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Co-marketing capability: scale development and performance implications

Abstract

Co-marketing alliances are a sustainable source of competitive advantage, though alliances still pose significant management challenges. Little is known about which capabilities allow firms to manage ongoing co-marketing alliances. Drawing on in-depth interviews with marketing alliance managers, the authors differentiate three dimensions of co-marketing capability and develop a multi-dimensional scale for its measurement. They test the relationship of co-marketing capability with alliance performance, as well as the moderating role of boundary conditions specific to alliances, using a cross sectional survey of 287 chief marketing officers. They find amplifying and buffering effects of the alliance context. The empirical results imply that managers who want to benefit from their co-marketing alliances should invest in alliance coordination, inter-firm communication, and knowledge management capabilities, and that alliance tenure, power imbalance among partners, and alliance flexibility affect resource allocation decisions.

Keywords: co-marketing capability, co-marketing alliances, alliances, alliance performance, survey research.
JEL Classification: M31.

Introduction

In the past two decades, alliances have become central to most firms' marketing strategies (e.g., Kale & Singh, 2009). The benefits of co-marketing alliances are vast, including access to new markets or new customers (Bucklin & Sengupta, 1993). For example, by forming an alliance with a well-established retailer, a manufacturing firm gains access to the retailer's customers. A co-marketing alliance also can provide a firm with access to new products, product features, brands or services and thus help create stronger offerings (Kalaignanam et al., 2007). It offers a firm access to new knowledge and skills, meaning that it does not need to develop them internally (Rindfleisch & Heide, 1997). Co-marketing alliance announcements even create abnormal stock returns and increase firm value (Swaminathan & Moorman, 2009).

Along with these potential contributions, alliances pose significant managerial challenges. The potential for serious conflict is always present, because partners often compete in areas not covered by the alliance agreement, use the alliance opportunistically to gain a better market position at the expense of their partner or battle over intellectual property (Swaminathan & Moorman, 2009). These challenges lead approximately 70% of alliances to fail (Sivadas & Dwyer, 2000) and more than 50% to be terminated ahead of schedule, without reaching the alliance's goals (Lunnan & Haugland, 2007). In some cases, alliances even destroy shareholder value (Kale et al., 2002). Not surprisingly then, considerable research has focused on how alliances might be designed to ensure they offer competitive advantage.

However, most prior research has focused on alliance formation mechanisms. Considerably less attention has centred on the management of ongoing alliances and on the special field of co-marketing alliances; to the best of our knowledge, this study offers the first examination of post-alliance formation management efforts. Co-marketing alliances can be defined as 'formalized collaborative arrangements between two or more organizations focused on downstream value chain activities' (Swaminathan & Moorman, 2009, p. 53). In addition, co-marketing alliances represent a form of symbiotic marketing (Varadarajan & Rajaratnam, 1986), with three distinct characteristics. First, they aim to amplify or create consumer awareness of the benefits offered by the participating firms. Second, co-marketing alliances are typically undertaken by firms whose products are complements in the marketplace. The alliances therefore involve marketing coordination between the partners, which may extend to joint product development, distribution, communication or market access. Third, the motivation to form co-marketing alliances arises from demand-side considerations, such as consumer preferences for mutual products.

To date, researchers have identified several external and internal antecedents of co-marketing alliance success. The key environmental factors include the rate of technological change (Bucklin & Sengupta, 1993) and network efficiency or density (Swaminathan & Moorman, 2009). Organizational factors that increase co-marketing alliance efficiency include balanced power within the alliance, a low level of conflict, partners that match each other and alliance tenure (e.g., Bucklin & Sengupta, 1993). Furthermore the commitment and compatibility of the alliance partners can influence co-marketing satisfaction. Idiosyncratic and complementary resources, senior management commitment, alliance experience, partner identification propensity and the ability to develop alliance managers also tend to lead to joint

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success in co-marketing alliances (Lambe et al., 2002). Even with these insights though, we still lack an answer to the crucial question of how successful co-marketing alliances should be managed, as well as which underlying capabilities and alliance-based contingency variables result in stronger co-marketing alliance performance.

To address this shortfall, we conduct in-depth interviews with marketing alliance managers and identify three dimensions of co-marketing capability that enable firms to engage effectively in marketing alliances. Our approach builds on prior research that emphasizes process elements in alliances (Ireland et al., 2002). According to this view, activities are largely carried out by individuals involved in the day-to-day management of the alliance. Rather than its formation or governance, this study highlights the ongoing management of the alliance relationship process. Thus we implicitly assume that a co-marketing alliance, with an appropriate partner and an enabling governance structure, exist already. Based on interviews with executives, we develop a multi-dimensional scale to measure co-marketing capability. We then test the relationship of co-marketing capability with alliance performance, as well as the moderating role of managerial alliance challenges, using a cross-industry survey of 287 chief marketing officers.

1. Conceptual development and hypotheses

1.1. Theoretical background. Competitive advantages that stem from different degrees and qualities of resources are central to any marketing strategy (Hunt & Morgan, 1995), and successfully managed alliances might provide such advantages (Ireland et al., 2002). The resource-based view of the firm defines a firm's enduring competitive advantage as related to its possession of unique, inimitable resources and capabilities, created over time through complex interactions of the firm's resources and the development and exchange of information (Teece et al., 1997). Moreover, some unique resources can be traded selectively through inter-firm relationships, which implies that inter-organizational relationships create sustained cooperative advantages through idiosyncratic, complementary resource combinations. Furthermore, dynamic capability theory suggests that some firms are better able than others to enhance their overall competitive advantage by adding, reconfiguring and deleting resources or competences (Eisenhardt & Martin, 2000). Dynamic capabilities enable firms to create, deploy, and protect the intangible assets that support superior long-run business performance. In this view, companies may seek co-marketing alliances when they need additional resources or assets. Yet knowledge is missing on how to manage co-marketing alliances systematically or provides an empirically grounded explanation. To address this gap, we aim to measure a firm's co-marketing capability, though we recognize that such a strategic resource has only potential value, depending partially on the circumstances in which it is applied (Barney et al., 2001). For example, improper partner selection and variances in expectations would make alliance management more challenging. Accordingly, we identify characteristics that increase or reduce the impact of co-marketing capabilities on co-marketing alliance performance.

1.2. Qualitative data collection and analysis. With our qualitative inquiry, we attempt to shed light on co-marketing capability, defined as the organizational capabilities available to manage co-marketing alliances (Anand & Khanna, 2000). We conducted 18 in-depth personal interviews with senior managers from 13 firms during five workshops and one pertinent conference (Table 1). Both the workshops and the conference were part of a larger joint research project involving multiple firms and the authors' university, devoted to the topic of co-marketing alliances. The interviews followed a semi-structured format, with an initial set of prepared questions to guide the interview, supplemented with specific follow-up questions based on each informant's individual responses. We collected statements from our interviews regarding which behaviors most affect alliance goal achievement. One author grouped these statements into distinct dimensions; the other author re-grouped the statements independently and confirmed a three-dimensional view of co-marketing capability that consists of alliance coordination, inter-firm communication and knowledge management (Table 2).

Table 1. Qualitative study sources

	Industry	Informants [number]	Annual revenue (in US$)
Workshop and conference participants			
1	Life insurance	Chief Marketing Officer [1] European Marketing Director [2]	$ 23 billion
2	Software	Vice Director Europe [3] Marketing Division Manager [4]	$ 70 billion
3	Insurance and risk management	Chief Marketing Officer [5] Marketing Division Manager [6]	$ 68 billion

Table 1 (cont.). Qualitative study sources

	Industry	Informants [number]	Annual revenue (in US$)
4	Private banking and financial services	Chief Marketing Officer [7] European Marketing Director [8]	$ 126 billion
5	Grocery retail	Chief Strategy Officer [9]	$ 20 billion
6	Financial services	Chief Marketing Officer [10]	$ 15 billion
7	Medical devices	European Country Manager [11]	$ 47 billion
8	Pharmaceutical products	Chief Sales Officer [12]	$ 929 million
9	Furniture	Chief Executive Officer [13]	$ 420 million
10	Construction and building maintenance	Channel Manager [14] Marketing Director Europe [15]	$ 3 billion
11	Internet corporation	European Marketing Director [16]	$ 6 billion
12	Management holding	Chief Executive Officer [17]	$ 204 million
13	Consumer products	Chief Sales Officer [18]	$ 2 billion

Table 2. Three dimensions of co-marketing capability

Dimension	Category	Example managerial statement [source]
Alliance coordination dimension	Active search for co-marketing alliances	'I am always looking for potential alliance partner. If we find a company that suits our objectives and firm culture, I try to get in contact and explore the possibilities of working together' [10]
	Allocation of responsibilities	'We dispense clear responsibilities within our alliance with [firm x]' [14]
	Lack of guidelines (negative)	'A past alliance of us with [firm x] failed because we lacked mutual guidelines' [16]
	Determination of contribution	'To be successful and avoid conflicts every member of an alliance need to know exactly what he has to contribute, most suitably in advance of an agreement' [2]
	Missing motivation of employees (negative)	'In my opinion many alliances fail because the responsible employees are not motivated to fully engage in mutual tasks and thus do not exploit the full potential of an alliance' [13]
	Well-established routines	'All managers and employees involved in an alliance need to know about the way we work together across the boundaries of each firm' [4]
	Well-planned work assignments	'We tend to assign work packages for each partner in an initial workshop' [6]
	Well-timed activities	'It is important that both partners are aware of all deadlines and critical dates that we have to keep in mind' [8]
Inter-firm communication dimension	Coordinating alliance needs	'We continuously discuss the needs and requirements with our alliance partners' [9]
	Informal exchange of information	'Besides our formal meetings and workshops I often go to lunch with my counterpart from [firm x]. These conversations tend to be much more elaborate' [6]
	Interrupted exchange of information (negative)	'I think that alliance partners should closely work together and continuously discuss upcoming topics. When exchange is interrupted, each alliance partner tends to go its own way – and the distinct ways do not necessary overlap' [16]
	Providing information too late (negative)	'It was very annoying when [firm x] provided important information after a delay. This irritating behavior resulted in suboptimal decisions by us and poisoned the climate of the cooperation' [14]
	Providing proprietary information	'Each partner must be willing to provide proprietary information' [16]
	Sharing information reciprocally	'Partners employ a 'giving and taking' of information in a successful alliance' [15]
Knowledge management dimension	Exhibiting own knowledge	'Well, after all it is also our duty to provide our knowledge to our alliance partners. This is the only way to keep long-lasting alliances' [16]
	Knowledge from partner firms is internalized	'Just getting the market information from [firm x] was not enough to improve our segmentation and targeting. We first had to implement it within our existing course of action. Then we were able to benefit from it' [14]
	Knowledge-absorbing capacities	'Alliance partners need to be willing and able to absorb new knowledge' [9]
	Missing assessment of unbalanced knowledge (negative)	'The main problem of many alliances is that one partner takes something as given and the other partner is not aware of it. This needs to be avoided' [17]
	Not considering experiences of alliance managers (negative)	'In many cases alliance agreements and the whole proceeding are very formal. It would be better if the experiences and evaluation of the alliance managers would count more in making crucial decisions' [15]
	Routines to gathering knowledge	'When firms have routines and processes to exchange knowledge within the alliance, then augmenting knowledge is facilitated' [11]
	Synthesizing current and acquired knowledge	'After we gain new knowledge, it is important that we confront it with our existing knowledge. What is really new? What contradicts our knowledge? And how can we use it in our firm? ' [4]

Notes: All statements were obtained in German; the table includes translations of the original statements.

1.3. Co-marketing capability and alliance performance. The multi-purpose nature of co-marketing alliances prompted us to follow previous research and pursue a multi-dimensional understanding of performance. We define co-marketing alliance performance as the degree to which a co-marketing

alliance achieves its primary objectives and contributes to outcomes including competitive positioning, the level of trust and harmony between alliance partners and success in learning critical skills or capabilities (Kale & Singh, 2007). Firm capabilities associated with alliance management accordingly are key to alliance success (Lambe et al., 2002). In the following, we derive hypotheses regarding how alliance coordination, inter-firm communication and knowledge management likely contribute to co-marketing alliance performance.

In this study, the *alliance coordination dimension* refers to an ability to coordinate and manage interdependence between partners in a co-marketing alliance. For example, informants indicated that 'we dispense clear responsibilities within our alliance with [firm x]' (i.e., allocation of responsibilities, [14]), that 'to be successful and avoid conflicts every member of an alliance needs to know exactly what he has to contribute, most suitably in advance of an agreement' (determination of contribution, [2]) and that 'we tend to assign work packages for each partner in an initial workshop' (well-planned work assignments, [6]). We expect that alliance coordination contributes to co-marketing alliance performance by enabling alliance partners to develop joint working procedures for effective task execution. Coordination skills also promote efficient joint efforts that minimize coordination costs and maximize coordination effectiveness, to the benefit of both partners (Gulati, 1995). Sivadas and Dwyer (2000) find that firms need well-timed and well-established routines and well-planned work assignments to develop new products successfully in alliance-based processes. Moreover, coordination enhances the efficiency with which a firm can use the partners' resources and avoids waste in long-term inter-firm relationships (Schreiner et al., 2009). In case of co-marketing alliances, coordination skills are crucial to implement efficient, effective joint working procedures for starting a mutual communication campaign or using a mutual distribution system, for example. Thus we hypothesize:

H1a: Alliance coordination positively influences co-marketing alliance performance.

We define the inter-firm communication dimension as the partners' ability to share formal and informal, meaningful and timely information. In our interviews, the executives noted, 'we continuously discuss the needs and requirements with our alliance partners' (coordinating alliance needs, [9]), 'besides our formal meetings and workshops I often go to lunch with my counterpart from [firm x]. This conversation tends to be much more elaborate' (informal exchange of information, [6]) and 'partners employ a 'giving and taking' of information in a successful alliance' (sharing information reciprocally, [15]). Therefore, inter-firm communication should contribute to co-marketing alliance performance by allowing alliance partners to share meaningful information on time, understand business situations and create stronger personal relationships. If alliance partners cannot share meaningful, timely information, their ability to achieve mutual objectives suffers (Schreiner et al., 2009). Dissimilarity in the available information also leads to ineffective communication and impedes experience sharing (Bucklin & Sengupta, 1993). Providing necessary information at the right time instead enhances the flexibility with which firms respond to customers or competitor-related actions, which improves performance. Intense communication also grants alliance partners a deeper understanding of business situations, which enhances their decision making (Sivadas & Dwyer, 2000). It strengthens the personal relationships among partnering corporations so they can achieve shared goals (Das & Teng, 2000). Therefore, in co-marketing alliances, inter-firm communication skills are crucial, especially to share information about the objectives of a mutual communication campaign or describe the environment of a mutual distribution system. In turn, we expect:

H1b: Inter-firm communication positively influences co-marketing alliance performance.

Finally, the knowledge management dimension refers to the ability to manage, share and deploy mutual knowledge in a co-marketing alliance, as described in the following interview statements: 'when firms have routines and processes to exchange knowledge within the alliance, then augmenting knowledge is facilitated' (routines to gather knowledge, [11]); 'after we gain new knowledge, it is important that we confront it with our existing knowledge. What is really new? What contradicts our knowledge? And how can we use it in our firm?' (synthesizing current and acquired knowledge, [4]) and 'the main problem of many alliances is that one partner takes something as given and the other partner is not aware of it. This needs to be avoided' (poor assessment of unbalanced knowledge, [17]). Knowledge management should contribute to co-marketing alliance performance, because it allows alliance partners to generate and enhance their knowledge-absorbing capacities and routines, which in turn increase the knowledge available to a firm and the likelihood

that it generates relational rents (Dyer & Singh, 1998). Furthermore, knowledge management is a key antecedent of effective alliance learning processes (Kale & Singh, 2007). Co-marketing alliances in particular provide firms with access to knowledge that enables them to adapt to their competitive environments and minimizes market risk, as long as each alliance partner has the capacity to learn the other's know-how (Ireland et al., 2002). In addition, knowledge management helps each firm manage its own intellectual property during mutual product development, especially when faced with a threat of co-marketing alliance partners that are pirates, whose sole objective is stealing secrets from the focal firm. Considering the impact of knowledge management for the success of a co-marketing alliance, we hypothesize:

H1c: Knowledge management positively influences co-marketing alliance performance.

1.4. Interactions of co-marketing capability and managerial alliance challenges. The cost and effort involved in developing co-marketing capability creates a crucial question: Does the 'implementation of these [alliance capability] processes create a bureaucracy whose costs outweigh the resultant benefits?' (Kale & Singh, 2009, p. 55). To address this issue, we test four distinct boundary conditions that might impede or enhance the effect of co-marketing capabilities on co-marketing alliance performance: alliance tenure, power imbalance, task complexity and alliance flexibility.

Co-marketing alliance tenure refers to the current age of an alliance. We expect that the positive effect of co-marketing capability on co-marketing performance decreases over time, because the potential for conflict decreases. Over time, working procedures for effective task execution, inter-firm communication and knowledge-absorbing routines become implicitly salient. This development manifests in the failure rates of alliances. Levinthal and Fichman (1988) examine the duration of inter-organizational relationships and find that the rate of failure declines continuously over time. Specifically, two-thirds of all alliances experience severe problems in the first two years, and reported failure rates range as high as 70% during this period (Das & Teng, 2000). Thus, firms that cooperate for longer develop a better mutual understanding and can cope better with conflicts. During the initial period of cooperation though, conflicts arise and create significant barriers to alliance operations (Kale & Singh, 2009). These conflicts may include alliance governance, intellectual property or task responsibility issues. For example, in the initial phase of a mutual distribution system, conflicts might arise regarding the responsibility for working procedures, the objective of the distribution system and competitive knowledge. To overcome such potential conflicts, the organization needs capabilities to manage co-marketing alliances effecttively. Coordinating, sharing meaningful and timely information and managing knowledge within a co-marketing alliance thus should be particularly crucial methods for overcoming partner opportunism, goal divergence and knowledge differences in the early stages of an alliance (Ire-land et al., 2002). Then over time, information asymmetries between partners diminish with greater knowledge about the other party. Potential conflicts also may become more salient, because true motivations and hidden objectives grow transparent (Bucklin & Sengupta, 1993). Consequently, we expect that the impact of co-marketing capability on alliance outcome is especially high in early stages and hypothesize:

H2: The longer the tenure of a co-marketing alliance, the weaker the relationship between co-marketing capability and alliance performance.

A power imbalance arises when co-marketing alliances are dominated by one partner. The positive effect of co-marketing capability on co-marketing performance should increase when the power within an alliance is distributed unequally. Asymmetrical power interferes with joint problem solving, because the weaker partner guards against exploitation while the stronger partner probes its boundaries (McAlister et al., 1986). Thus, the presence of a power imbalance impedes the achievement of the alliance goals (Sivadas & Dwyer, 2000). It also creates relational risk, such that one alliance partner might not commit fully to the alliance or fails to behave as expected. In turn, the ability to manage an alliance has a much broader and deeper effect on alliance performance when relational risk is high (Das & Teng, 2001). If one firm dominates an alliance, strong and harmonious cooperation can be achieved only when both partners exhibit significant coordination, communication and knowledge management skills. For example, in a new product alliance marked by a power imbalance, a weaker partner might worry about the unfair exploitation of its skills and resist close working conditions or exchanges of information and knowledge. The stronger partner also might push its position too far and enforce a one-sided outcome, which encourages the weak commit of its alliance partner. Both behaviors result in a dysfunctional outcome. Accordingly, we posit that co-marketing capability

is more important for co-marketing alliances characterized by power imbalances:

H3: The higher the power imbalance in a co-marketing alliance, the stronger the relationship between co-marketing capability and alliance performance.

Task complexity refers to the breadth and comprehensiveness of activities and responsibilities within a co-marketing alliance. We expect that the positive effect of a co-marketing capability on co-marketing performance increases with a more complex alliance. The complexity of co-marketing alliances differ because underlying motives focus on various tasks, such as shared advertising, joint product development or shared distribution facilities (Varadarajan & Cunningham, 1995). A shared advertising campaign demands manageable activities and comparably low complexity, but shared distribution facilities demand widespread activities and high complexity. In general, more complex tasks increase the risk of alliance failure, because higher complexity makes it more difficult for alliance partners to specify the outcomes they expect and the processes needed to achieve them (Day, 1995). In this case, the alliance requires closer partner relationships and more sophisticated alliance management capabilities (Schreiner et al., 2009). With weak coordination, communication or knowledge management, a complex alliance is likely to fail. Furthermore, the alliance domain becomes multifaceted with greater task complexity (Day, 1995). For example, both the amount and the quality of coordination, communication and knowledge management needed increase for a shared distribution alliance compared with a shared advertising campaign. Thus, we hypothesize:

H4: The higher the complexity of tasks within a co-marketing alliance, the stronger the relationship between co-marketing capability and alliance performance.

Finally, alliance flexibility refers to the rigidness of resources or responsibilities involved in the co-marketing alliance. The positive effect of co-marketing capability on co-marketing performance should increase with greater flexibility in resources or responsibilities. For example, shared advertising campaigns are predictable and thus frequently feature rigid resources and responsibilities; new product development alliances instead take place in an unpredictable setting characterized by flexible resources and responsibilities (Sivadas & Dwyer, 2000). On the one hand, flexibility within alliances is often crucial for achieving objectives (Young-Ybarra & Wiersema, 1999). Especially in co-marketing alliances, flexibility offers a key means to face uncertain marketing environments (Read et al., 2009). On the other hand, alliances tend to succeed when the partners' responsibilities are detailed in advance (Ireland et al., 2002). Departures from prior agreements involve renegotiation, which may impede the required flexibility. Moreover, restructuring resources and responsibilities across alliance partners poses significant managerial challenges and demands highly sophisticated alliance management skills (Day, 1995). The challenges of coordination, communication and knowledge management also are especially high in flexible co-marketing alliances, for several reasons (Sivadas & Dwyer, 2000). First, the coordination of joint working procedures becomes more demanding if the procedures take place in a flexible environment. Second, identifying what information is meaningful and communicating it quickly is a pre-requisite of progress in a flexible alliance. Third, knowledge-absorbing capacities must be constantly adapted in conditions of flexibility. These challenges are not as notable for rigid co-marketing alliances, whose resources and responsibilities can be detailed and negotiated in advance. We thus anticipate:

H5: The higher the flexibility of a co-marketing alliance, the stronger the relationship between co-marketing capability and alliance performance.

We present our hypotheses in Figure 1 (see Appendix). To test the proposed relationships, we undertook a cross-industry survey of 287 chief marketing officers in the German-speaking part of Switzerland. Before we could test the hypotheses though, we developed a measure of co-marketing capability.

2. Research methodology

2.1. Developing a co-marketing capability scale. Our scale development process followed the steps suggested by DeVellis (1991). We created an initial item pool, using observations from our fieldwork and a systematic literature review. Four marketing researchers then reviewed the items in our initial item pool (available from the authors). This review suggested excluding 7 items identified by the experts as inappropriate. To validate the remaining indicators, 12 managers who did not participate in the main study, recruited from an executive education program at a major European business school who indicated that they are or have been engaged in co-marketing alliances, completed a pre-test. Their responses prompted us to exclude 5 more items.

Thus, the preliminary scales consisted of 21 items (8 alliance coordination, 6 inter-firm communication and 7 knowledge management items).

2.2. Survey data collection and sample. The primary data for our hypotheses tests came from firms operating in consumer and business markets. We purchased firms' addresses from a commercial provider and selected firms with more than 100 employees to avoid any interference of small firms' likely dependence on their alliances. Such firms may have trouble finding the right alliance partner and implementing favorable governance mechanisms (Kale & Singh, 2009), which would violate our assumptions of an appropriate partner and appropriate governance structures. We mailed surveys to each top marketing executive from the resulting sample of 1,855 firms; however, 124 questionnaires were undeliverable because the managers had left the company or due to errors in the addresses. We asked the executives to respond to our questions in relation to an ongoing co-marketing alliance and included a validation item ('How knowledgeable are you regarding the co-marketing management practices?'). After performing follow-up contacts, we received 293 usable questionnaires, for an effective response rate of 17%. After eliminating 6 surveys from respondents who rated their relevant knowledge on the alliance as below 5 on the seven-point scale, we retained 287 useable surveys. The mean respondent knowledge score of 5.91 indicated the validity of the data. A comparison of early and late respondents revealed no significant differences on the main survey constructs and key demographics ($p > .05$).

2.3. Measurement. In addition to the scale for co-marketing capability, we developed new scales for task complexity and alliance flexibility. We measured task complexity with three items regarding the complexity of the objectives, activities and responsibility in a co-marketing alliance and alliance flexibility with four items regarding the flexibility of alliance management decisions, dedicated employees, joint financial assets and joint marketing and sales. All other constructs relied on established scales. The tenure of the co-marketing alliance measure used a single item adapted from Bucklin and Sengupta (1993). However, we refined their original measure, because our qualitative interviews indicated that co-marketing alliances typically span a relatively short timeframe (1 = 'up to three months' and 7 = 'more than three years'). In line with suggestions from Sivadas and Dwyer (2000), we formulated three items to capture asymmetrical dependence in co-marketing alliance, imbalance in endowments and partner domination in co-marketing alliances. We used the scale provided by Kale and Singh (2007) to measure co-marketing alliance performance. Additional variables in the survey controlled for industry and business unit heterogeneity. Specifically, we collected data on industry type, technological turbulence and business unit size. To control for alliance-specific heterogeneity, we noted the total number of co-marketing alliances entered into by the firm in the previous three years; the temporal horizon of the alliances, defined by their emphasis on mutual short- or long-term goals; asset specificity, or the amount of idiosyncratic resources devoted to the alliance; and the joint market presence of the alliance partners, a new single-item measure. Two new scales measured contractual governance and partner identification competence. Items, Cronbach's alphas, average variance extracted and composite reliability for the measures are available from the authors.

2.4. Measure reliability and validity. A confirmatory factor analysis revealed five items with low item-to-total correlations; we excluded them from further analysis. The remaining indicators loaded significantly on their intended factors, which indicated convergent validity. The square roots of the average variance extracted for each construct were significantly greater than the correlations among constructs, indicating discriminant validity. The Cronbach's alpha and composite reliability values of the constructs exceeded the recommended minimum of .70, with the exception of the strength of consumer demand. We report the summary scale statistics and correlations in Table 3 (see Appendix). Each aspect of co-marketing capability uniquely affects the firm's capability for co-marketing alliances. However, they also tend to correlate, in that they represent different facets of a common notion of co-marketing capability. We therefore used confirmatory factor analysis to estimate a reflective second-order factor model that represents these relationships. Compared to other specifications, the second-order, three-factor model best fitted our data (χ^2/[d.f.] = 224.56/[98], confirmatory fit index [CFI] = .95, root mean square error of approximation [RMSEA] = .07). The correlations between the first-order factors were significant ($p < .01$), and each first-order factor showed a high factor loading on the second-order factor. Overall, these results confirmed that co-marketing capability is a second-order, common factor of the different capabilities of co-marketing.

2.5. Results. We used hierarchical multiple regression analysis to test the hypotheses (Table 4). $H_{1a\text{-}c}$ investigate the effects of the three sub-dimensions of a firm's co-marketing capability on its alliance performance. We found that alliance coordination (β = = .19, p < .01), inter-firm communication (β = .27, p < .01) and knowledge management (β = .10, p < .10) were significant and positively associated with alliance performance (Model 2a). Firms with the abilities to coordinate and manage interdependence with their partners; to share formal and informal, meaningful and timely information; and to manage, share and deploy mutual knowledge within the domain of the co-marketing alliance thus are more likely to benefit from this alliance, in support of our hypotheses. Model 2b further reveals that the second-order factor had a strong positive effect on alliance performance (β = .47, p < .01); alliance tenure (β = .13, p < .05) had a positive, significant effect on alliance performance; but power imbalance (β = -.10, p < .10) and task complexity (β = -.23, p < .01) revealed negative, significant effects.

We introduce the interaction effects in Model 3. H2 examines the effect of alliance tenure on the relationship between co-marketing capability and alliance performance. We argue that it is more beneficial for firms in a younger, rather than an older, alliance to invest in co-marketing capability. This argument received support from the significant and negative coefficient of the interaction term (β = -.16, p < .01). That is, in support of H2, firms engaged in younger co-marketing alliances see greater returns from their co-marketing capability. The significant influence of alliance tenure on the relationship between co-marketing capability and alliance performance is depicted in Figure 2A. H3 explores the implications of power imbalance on the co-marketing capability – performance relationship. We predict that firms confronted with high power imbalance in a co-marketing alliance enjoy enhanced performance effects from their co-marketing capabilities, the coefficient for the interaction between power imbalance and co-marketing capability was positive and significant (β = .11, p < .05). However, the effect of task complexity on the relationship between co-marketing capability and alliance performance was not significant (p > .10); in conflict with H4, co-marketing capability was not more important in an alliance characterized by high task complexity. We plotted these results in Figure 2B and 2C, respectively. Finally, H5 explores the relationship of alliance flexibility, co-marketing capability and alliance performance. We expect that the contribution of co-marketing capability to performance is higher in an alliance characterized by high flexibility. The coefficient for the interaction between power imbalance and co-marketing capability is positive and significant (β = .13, p < .05), in support of H5. The interaction graph is depicted in Figure 2D.

Table 4. Regression analysis

	Model 1		Model 2a		Model 2b		Model 3		Hypotheses testing
	β	*t*-value	β	*t*-value	β	*t*-value	β	*t*-value	
Control variables									
Industry type	-.01	-.11	-.02	-.47	-.01	-.18	-.02	-.35	
Business unit size	.06	1.02	.02	.35	.01	.19	.01	.19	
Technological turbulence	-.15	-2.62**	-.12	-2.25*	-.10	-1.98†	-.09	-1.75†	
Number of alliances	.03	.49	.02	.34	.01	.18	-.01	-.12	
Temporal horizon of alliances	.17	2.53*	.05	.85	.05	1.03	.05	1.02	
Asset specificity of alliances	.02	.39	.11	1.82†	.14	2.40*	.15	2.70**	
Contractual alliance governance	.15	2.54*	.02	.33	.06	1.04	.02	.44	
Partner identification competence	.25	4.51**	.08	1.20	.05	1.01	.05	.73	
Joint market presence	.14	2.48*	.20	3.99**	.20	3.97**	.20	3.97**	
Main effects									
Alliance coordination			.19	2.95**					H1a supported
Inter-firm communication			.27	4.43**					H1b supported
Knowledge management			.10	1.72†					H1c supported
Co-marketing capability (CMC)					.47	5.78**	.53	6.50**	
Alliance tenure			.13	2.45*	.13	2.45*	.13	2.60**	
Power imbalance			-.09	-1.60	-.10	-1.76†	-.09	-1.74†	
Task complexity			-.24	-4.20**	-.23	-4.00**	-.20	-3.58**	
Alliance flexibility			.03	.60	.04	.73	.03	.64	
Interaction effects									
CMC x Alliance tenure							-.16	-3.06**	H2 supported
CMC x Power imbalance							.11	2.03*	H3 supported

Table 4 (cont.). Regression analysis

	Model 1		Model 2a		Model 2b		Model 3		Hypotheses testing
	β	*t*-value	*β*	*t*-value	*β*	*t*-value	*β*	*t*-value	
CMC x Task complexity							.04	.62	*H4* not supported
CMC x Alliance flexibility							.13	2.51*	H5 supported
R-square		.19		.38		.36		.41	
Adjusted *R*-square		.17		.34		.32		.36	
F-value		7.34**		10.12**		10.70**		9.91**	
R-square change				.18		.17		.05	
F change				11.04**		13.72**		4.96**	

Note: Standardized betas, two-tailed tests for control variables and one-tailed tests for hypotheses, † = $p < .10$, * $p < .05$, ** $p < .01$.

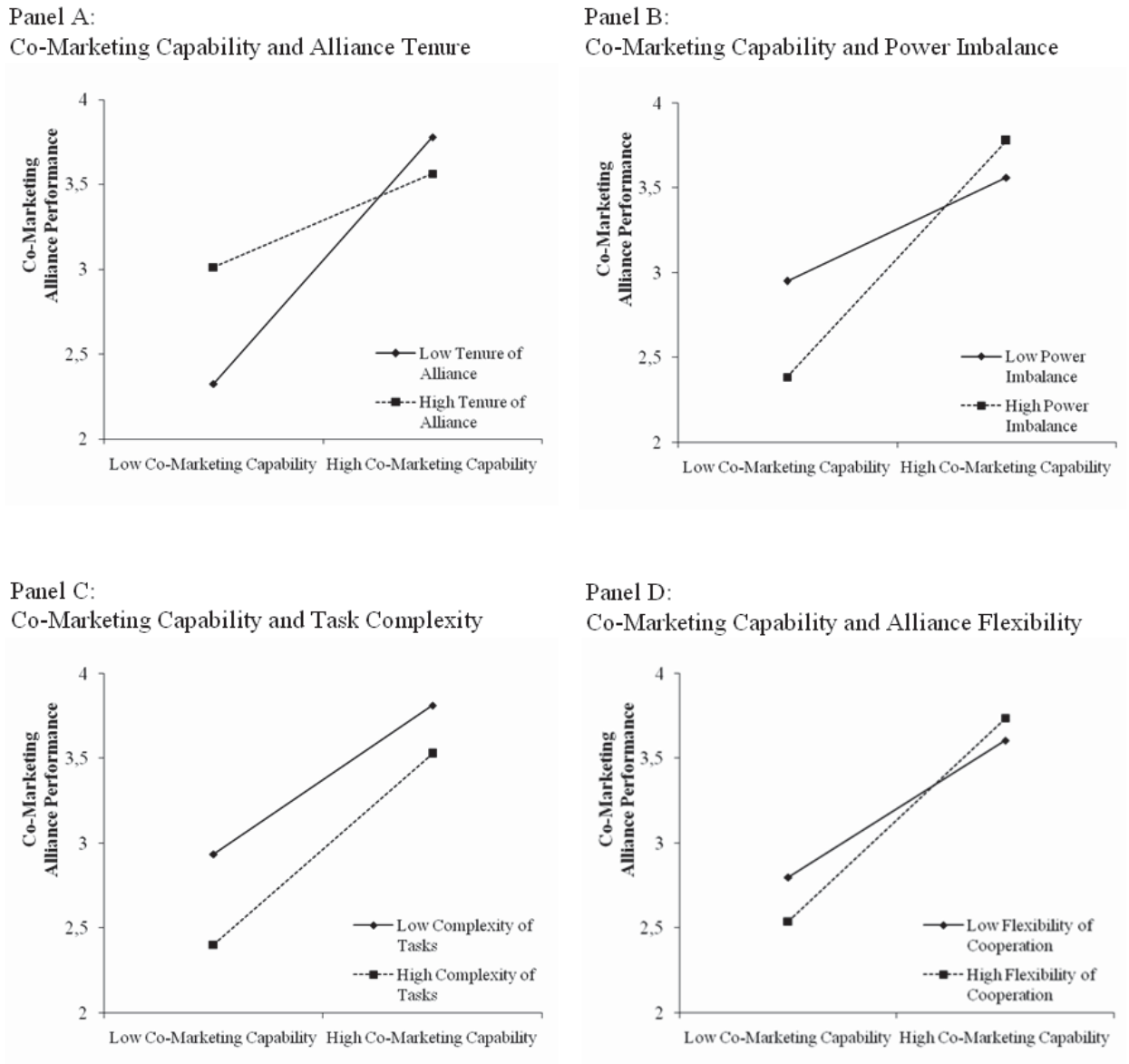

Fig. 2. Interaction effects

Discussion

High failure rates indicate the difficulty associated with managing alliances. Initially, firms must find the right alliance partner and establish appropriate governance mechanisms. Even after they have done so, co-marketing capabilities, or their absence, can lead to failure too. Our results thus offer several conclusions. First, to achieve co-marketing alliance success, organizations should focus on (1) coordinating the interdependence of partners within the co-marketing alliance; (2) sharing formal and informal, meaningful and timely information and (3) managing mutual knowledge. Second, our results confirm the strong impact of co-marketing capability

on co-marketing alliance success. Third, co-marketing capability is especially important in the initial phase of co-marketing alliances and in short-term alliances. Fourth, firms need a higher degree of co-marketing capability to handle co-marketing alliances marked by power imbalances. Fifth, flexibility in co-marketing alliances increases the importance of co-marketing capabilities as determinants of success.

The managerial implications in turn are straightforward: Firms should build a distinct co-marketing capability that features alliance coordination, inter-firm communication and knowledge management, because doing so will enhance the performance of their co-marketing alliances. To meet this challenge, firms might assign a manager exclusively to co-marketing capability responsibilities. However, firms that follow this strategy also need to recognize the potential for centralization, which will diminish attitudes toward the alliance and increase the risk of opportunism (Sivadas & Dwyer, 2000). Building co-marketing capabilities also requires investments, so managers should consider their co-marketing alliances when making resource allocation decisions. A moderate co-marketing capability may be sufficient for persistent alliances, those characterized by relative power balance and relatively rigid alliances. However, managers need to devote more resources to young co-marketing alliances, those that feature power imbalances among partners and alliances that demand more flexibility, because they require more sophisticated co-marketing capabilities.

This study also has theoretical implications. The moderating role of co-marketing alliance tenure confirms prior findings that alliance experience plays a significant role in alliance success (Lambe et al., 2002). Firms in long-lasting co-marketing alliances learn about each other and gradually internalize their roles and responsibilities (Day, 1995); over time, joint activities become more tacit and embedded. Prior research also has indicated that co-marketing alliances dominated by a single partner require more managerial skills to avoid detrimental effects (Bucklin & Sengupta, 1993). We endorse this finding. We also find a significant interaction between power imbalance and co-marketing capability. Ambitious alliances with flexible tasks require extensive co-marketing capability, so in this sense, our study provides empirical support for Day's (1995) suggestion that a firm's initial attempts to forge co-marketing alliances should begin with relatively modest, well-defined objectives. The lack of any relationship between task complexity and co-marketing capability was a surprise though. Prior research has suggested that co-marketing alliances with complex tasks require more managerial skills to avoid detrimental effects (Varadarajan & Cunningham, 1995). We posit two potential explanations for these findings. First, co-marketing capability might be a necessary pre-condition for achieving alliance objectives that is mandatory for all partners, regardless of the tasks they undertake. Second, our sample includes only firms with more than 100 employees. All of their co-marketing alliances thus might feature a relatively high level of complexity, whereas the effect of task complexity may be more pronounced for small firms.

Although our results are suggestive for theory and practice, we also acknowledge several limitations of this study. First, we focused on the management of ongoing alliances. We included contractual alliance governance and partner identification competence as control variables, but further research should explicitly address the interplay of alliance formation competencies with co-marketing capabilities. Second, similar to most alliance studies, we relied on survey data, which may feature a self-serving bias. Third, for privacy reasons, we collected data from only one side of each co-marketing alliance, at a single moment in time. To validate our results, data from both alliance partners would be desirable. Furthermore, longitudinal data might be useful to examine how changes in certain dimensions of co-marketing capability affect alliance success over time. Fourth, our study was based on firms that already were engaged in co-marketing alliance and thus likely to exhibit some degree of co-marketing capability. Other firms that might totally lack this capability are not represented in our sample. Fifth, we did not examine additional alliance outcomes of co-marketing capability, such as learning or knowledge generation by the cooperating firm. Sixth and finally, additional research should focus on the relationship between co-marketing capability and other important firm capabilities, such as market orientation or customer relationship management.

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Appendix

Table 3. Correlation matrix

	Variable	Mean	SD	AVE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Co-marketing capability	3.13	0.84	0.62														
2	Alliance tenure	3.18	1.68	n.a.	0.06													
3	Power imbalance	3.27	2.12	0.54	-0.02	-0.11												
4	Task complexity	3.61	1.84	0.45	-0.13*	-0.06	-0.30**											
5	Alliance flexibility	2.51	0.90	0.46	-0.30**	0.13*	0.00	-0.05										
6	Joint market presence	3.02	2.11	n.a.	0.00	-0.17**	0.07	-0.04	0.02									
7	Industry type	n.a.	n.a.	n.a.	-0.03	-0.06	-0.02	-0.02	0.09	-0.11								
8	Partner identification competence	2.84	1.09	0.69	0.38**	-0.05	-0.16*	0.05	0.03	0.08	-0.04							
9	Technological turbulence	4.11	1.62	0.71	-0.20**	-0.05	0.03	0.07	0.07	0.03	-0.12*	-0.07						
10	Contractual alliance governance	4.68	1.57	0.51	0.43**	0.08	0.05	-0.12*	-0.22**	0.03	-0.06	-0.06	-0.15*					
11	Business unit size	n.a.	n.a.	n.a.	0.05	-0.04	0.13*	-0.15*	0.04	0.17**	0.05	0.01	0.04	-0.06				
12	Number of alliances	4.66	3.21	n.a.	-0.02	0.06	0.11	-0.12*	0.02	-0.01	0.13*	-0.09	-0.08	0.10	-0.13*			
13	Temporal horizon of alliances	6.16	1.53	n.a.	0.18**	-0.13*	0.01	-0.20**	-0.10	0.06	-0.08	0.02	-0.12*	0.17**	0.01	-0.02		
14	Asset specificity of alliances	4.62	1.30	0.65	-0.10	-0.11	-0.36**	0.44**	0.03	-0.06	0.00	0.05	0.13*	-0.07	-0.13*	-0.13*	0.01	
15	Co-marketing alliance performance	3.17	0.94	0.63	0.49**	0.14*	-0.08	-0.25**	-0.07	0.18**	-0.03	0.29**	-0.20**	0.24**	0.07	0.01	0.19**	-0.02

Note: * $p < .05$, ** $p < .01$. All mean values refer to a 7-point format (except number of alliances).

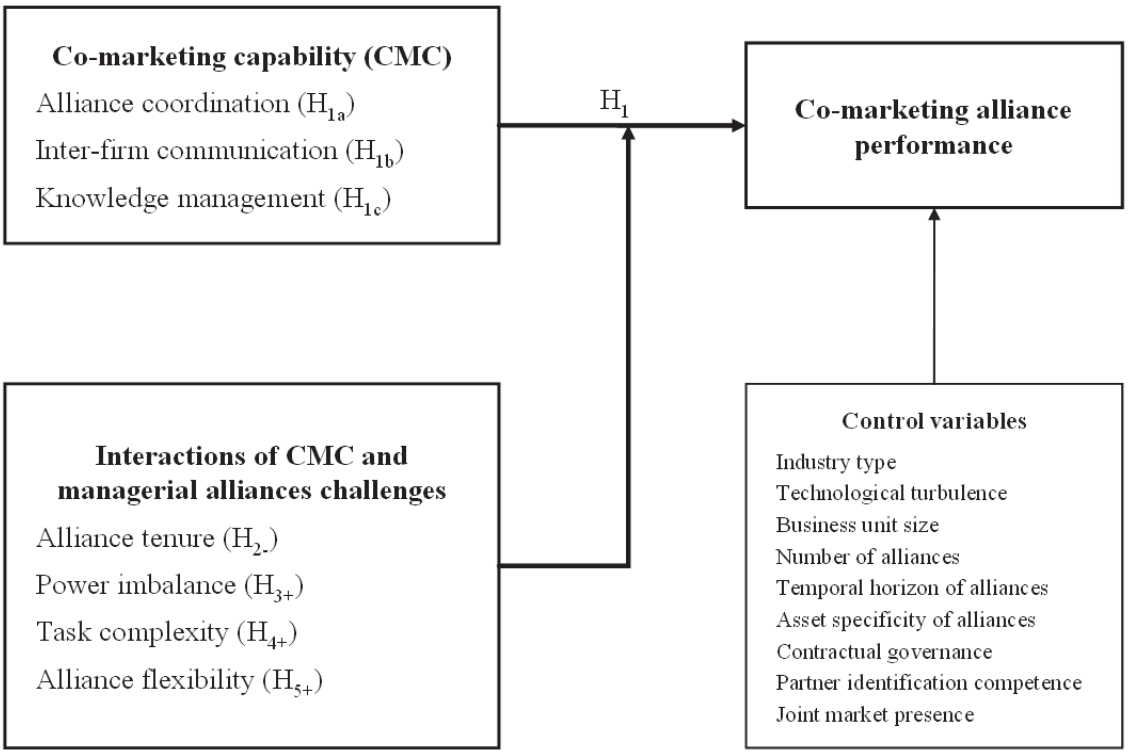

Fig. 1. Conceptual model