such as in this paper, we took the approach that we would ask our focal organizations what processes they had and what activities they performed taking these measures from established scales in the literature, to measure the skills that form AMC. The measures for coordination, communication and bonding were taken directly from Schreiner et al. (2009). This was required to be able to test H2 though we added one additional item on coordination from Mohr and Spekman (1994), and two additional communication items from Styles et al. (2008) relating to keeping partners informed about the relationship. Items for Distributive Justice and Procedural Justice items were taken from Luo (2007) with some changes for context. The items for Resource Combination were taken from Wiklund and Shepherd (2009). Adaptation was taken from Gibson and Birkinshaw (2004) with one item added on adjustment from Nadkarni and Herrmann (2010).

Alliance performance has proven to be a difficult construct to capture primarily due to the multifaceted nature of alliances (Christoffersen, 2012). Lunnan and Haugland (2008) note three different ways of measuring the concept: financial, operational, and subjective. While financial measures are frequently used (Fang et al., 2016; Niesten & Jolink, 2015), it is difficult to get separate reliable financial information on the performance of the alliance itself. Operational measures typically include duration, stability, and termination (Christoffersen, Plenborg, & Robson, 2014). However, many alliances have pre-defined end dates, so termination as a measure may be an aspect of the alliance rather than a measure of performance. Instability, typically considered to be negatively valenced, could also be considered as a positive outcome as the

alliance may be growing in importance rather than disintegrating. Organizational performance can also be measured subjectively by asking well-informed management executives of the firm as to how well the firm is doing (Lunnan & Haugland, 2008; Schilke & Lumineau, 2018). In the case of small to medium sized firms, objective data, particularly at alliance level, is generally difficult to obtain and thus data from key-informants is the only feasible option to follow. Although subjective and objective performance represent different ways of measuring performance, they have been shown to have a significant degree of correlation (Richard, Devinney, Yip, & Johnson, 2009). Recent studies (Jiang et al., 2015; Li et al., 2017; Schilke & Lumineau, 2018) have focused on subjective performance and Christoffersen et al. (2014) find that it is the most popular method of measuring performance in this context. The scale for alliance performance was adapted from Krishnan et al. (2006) with one extra item from Kale and Singh (2007) relating to competitive position. A pre-test, followed by a pilot, was carried out with a sample of alliance managers to assess content validity, and avoid vague or ambiguous items. Minor changes to wording of individual items were made to remove ambiguity.

### 3.3. Control variables

We used length of the focal partnership as a control variable following Cao and Lumineau (2015). As the partnership lengthens the alliance partners get more time to understand each other (Schreiner et al., 2009), and thus the level of the capability increases over time (Rothaermel & Deeds, 2006). Rather than focusing on general experience with alliances, Lai and Chang (2010) found that specific experience is an important issue in the management of alliances. This factor may influence the effectiveness of an organizations' alliance management skills and activities leading to better alliance performance outcomes. We also, following other studies (Choi & Contractor, 2019; Fang et al., 2016; Rothaermel & Deeds, 2006; Schilke, 2014a, 2014b), controlled for size of the focal firm.

### 3.4. Instrument validation

As the data was collected utilizing survey measures from a single source, there is the potential for common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Several techniques were employed to minimize the risk of common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012). All respondents were the key person in their organization responsible for the alliance, so it is reasonable to expect that they were aware of the constructs in the study and were able to put them in context (MacKenzie & Podsakoff, 2012). Following Balboni et al. (2018), their knowledge of their organization and of the alliance was asked and the average score was over 6 (on a 7-point scale) with no individual scores below 5. Many of them asked for further information on the findings showing further evidence of mitigating the risk. We initially conducted Harman's one factor test. No significant single factor emerged which provides some, although limited, evidence of no substantial common method bias. Given the reported issue around this test (Podsakoff et al., 2003), the common method factor technique (Podsakoff et al., 2003) was also employed and the fit indices were very poor ( $\chi^2/df = 3.83$ , CFI = 0.507, TLI = 0.498, RMSEA = 0.136, SRMR = 0.122) showing further evidence of lack of a common method effect. A more robust method for testing this bias is the marker variable method (Hulland, Baumgartner, & Smith, 2018; Lindell & Whitney, 2001). The propensity to scan for new partners was used as the marker variable. A discounted correlation matrix (Lindell & Whitney, 2001) was calculated. The highest difference was 0.039, and there were no changes in the directionality or the significance of any of the zero order inter-construct correlations, thus providing additional support for a lack of common method bias (Lindell & Whitney, 2001; Williams, Hartman, & Cavazotte, 2010).

3.5. Analysis

Measurement models, using MPlus, were developed for each construct of interest using confirmatory factor analysis (CFA) to test reliability and validity (Anderson & Gerbing, 1988; Bagozzi & Yi, 2012). The fit indices for the measurement model, including all constructs with no structural paths, were good ( $\chi^2/df = 1.54$ , CFI = 0.91, TLI = 0.90, RMSEA = 0.059, SRMR = 0.076) (Bagozzi & Yi, 2012). This was followed by structural model estimation, as per Fig. 1, to test our hypotheses.

A CFA was run for each construct. Items with low reliabilities and unacceptable R<sup>2</sup> were removed. Construct validity was assessed, as per Appendix 1, using composite reliability (CR) and average variance extracted (AVE). All AVE estimates were greater than 0.50 except for coordination, which was very close at 0.49, and all CR values were over 0.80 (Bagozzi & Yi, 2012; Fornell & Larcker, 1981). Details can be found in Appendix 1. Discriminant validity was assessed using the inter-construct correlations and the square roots of the AVEs (Fornell & Larcker, 1981) in Table 1. One of the correlations was higher than the lowest square root of the AVE but the difference was quite small (0.01) so there is evidence of discriminant validity.

4. Results

Following established practices with second order factor models, we tested to see if the second order model itself met measurement standards. To assess this, following Schreiner et al. (2009), we compared our second order model against a single factor model ( $\chi^2/df = 3.79$ , CFI = 0.576, TLI = 0.546, RMSEA = 0.136, SRMR = 0.115), and a model where the correlation between the seven factors were constrained ( $\chi^2/df = 2.403$ , CFI = 0.788, TLI = 0.772, RMSEA = 0.095; SRMR = 0.274). The second order model was superior to these alternatives on all fit indices ( $\chi^2/df = 1.665$ , CFI = 0.901, TLI = 0.892, RMSEA = 0.066, SRMR = 0.070).

To test our hypothesis, we firstly developed a model which replicated Fig. 1 but with only the three skills identified by Schreiner et al. (2009) included. We associated this second order factor with alliance performance and controlled for length of the focal partnership. The Schreiner et al. (2009) model had an adequate level of fit ( $\chi^2/df = 1.70$ , CFI = 0.911, TLI = 0.900, RMSEA = 0.068, SRMR = 0.071) and the association with performance was, as expected, positive and significant (standardized effect size of 0.456,  $p = 0.000$ ). We then tested our proposed model as per Fig. 1 and this had a better level of fit ( $\chi^2/df = 1.51$ , CFI = 0.907, TLI = 0.901, RMSEA = 0.058, SRMR = 0.075), and the association with performance was higher (standardized effect of 0.489,  $p = 0000$ ), providing evidence in support of our main hypothesis. As the two models are not nested it was not possible to calculate other direct measures of comparison. The length of the key partnership, our control variable, had a small positive but significant (0.207,  $p < 0.05$ ) effect on AMC, though no significant effect on alliance performance (0.0179,  $p = 0.358$ ). See Fig. 2 for the results. Although the size of the firm was included as a control variable in the initial analysis, it did not have any significant effect on any of the exogenous and endogenous constructs, and thus is

not included in the final analysis.

In an alternative model, we tested if the Schreiner et al. (2009) conceptualization of AMC (with coordination, communication, and bonding as constituent skills in a second order model) with the other skills and activities at that level, effectively creating a three-level model, might better fit the data. In a further alternative, we also formed a justice second order factor and a resource related second order factor and conceptualized AMC as a third-order factor model. The overall effect on performance in these alternatives was similar to the core model tested which was expected as it is the same set of variables and relationships just grouped into higher order factors. However, these models were more complex and since the original model posited is more parsimonious, and has essentially the same outcomes, we retained the conceptual model that we developed and empirically tested. We also ran models with and without the justice components and the resource components to assess their impact. The model without the two resource related skills had a poorer level of association with performance though still positive and significant (0.477,  $p = 0.000$ ). The model without the two justice activities had a higher level of association (0.507,  $p = 0.000$ ) with performance but the fit indices were poorer. As a result of these analyses, and the high loadings of the justice activities on the second order AMC, we retained the justice activities as part of our extended conceptualization.

Another option considered is that these skills have independent effects on performance and that there is no synergistic effect of combining them into one second order alliance management capability. To assess this, we firstly assessed the level of association between each skill or activity individually with performance using seven different models. As expected, each one had a significant positive association with performance with standardized effect sizes ranging from 0.378 for bonding to 0.315 for resource combination, with an average of 0.357, all significant at  $p = 0.000$ , and the model fit was very strong in each case. This provided evidence that each component was important though it should be noted that the level of association with performance is lower than in the AMC model previously reported. Secondly, to test if the components are individually important when not combined into AMC, a single model was tested with linear relationships between the seven skills and activities, and performance. While the fit of this model was comparable to the model that tested our main hypothesis ( $\chi^2/df = 1.46$ , CFI = 0.919, TLI = 0.911, RMSEA = 0.055, SRMR = 0.064), results show that only the coordination skill strongly (0.235,  $p < 0.01$ ) and the adaptive skill (0.271,  $p < 0.10$ ) weakly relate to performance. All other skills and activities have no significant effect. We also replicated this analysis with the Schreiner et al. (2009) model ( $\chi^2/df = 1.70$ , CFI = 0.912, TLI = 0.900, RMSEA = 0.068, SRMR = 0.066) and found that only the coordination skill positively (0.211,  $p < 0.05$ ) related to performance. This provides evidence that it is when the firm deploys the capability, comprised of these seven skills and activities, the effect on performance is greater.

Table 1  
Inter-construct correlations.

Construct	Coord	Comm	Bond	DJ	PJ	Res Comb	Adaptation	Performance
Coordination	0.70							
Communication	0.38	0.73						
Bonding	0.40	0.71	0.73					
Distributive Justice	0.29	0.52	0.54	0.84				
Procedural Justice	0.36	0.64	0.66	0.63	0.84			
Resource Comb	0.23	0.41	0.43	0.36	0.44	0.73		
Adaptation	0.29	0.52	0.54	0.46	0.56	0.40	0.79	
Alliance Perf	0.21	0.38	0.39	0.33	0.40	0.26	0.33	0.82

The diagonal shows the square root of Average Variance Extracted (AVE). All correlations significant at  $p < 0.001$ .

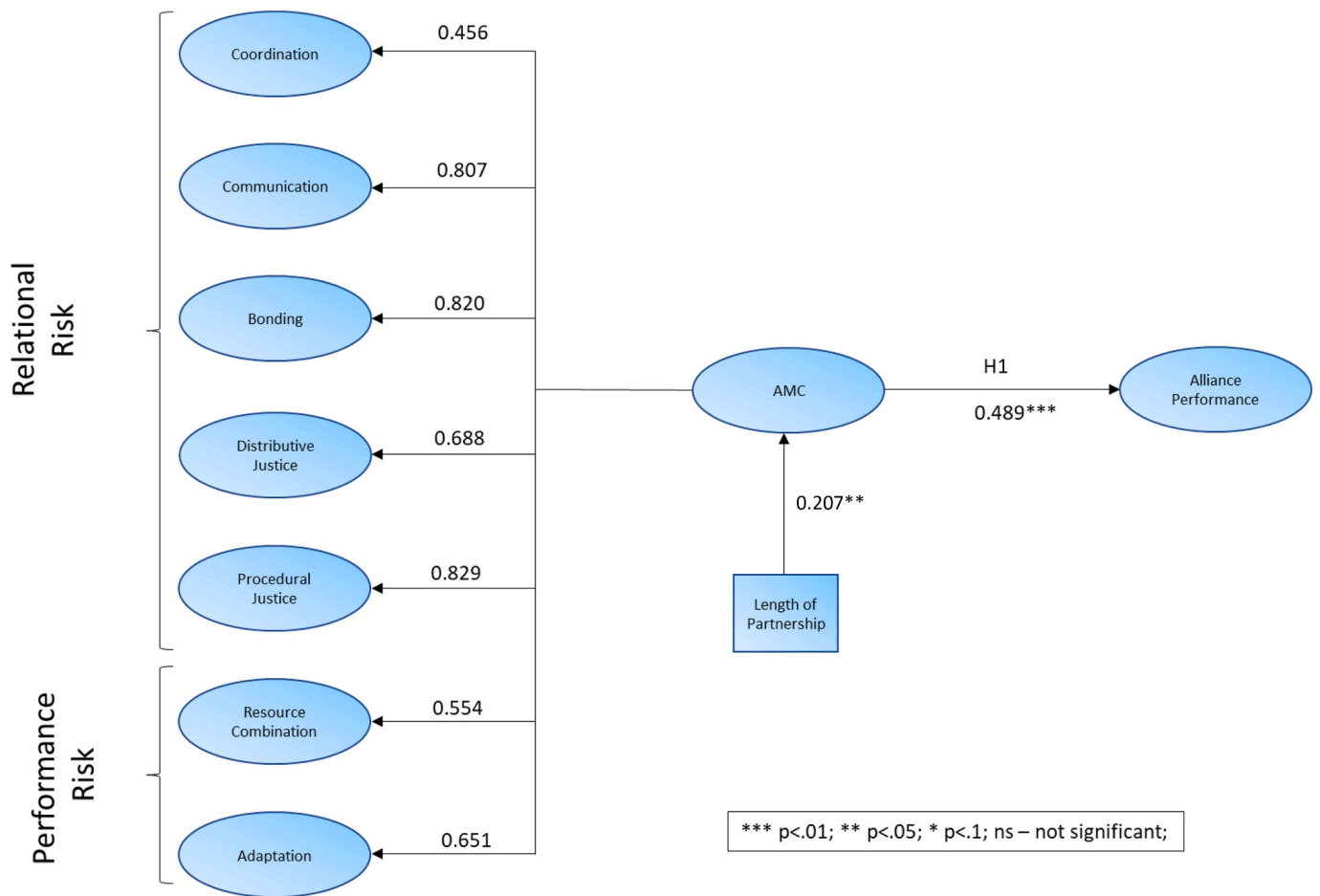


Fig. 2. Structural Model results (standardized estimates).

5. Discussion

5.1. Findings and contribution

The ability of firms to, firstly, recognize the need for capabilities to manage alliances effectively, and secondly, to develop those capabilities (Niesten & Jolink, 2015), is potentially core for their future success. This paper set out to extend the conceptualization of AMC to enable firms engaging in individual alliances to better manage both relational and performance risk in strategic alliances in the post-formation stage. We were motivated by the call by Forkmann et al. (2018) to extend alliance capabilities beyond the relational. This study contributes to the growing literature on alliance management capabilities specifically focusing on the post-formation management stage. All stages are important and arguing about the importance of one stage over the other, in ensuring the success of the alliance, is a futile debate since every stage has its own significance (Kauppila, 2015). Still, the management stage may hold the key to alliance success because it is the longest stage in the lifetime of an alliance and there remains a lack of research on this stage (Albers et al., 2016; Choi & Contractor, 2019).

Following a review of AMC conceptualizations, we develop a set of seven inter-related skills and activities. These were empirically tested on a cross-sectional data set of alliances in India. Support was found for the proposed second-order AMC and its consequent impact on alliance performance. The three skills of coordination, communication, and bonding (Schreiner et al., 2009) are well understood in the literature (Kohtamäki et al., 2018; Wang & Rajagopalan, 2015). Our paper finds strong evidence for the role of these skills thus providing face validity for our conceptualization. We also find that the longer the alliance, the

higher the level of AMC, in line with extant research (Cao & Lumineau, 2015; Lai et al., 2010; Rothaermel & Deeds, 2006). No significant effect was found for firm size (Choi & Contractor, 2019; Fang et al., 2016) thus the level of AMC does not seem to be related to how large the organization is.

We add to the literature by specifically proposing that activities to develop higher levels of distributive and procedural justice by alliance partners are part of a capability to manage alliances. This contributes to the growing calls for an exploration of the role of justice in alliance research (Bouazzaoui et al., 2020; Crawshaw et al., 2013; Wang & Dyball, 2019), and in inter-organizational relationships in general (Lumineau & Oliveira, 2018). SET is fundamental to the success of alliances, and we extend the traditional use of SET in alliance-related research through consideration of justice activities. SET underpins the justice activities included in our extended conceptualization as perceptions of injustice would reduce the likelihood of reciprocity that is central to alliance functioning. We also contend, in line with TCE, that through developing justice-related skills, organizations can reduce the costs associated with potential opportunism by partners.

Alliances are successful when they combine and adapt resources to meet alliance related goals. Some of this activity was already captured by the coordination skill (Schreiner et al., 2009), and our additional resource combination and adaptation skills complement and extend this. Resource management is core to increased performance in an alliance context (Albers et al., 2016; Chadwick et al., 2015; Jiang et al., 2015; Sirmon et al., 2011; Styles et al., 2008; Wiklund & Shepherd, 2009). We drew on this literature to add two skills: a resource combination skill and an adaptive skill. We stress the importance of resource combination as fundamentally an alliance brings partners together to exploit common



and unique resources. We contend that the lack of such a skill is a major stumbling block in deriving value from the alliance and thus it is core to an alliance management capability. Alliances do not operate in vacuums and as a result the skill to adapt resources to changing circumstances is also, in our view, essential. Much of the literature in this area has stressed the importance of knowledge (Kale & Singh, 2009; Kohtamäki et al., 2018) and while we agree this is important, we consider to what end this knowledge is applied – the effective management of resources. It is our contention, and validated through this paper, that the skills to combine resources and adapt the resource base to changing circumstances contribute to alliance success.

### 5.2. Managerial implications

The AMC framework proposed in this paper also offers several practical implications for alliance managers and for organizations that are either in alliances or plan to enter them. It may also provide a useful framework to analyze reasons for alliance failure. Each of the seven skills and activities are individually important, as shown in our results, but it is when they combine as a capability to manage an alliance, it is when they have the highest association with performance. For example, although communication and bonding are vital for smooth alliance functioning, alliance managers also need to develop skills to make sure that their counterparts perceive alliance functioning to be fair. Likewise, although a good relationship is the key to a successful alliance, ultimately it must perform financially, and this can be achieved through better efforts in combining resources and adapting resources to external changes. This multipronged approach, although difficult in practice, will go a long way in ensuring that favorable alliance outcomes are achieved.

Alliance management capability, although straightforward and simple in appearance, can be quite difficult to initiate and sustain at the firm level. Firm level processes need to be established and practiced diligently to achieve proposed alliance performance outcomes. While firms may take the step to embed these into structures, this is not always possible for smaller firms who have potentially less resources and may be more dependent on alliances to access markets or innovate. For example, the development of interfirm councils (Lorenzoni & Lipparini, 1999) may not be possible for all firms due to the resources required, however the capability to create fair order processing systems (Yang et al., 2012) where it is clear how partners are prioritized is potentially achievable by all firms. Our result that it is the length of the partnership, and not the size of the firm, that has a positive impact on the level of AMC provides further evidence for these contentions.

Although it is undoubtedly desirable that both partners have high levels of AMC, we contend that even one partner having high AMC will lead to increased alliance performance outcomes. This is due to two reasons. First, actions by one partner can affect alliance performance in a positive manner (Cullen, Johnson, & Sakano, 2000). Indeed, Bello, Katsikeas, and Robson (2010) show that a unilateral accommodation by a focal firm, owing perhaps to higher commitment to the venture, with regards to an opportunistic partner leads to higher positive outcomes for the alliance. The 17 interviews conducted support this view whereby many managers took the karmic view that good deeds lead to good outcomes, resonating with SET. Second, if one partner has a better level of AMC, than it may be able to mitigate poor performance by the other through not only its own superior skills in managing the alliance but, also in the process, sharing good alliance management practices with its partner.

### 5.3. Limitations and future research

One of the limitations of our study is that it is restricted to a single industry. Although, the IT-services industry is global in nature and tends to have common policies and procedures, undertaking research in different sectors would enhance the generalizability of our model. Given the industry, the alliances in our sample were primarily technological in

nature. Our study is conducted in India, an emerging economy, and thus there may be differences in how alliances are managed in this environment. We focused on the post-formation stage though it would be interesting to see how the presence of AMC affects the formation of new alliances though a study of initial negotiations and construction of alliance contracts.

Our ability to infer causal relationships is reduced due to the cross-sectional nature of our data. We have specified our model such that higher levels of AMC drive alliance-level performance. This is the most likely chain of reasoning and is grounded in SET and the RBV (i.e. firm level capabilities lead to performance); however, our focal relationship may be reciprocal. For example, higher levels of AMC come with a cost that can only be borne by successful alliances. Longitudinal research would help to answer this limitation though the high levels of cooperation required are difficult to attain and our interviews with key informants did not give us confidence that we would be able to employ this method successfully.

Cao and Lumineau (2015), in a meta-analysis, suggest that contractual and relational governance are related, though this contention is debated in the literature (Keller, Lumineau, Mellewigt, & Ariño, 2021). Future research could consider how contracts (Contractor & Reuer, 2014; Schilke & Lumineau, 2018) include the dimensions of our extended conceptualization of AMC. While coordination and communication mechanisms are typically part of contracts (Balboni et al., 2018; Cao & Lumineau, 2015; Contractor & Reuer, 2014; Schilke & Lumineau, 2018), how do the other activities and skills that are part of our extended conceptualization appear in contracts? For example, are justice issues (for example around fair decision making procedures) explicitly written into contracts as part of contractual governance mechanisms? Analysis of internal documentation regarding alliance policies, procedures, and protocols could also be examined to understand the various methods by which firms maintain AMC over time. Additional insight could be gained from consideration of both successful and unsuccessful alliances. The seven skills and abilities identified in this paper provide avenues of inquiry for understanding the “black box” of how alliances are managed (Albers et al., 2016).

## 6. Conclusion

Our paper responds to calls for research on capabilities required in the post-formation stage of alliances (Contractor & Reuer, 2014; Kohtamäki et al., 2018; Wang & Rajagopalan, 2015). Furthermore, we contribute to the gap identified by Albers et al. (2016) pertaining to the internal operations of alliances, through extending the range of skills and activities that comprise AMC, and thus opening new routes for future research. Our extended AMC conceptualization also contributes to the research gap identified by Forkmann et al. (2018) which calls for research on management capabilities that are not exclusively focused on relationship development. We achieve this through bringing together the emerging stream of literature on justice in alliances (Bouazzaoui et al., 2020; Wang & Dyball, 2019) and integrating it into our extended AMC conceptualization. We also focus on the ability of firms to deploy both their unique resources and those available to them due to the alliance more effectively and efficiently, through developing skills to combine and adapt resources (Chadwick et al., 2015; Chiambaretto & Wassmer, 2019; Sirmon et al., 2011). This paper demonstrates that to mitigate against relational and performance risk (Das & Teng, 2001a, 2001b; Gomes et al., 2016), alliance managers need to consider the seven skills and activities together. We find that focusing on relationship management alone is insufficient in agreement with Forkmann et al. (2018). Our conceptualization of AMC for individual alliances in the post-formation stage integrates insights from the relational view informed by SET, RBV and TCE so that firms can develop a capability composed of a set of seven distinct, yet complementary, skills and activities to enhance the functioning of their alliances and ultimately reduce the performance and relational risks that contribute to alliance

failure.

## Appendix 1: Items, loadings, and reliabilities

Scale items	Factor loadings ( $\lambda$ )	Reliability	
		Composite reliability	Average variance extracted
<b>Coordination</b>		0.825	0.489
For coordinating partner-related activities, we have established internal processes (example, for marketing, project coordination) within our company.	0.810		
For cooperation with our partner, we have established cross-company processes, meaning reaching across company boundaries	0.685		
Within our company, we meet regularly to adapt our working procedures to our partner.	0.741		
Within our company, we have adjusted our incentive systems (bonus, goal agreement) to serve the goals of the partnership with our partner.	0.561		
Within our company, we ensure that our activities with our partner are well coordinated.	0.676		
<b>Communication</b>		0.818	0.530
We always make an effort to make our partner understand our service and product offering.	0.676		
In case of any organizational changes, we always inform our partner about the new contact person in our company.	0.744		
We keep our partner well informed with regards to the relationship.	0.797		
We communicate well to our partner, our expectation regarding the performance of the partnership.	0.689		
<b>Bonding</b>		0.855	0.543
We stand by our partner's side even in difficult situations	0.751		
We listen attentively when our partner explains problems to us.	0.812		
We care about the concerns of our partner even if we do not expect any advantages to arise for us in the short term.	0.785		
During conversations we automatically understand what our partner actually wants.	0.598		
When discussing points of disagreement, we always try to see our partner's point of view.	0.721		
<b>Distributive Justice</b> Within our company, we ensure that the rewards/returns generated from the partnership are shared fairly with our partner		0.828	0.618
With respect to the Commitment shown (by each partner).	0.805		
With respect to the Responsibilities taken (by each partner).	0.841		
With respect to the Efforts put (by each partner) towards the success of the partnership.	0.706		
<b>Procedural Justice:</b> Within our company, we ensure that the procedures used		0.937	0.712
For making decisions for the partnership are fair.	0.880		
Used to negotiate and ultimately write contracts for our partnership are fair.	0.815		
Used to develop and structure the partnership are fair.	0.852		
In planning and managing the partnership activities are fair.	0.851		
To govern knowledge between two parties are fair.	0.807		
Within our company, we ensure that the execution and implementation of the partnership contract is done fairly.	0.854		
<b>Resource Combination Rate</b> your company's emphasis on using different resources, compared with the common practices in your industry, concerning		0.824	0.541
Accumulating unique resources for future use.	0.674		
Using new resources, not previously known in the industry, to pursue new strategic initiatives such as entering a new market.	0.814		
Developing new resources for use in new operations.	0.738		
Using new resources to create radically new product.	0.708		
<b>Adaptation</b>		0.828	0.618
Within our company, we encourage people to challenge outmoded traditions and practices.	0.805		
We are flexible enough to respond quickly to changes in the environment.	0.841		
We evolve rapidly in response to shifts in our business priorities.	0.706		
<b>Alliance Performance</b>		0.926	0.677
The objectives for which this partnership was established are being met	0.798		
Our firm is satisfied with the financial performance of the partnership.	0.813		
Our partner firm seems to be satisfied with the financial performance of the partnership.	0.842		
Our firm is satisfied with the overall performance of the partnership.	0.876		
Our partner firm seems to be satisfied with the overall performance of the partnership.	0.894		
Our company's competitive position has been greatly enhanced due to the partnership.	0.698		

## References

- Albers, S., Wohlgezogen, F., & Zajac, E. J. (2016). Strategic alliance structures: An organization design perspective. *Journal of Management*, 42, 582–614.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411–423.
- Ariño, A., & Ring, P. S. (2010). The role of fairness in alliance formation. *Strategic Management Journal*, 31(10), 1054–1087.
- Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science*, 40, 8–34.
- Balboni, B., Marchi, G., & Vignola, M. (2018). The moderating effect of trust on formal control mechanisms in international alliances. *European Management Review*, 15, 541–558.
- Bello, D. C., Katsikeas, C. S., & Robson, M. J. (2010). Does accommodating a self-serving partner in an international marketing alliance pay off? *Journal of Marketing*, 74(6), 77–93.
- Blau, P. M. (1964). *Exchange and power in social life*. Transaction Publishers.
- Bouazzaoui, M., Wu, H.-J., Roehrich, J. K., Squire, B., & Roath, A. S. (2020). Justice in inter-organizational relationships: A literature review and future research agenda. *Industrial Marketing Management*, 87, 128–137.

- Cao, Z., & Lumineau, F. (2015). Revisiting the interplay between contractual and relational governance: A qualitative and meta-analytic investigation. *Journal of Operations Management*, 33, 15–42.
- Chadwick, C., Super, J. F., & Kwon, K. (2015). Resource orchestration in practice: CEO emphasis on SHRM, commitment-based HR systems, and firm performance. *Strategic Management Journal*, 36(3), 360–376.
- Chiambaretto, P., & Wassmer, U. (2019). Resource utilization as an internal driver of alliance portfolio evolution: The Qatar airways case (1993–2010). *Long Range Planning*, 52(1), 51–71.
- Choi, J., & Contractor, F. J. (2019). Improving the progress of research & development (R&D) projects by selecting an optimal alliance structure and partner type. *British Journal of Management*, 30(4), 791–809.
- Christoffersen, J. (2012). A review of antecedents of international strategic alliance performance: Synthesized evidence and new directions for core constructs. *International Journal of Management Reviews*, 15, 66–85.
- Christoffersen, J., Plenborg, T., & Robson, M. J. (2014). Measures of strategic alliance performance, classified and assessed. *International Business Review*, 23, 479–489.
- Contractor, F. J., & Reuer, J. J. (2014). Structuring and governing alliances: New directions for research. *Global Strategy Journal*, 4, 241–256.
- Crawshaw, J. R., Cropanzano, R., Bell, C. M., & Nadisic, T. (2013). Organizational justice: New insights from behavioural ethics. *Human Relations*, 66, 885–904.
- Cropanzano, R., Anthony, E. L., Daniels, S. R., & Hall, A. V. (2017). Social exchange theory: A critical review with theoretical remedies. *Academy of Management Annals*, 11, 479–516.
- Cullen, J. B., Johnson, J. L., & Sakano, T. (2000). Success through commitment and trust: The soft side of strategic alliance management. *Journal of World Business*, 35(3), 223–240.
- Dan, S. M., & Zondag, M. M. (2016). Drivers of alliance terminations: An empirical examination of the bio-pharmaceutical industry. *Industrial Marketing Management*, 54, 107–115.
- Das, T. K., & Teng, B.-S. (2001a). A risk perception model of alliance structuring. *Journal of International Management*, 7, 1–29.
- Das, T. K., & Teng, B.-S. (2001b). Trust, control, and risk in strategic alliances: An integrated framework. *Organization Studies*, 22, 251–283.
- Fang, E., Lee, J., Palmatier, R., & Guo, Z. (2016). Understanding the effects of plural marketing structures on alliance performance. *Journal of Marketing Research*, 53, 628–645.
- Forkmann, S., Henneberg, S. C., & Mitrega, M. (2018). Capabilities in business relationships and networks: Research recommendations and directions. *Industrial Marketing Management*, 74, 4–26.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39–50.
- Galunic, D. C., & Rodan, S. (1998). Resource recombinations in the firm: Knowledge structures and the potential for schumpeterian innovation. *Strategic Management Journal*, 19, 1193–1201.
- Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, 47, 209–226.
- Gomes, E., Barnes, B. R., & Mahmood, T. (2016). A 22 year review of strategic alliance research in the leading management journals. *International Business Review*, 25, 15–27.
- Gulati, R. (1998). Alliances and networks. *Strategic Management Journal*, 19, 293–317.
- Gulati, R., Lawrence, P. R., & Puranam, P. (2005). Adaptation in vertical relationships: Beyond incentive conflict. *Strategic Management Journal*, 26, 415–440.
- Gulati, R., & Singh, H. (1998). The architecture of cooperation: Managing coordination costs and appropriation concerns in strategic alliances. *Administrative Science Quarterly*, 43, 781–814.
- Gulati, R., Wohlgezogen, F., & Zhelyazkov, P. (2012). The two facets of collaboration: Cooperation and coordination in strategic alliances. *The Academy of Management Annals*, 6, 531–583.
- He, Q., Meadows, M., Angwin, D., Gomes, E., & Child, J. (2020). Strategic alliance research in the era of digital transformation: Perspectives on future research. *British Journal of Management*, 31(3), 589–617.
- Holtz, B. C., & Harold, C. M. (2011). Interpersonal justice and deviance: The moderating effects of interpersonal justice values and justice orientation. *Journal of Management*, 39, 339–365.
- Hulland, J., Baumgartner, H., & Smith, K. M. (2018). Marketing survey research best practices: Evidence and recommendations from a review of JAMS articles. *Journal of the Academy of Marketing Science*, 46, 92–108.
- Huo, B., Wang, Z., & Tian, Y. (2016). The impact of justice on collaborative and opportunistic behaviors in supply chain relationships. *International Journal of Production Economics*, 177, 12–23.
- Jiang, X., Jiang, F., Cai, X., & Liu, H. (2015). How does trust affect alliance performance? The mediating role of resource sharing. *Industrial Marketing Management*, 45, 128–138.
- Kale, P., & Singh, H. (2007). Building firm capabilities through learning: The role of the alliance learning process in alliance capability and firm-level alliance success. *Strategic Management Journal*, 28, 981–1000.
- Kale, P., & Singh, H. (2009). Managing strategic alliances: What do we know now, and where do we go from here? *Academy of Management Perspectives*, 23(3), 45–62.
- Kauppila, O.-P. (2015). Alliance management capability and firm performance: Using resource based theory to look inside the process black box. *Long Range Planning*, 48, 151–167.
- Keller, A., Lumineau, F., Mellewigt, T., & Ariño, A. (2021). Alliance governance mechanisms in the face of disruption. *Organization Science*, 32(6), 1542–1570.
- Kohtamäki, M., Rabetino, R., & Möller, K. (2018). Alliance capabilities: A systematic review and future research directions. *Industrial Marketing Management*, 68, 188–201.
- Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2010). The resource-based view: A review and assessment of its critiques. *Journal of Management*, 36(1), 349–372.
- Krishnan, R., Martin, X., & Noorderhaven, N. G. (2006). When does trust matter to alliance performance? *Academy of Management Journal*, 49, 894–917.
- Kumar, N., Stern, L. W., & Anderson, J. C. (1993). Conducting interorganizational research using key informants. *Academy of Management Journal*, 36, 1633–1651.
- Kunc, M. H., & Morecroft, J. D. W. (2010). Managerial decision making and firm performance under a resource-based paradigm. *Strategic Management Journal*, 31, 1164–1182.
- Lai, W. H., & Chang, P. L. (2010). Corporate motivation and performance in R&D alliances. *Journal of Business Research*, 63(5), 490–496. <https://doi.org/10.1016/j.jbusres.2009.04.007>
- Latussek, D., & Vlaar, P. W. (2018). Uncertainty in interorganizational collaboration and the dynamics of trust: A qualitative study. *European Management Journal*, 36, 12–27.
- Leischnig, A., Geigenmüller, A., & Lohmann, S. (2014). On the role of alliance management capability, organizational compatibility, and interaction quality in interorganizational technology transfer. *Journal of Business Research*, 67, 1049–1057.
- Levinthal, D. A., & Wu, B. (2010). Opportunity costs and non-scale free capabilities: Profit maximization, corporate scope, and profit margins. *Strategic Management Journal*, 31(7), 780–801.
- Li, L., Jiang, F., Pei, Y., & Jiang, N. (2017). Entrepreneurial orientation and strategic alliance success: The contingency role of relational factors. *Journal of Business Research*, 72, 46–56.
- Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 86, 114–121.
- Liu, Y., Liu, T., & Li, Y. (2014). How to inhibit a partner's strong and weak forms of opportunism: Impacts of network embeddedness and bilateral TSIs. *Industrial Marketing Management*, 43(2), 280–292.
- Lorenzini, G., & Lipparini, A. (1999). The leveraging of interfirm relationships as a distinctive organizational capability: A longitudinal study. *Strategic Management Journal*, 20(4), 317–338.
- Lumineau, F., & Oliveira, N. (2018). A pluralistic perspective to overcome major blind spots in research on interorganizational relationships. *Academy of Management Annals*, 12(1), 440–465.
- Lunnan, R., & Haugland, S. A. (2008). Predicting and measuring alliance performance: A multidimensional analysis. *Strategic Management Journal*, 29, 545–556.
- Luo, Y. (2007). The independent and interactive roles of procedural, distributive, and interactional justice in strategic alliances. *Academy of Management Journal*, 50, 644–664.
- Luo, Y. (2008). Procedural fairness and interfirm cooperation in strategic alliances. *Strategic Management Journal*, 29, 27–46.
- Luo, Y., Liu, Y., Yang, Q., Maksimov, V., & Hou, J. (2015). Improving performance and reducing cost in buyer-supplier relationships: The role of justice in curtailing opportunism. *Journal of Business Research*, 68, 607–615.
- MacKenzie, S. B., & Podsakoff, P. M. (2012). Common method bias in marketing: Causes, mechanisms, and procedural remedies. *Journal of Retailing*, 88, 542–555.
- Melkonian, T., Monin, P., & Noorderhaven, N. G. (2011). Distributive justice, procedural justice, exemplarity, and employee's willingness to cooperate in M&A integration processes: An analysis of the air France-KLM merger. *Human Resource Management*, 50, 809–837.
- Min, J. (2017). Sensitivity of alliance termination to prealliance conditions: Expectation effects of alliance partners. *Organization Studies*, 38, 917–936.
- Mohr, J., & Spekman, R. (1994). Characteristics of partnership success: Partnership attributes, communication behavior, and conflict resolution techniques. *Strategic Management Journal*, 15, 135–152.
- Musarra, G., Robson, M. J., & Katsikeas, C. S. (2016). The influence of desire for control on monitoring decisions and performance outcomes in strategic alliances. *Industrial Marketing Management*, 55, 10–21.
- Muthusamy, S. K., & White, M. A. (2005). Learning and knowledge transfer in strategic alliances: A social exchange view. *Organization Studies*, 26, 415–441.
- Nadkarni, S., & Herrmann, P. (2010). CEO personality, strategic flexibility, and firm performance: The case of the Indian business process outsourcing industry. *Academy of Management Journal*, 53, 1050–1073.
- Narasimhan, R., Narayanan, S., & Srinivasan, R. (2013). An investigation of justice in supply chain relationships and their performance impact. *Journal of Operations Management*, 31, 236–247.
- Niesten, E., & Jolink, A. (2015). The impact of alliance management capabilities on alliance attributes and performance: A literature review. *International Journal of Management Reviews*, 17, 69–100.
- Niesten, E., & Jolink, A. (2018). Alliance governance choices: Disentangling the effects of uncertainty and alliance experience. *Long Range Planning*, 51(2), 320–333.
- O'Dwyer, M., & Gilmore, A. (2018). Value and alliance capability and the formation of strategic alliances in SMEs: The impact of customer orientation and resource optimisation. *Journal of Business Research*, 87, 58–68.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903.
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539–569.
- Rahman, N., & Korn, H. J. (2014). Alliance longevity: Examining relational and operational antecedents. *Long Range Planning*, 47(5), 245–261.

- Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring organizational performance: Towards methodological best practice. *Journal of Management*, 35, 718–804.
- Robson, M. J., Katsikeas, C. S., Schlegelmilch, B. B., & Pramböck, B. (2019). Alliance capabilities, interpartner attributes, and performance outcomes in international strategic alliances. *Journal of World Business*, 54, 137–153.
- Rothaermel, F. T., & Deeds, D. L. (2006). Alliance type, alliance experience and alliance management capability in high-technology ventures. *Journal of Business Venturing*, 21, 429–460.
- Saada, B., & Gomes-Casseres, B. (2019). Why your next deal may be a partnership. *Strategy*, 94. Available: <https://www.strategy-business.com/article/Why-Your-Next-Deal-May-Be-a-Partnership> (Accessed: 14 August 2021).
- Schilke, O. (2014a). Second-order dynamic capabilities: How do they matter? *Academy of Management Perspectives*, 28, 368–380.
- Schilke, O. (2014b). On the contingent value of dynamic capabilities for competitive advantage: The nonlinear moderating effect of environmental dynamism. *Strategic Management Journal*, 35, 179–203.
- Schilke, O., & Goerzen, A. (2010). Alliance management capability: An investigation of the construct and its measurement. *Journal of Management*, 36, 1192–1219.
- Schilke, O., & Lumineau, F. (2018). The double-edged effect of contracts on alliance performance. *Journal of Management*, 44, 2827–2858.
- Schreiner, M., Kale, P., & Corsten, D. (2009). What really is alliance management capability and how does it impact alliance outcomes and success? *Strategic Management Journal*, 30, 1395–1419.
- Simonin, B. L. (1997). The importance of collaborative know-how: An empirical test of the learning organization. *Academy of Management Journal*, 40, 1150–1174.
- Simoons, P. (2018). How to steer clear from the high failure rate of strategic alliances. Available: <https://www.petersimoons.com/how-to-steer-clear-from-the-high-failure-rate-of-strategic-alliances/> (Accessed: 14 August 2021).
- Sirmon, D. G., Gove, S., & Hitt, M. A. (2008). Resource management in dyadic competitive rivalry: The effects of resource bundling and deployment. *Academy of Management Journal*, 51, 919–935.
- Sirmon, D. G., Hitt, M. A., & Ireland, R. D. (2007). Managing firm resources in dynamic environments to create value: Looking inside the black box. *Academy of Management Review*, 32, 273–292.
- Sirmon, D. G., Hitt, M. A., Ireland, R. D., & Anitra, G. B. (2011). Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management*, 37, 1390–1412.
- Styles, C., Patterson, P. G., & Ahmed, F. (2008). A relational model of export performance. *Journal of International Business Studies*, 39, 880–900.
- Trada, S., & Goyal, V. (2017). The dual effects of perceived unfairness on opportunism in channel relationships. *Industrial Marketing Management*, 64, 135–146.
- Vitasek, K. (2020). The increasing need for strategic alliances. In *Forbes*, 28th March. Available: <https://www.forbes.com/sites/katevitasek/2020/03/28/the-increasing-need-for-strategic-alliances/> (Accessed: 14 August 2021).
- Wang, A., & Dyball, M. C. (2019). Management controls and their links with fairness and performance in inter-organisational relationships. *Accounting and Finance*, 59(3), 1835–1868.
- Wang, L., & Zajac, E. J. (2007). Alliance or acquisition? A dyadic perspective on interfirm resource combinations. *Strategic Management Journal*, 28, 1291–1317.
- Wang, Y., & Rajagopalan, N. (2015). Alliance capabilities: Review and research agenda. *Journal of Management*, 41, 236–260.
- Whitler, K. A. (2014). Why strategic alliances fail: New CMO council report. Available: <https://www.forbes.com/sites/kimberlywhitler/2014/10/24/why-strategic-alliances-fail-new-cmo-council-report/> (Accessed: 10 August 2021).
- Wiklund, J., & Shepherd, D. (2009). The effectiveness of alliances and acquisitions: The role of resource combination activities. *Entrepreneurship Theory and Practice*, 33, 193–212.
- Williams, L. J., Hartman, N., & Cavazotte, F. (2010). Method variance and marker variables: A review and comprehensive CFA marker technique. *Organizational Research Methods*, 13, 477–514.
- Williamson, O. E. (1985). *The economic institutions of capitalism: Firms, markets, relational contracting*. New York: Free Press, Collier Macmillan.
- Yang, D., Sivadas, E., Kanf, B., & Oh, S. (2012). Dissolution intention in channel relationships: An examination of contributing factors. *Industrial Marketing Management*, 41, 1106–1113.