EXPLORING VALUE COCREATION IN RELATIONSHIPS BETWEEN AN ERP VENDOR AND ITS PARTNERS: A REVELATORY CASE STUDY[1]

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Contemporary business organizations are increasingly turning their attention to jointly creating value with a variety of stakeholders, such as individual customers and other business organizations. However, a review of the literature reveals that very few studies have systematically examined value cocreation within business-to-business (B2B) contexts. Using a revelatory case study of the relationship between an ERP vendor with a global reputation and its partners, and informed by the resource-based view of the firm and related theoretical perspectives, we develop an understanding of value cocreation in B2B alliances associated with selling, extending, and implementing packaged software, specifically ERP systems. Our study reveals that there are different mechanisms underlying value cocreation within B2B alliances, and also points to several categories of contingency factors that influence these mechanisms. In addition to providing insights about the phenomenon of cocreation itself, the study contributes to the stream of packaged software literature, where the implications of value cocreation in alliances between packaged software vendors and their partners for the client organizations have not been sufficiently explored.

Keywords: Value creation, cocreation, business-to-business alliance, ERP systems, SME market, vendor–partner relationship, information technology characteristics, case study, interpretive study

Introduction and Motivation

A growing trend in today's business environment is cocreation of value by a firm and its primary stakeholders. From automobile companies such as Fiat to information technology companies such as Dell, Google, and Amazon, an increasing number of firms are jumping on the cocreation bandwagon (e.g., Prahalad and Ramaswamy 2004; Ramaswamy 2009).

Prahalad and Ramaswamy (2004, p. 6) highlight the essence of cocreation by arguing that it is "not the transfer nor outsourcing of activities…nor a marginal customization of products and services." Instead, they emphasize the importance of "personalized interactions" between a firm and its stakeholders.

Along with the growing popularity of cocreation, in recent times "there has been tremendous growth in the formation of…alliances" between two or more firms (e.g., Gulati et al. 2009, p. 1213). A primary reason for this growth in alliances

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is that partnerships generally help increase firm value (Kale and Singh 2009; Swaminathan and Moorman 2009). More recently, organizations, with alliance partners, have started to see the merit of jointly working toward the success of the alliance, thereby fuelling a trend toward *cocreating value* in such ventures (e.g., Prahalad and Ramaswamy 2004).

However, despite this focus on cocreation of value in general, and on cocreation within business-to-business (B2B) alliances in particular, little is known about *mechanisms* underlying value cocreation in such settings. It must be noted that B2B alliances are complex ventures, often involving multiple partners (Ernst et al. 2001), which can make cocreation challenging. Further, the diverse nature of cocreation has been alluded to by Kohli and Grover (2008, p. 28), who argue that in B2B alliances, "firms have strategic relationships with other firms that range from loose outsourcing to seamless integration in which products and information flow." In many of these contexts, it is unclear who creates the value, and how that value is being (and needs to be) jointly created (i.e., *cocreated*). Further, it is also a well-known fact that value creation/cocreation initiatives in B2B alliances are fraught with failure (Anand and Khanna 2000; Sarkar et al. 2009). Given the challenges in cocreating value in B2B alliances, a separate investigation of this phenomenon is warranted.

A systematic review of the literature (included in the EBSCO database from 1996 through 2010) on alliances and other forms of interfirm relationships using several search terms ranging from value cocreation" and "alliances," "value creation" and "alliances," to "value creation" and "joint ventures," failed to provide any meaningful results. Specifically, our literature review revealed that *none of the studies focus on cocreation within the B2B context*. Our current study seeks to address this important void.

Another noticeable gap emerging from our literature review that is of relevance to the Information Systems research community *is the general absence of technology-related considerations in the discourse on value cocreation*. Indeed, calling for research in this area, Kohli and Grover (p. 29) emphasize that studies on value within the IS discipline should focus not only on IT value but also on value cocreation either through or surrounding IT (i.e., business partners interacting with one another in the context of sales, development, customization, implementation, etc. of a technology platform and an associated development toolkit, such as packaged software). Our review of the literature on packaged software again pointed to a lack of focus on cocreation. Much of the research on this topic appears to dwell on understanding selection criteria for packaged software (e.g., Janson and

Subramaniam 1996; Keil and Tiwana 2006) or on the success factors of packaged software implementation (e.g., Lucas et al. 1988; Swanson and Wang 2005). Other studies examine post-implementation issues such as reduction of maintenance costs (e.g., Fryling 2010) or gaining the maximum benefits from packaged software implementation (e.g., Seddon et al. 2010). These studies focus mostly on *how a packaged software vendor fully develops or directly delivers the product to the client organization with minor customization*, assuming a one-way transfer of product from the vendor firm to the customer firm. Indeed, researchers seem to have ignored the fact that, in many contexts, the business model involves vendors selling, extending, and delivering packaged software through partners, who contribute to value addition for the customer firms.

Finally, consistent with Kohli and Grover (p. 28), our review revealed an existing bias toward certain theoretical (e.g., transaction cost economics) and measurement (e.g., quantitative) approaches to value. Such a predisposition toward quantified profitability measures of value exists not only in the value literature in general but also within the value (co-)creation literature in the IS discipline and relevant reference disciplines such as marketing and management. This is despite the observations that interfirm networks and relationships are so complex that utilizing an economic perspective solely can become a limitation in understanding the phenomenon of cocreation and can lead to incorrect assessments of value (Kohli and Grover 2008). Our research objective, then, is ***to develop an empirically based understanding of the cocreation of value in the context of a specific type of B2B partnership associated with the development, sales, implementation, and customization of packaged business software, specifically ERP systems.*** With this objective in mind, we hope to (1) present *a more holistic view on "cocreation of value,"* (2) *unearth why and how value cocreation occurs (or does not occur),* and (3) understand *the role of relevant IT-related* capabilities within this context. We attempt to accomplish our research objective through an in-depth case study of value cocreation as experienced in the relationship between a vendor and its partners jointly offering an ERP system for small and medium-sized enterprises (SMEs).

The rest of the article is organized as follows: First, we discuss the background literature and present our theoretical pre-understanding on value cocreation and related concepts. This is followed by a description of our case organization, a brief discussion of the methodology employed in this study, and our interpretation of the case study data with respect to value cocreation. We conclude with a discussion of the limitations and future directions and a recapitulation of the study's key contributions.

Theoretical Foundations: An Overview ▮▮▮▮▮

Existing Knowledge on Value

Hitt and Brynjolfsson (1996) suggest that the value literature draws primarily on three theoretical perspectives: theory of production, theories of competitive strategy, and theory of the consumer. The three perspectives have resulted in value (including IT-related value) being measured in three different ways. The *theory of production* argues that "firms possess a method for transforming various inputs into output, represented by a production function," and the value of any resource (e.g., IT) is demonstrated by its contribution to a positive "gross marginal product" (Hitt and Brynjolfsson 1996, p. 123). *Theories of competitive strategy,* on the other hand, criticize the production theory for its narrow focus on lowering costs and for ignoring resources' contributions to sustained competitive advantage (Hitt and Brynjolfsson 1996, p. 123). Theories of competitive strategy utilize measures such as ROI, ROA, revenue, quality, sales, and IT capital for value assessment (Kohli and Devaraj 2003). Finally, *the theory of the consumer* focuses on the "total benefit that a given purchase confers to consumers" (Hitt and Brynjolfsson 1996, pp. 124-125) and assesses value by estimating the demand curve and the total consumer surplus.

In the context of B2B alliances, our review of the literature suggests that while some researchers have assessed value by focusing on the profitability derived from meeting goals or on the longevity of the alliance (e.g., Das and Teng 2000), others have noted that value needs to be assessed "in terms of the ability of the partners to earn rents over and above what could have been achieved in the absence of the partnership" (Madhok and Tallman 1998, p. 328). However, we have not seen much elaboration or follow-up on this issue.

In a recent essay charting the path of value cocreation in the IS discipline, Kohli and Grover (2008, p. 33) emphasize the need to assess *intangible value,* observing that in today's complex organizational contexts, both "businesses and customers are the final arbitrators of value creation, and by overemphasizing pure financial post hoc metrics or even *ex ante* market value, we underreport the true benefits of IT to these stakeholders." We would also like to note that researchers are increasingly viewing value in the context of alliances to be *multifaceted* in nature. For example, Sarkar et al. (2009, p. 585) have explicitly stated that "value…is likely to be reflected along multiple dimensions and different constituent elements." Similarly, Gil-Saura et al. (2009, p. 595) suggest that value "is a subjective, multidimensional construct," and it is only through a multidimensional view that we

get a true picture of the value created within such alliance relationships. Consistent with the existing body of knowledge, in this study we view value from both tangible and intangible perspectives. Our interpretive case study approach is particularly well-suited for uncovering the different facets of value, not easily captured through traditional quantitative measures, but nevertheless of relevance to B2B alliance partners and their clients.

Key Theoretical Perspectives for Studying Value Cocreation in B2B Partnerships

As the term suggests, *cocreation involves a symbiotic relationship between a firm and its primary stakeholders* (Kohli and Grover 2008, p. 28), *wherein the stakeholders* (i.e., the focal firm with its partners or clients) *customize and coproduce products/services* (Payne et al. 2008). One theoretical perspective that we found potentially useful in understanding value cocreation within B2B relationships is the resource-based view (RBV) of the firm. Within RBV, resources are seen as "stocks of available factors that are owned or controlled by the firm" (Amit and Schoemaker 1993, p. 35). The resources consist of a bundle of potential services that can be used for rent generation (Penrose 1959). However, idiosyncratic differences among firms (e.g., managerial vision, assessment, perception, knowledge base, experience, and vision) lead to variance in the use of resources by different firms (Barney 1991; Wernerfelt 1984). RBV further proposes that valuable, rare, inimitable, and non-substitutable (VRIN) resources are the genesis of competitive advantage through value creation (Barney 1991; Mahoney and Pandian 1992; Wernerfelt 1984). Although RBV highlights the importance of VRIN resources and their manifestations as competencies for *potential* value creation activities (Möller et al. 2008), we believe that RBV *by itself* may not be sufficient to explain all of the aspects of value cocreation, and that the insights of other perspectives can fruitfully complement RBV to provide a more complete picture of the phenomenon (Kohli and Grover 2008; Madhok and Tallman 1998).

Although the VRIN resources each organization brings to the relationship are at the core of B2B alliances, it is the nature of alignment of these resources in the alliance that determines success in terms of value cocreated (Das and Teng 2000). Partner resource alignment refers to the patterned development through diligence, whereby the resources of the partner firms are matched and utilized in an alliance. The two most common forms of alignment are *complementary* and *supplementary* (Das and Teng 2000). In complementary alignment, firms contribute dissimilar sets of resources to the alliance, bringing a level of completeness to the resource requirements

of the alliance (Hill and Hellriegel 1994). For instance, a company that has a strong technological team may seek an alliance with another company with marketing skills relevant to tapping the market for its technological product. On the other hand, in supplementary resource alignment, firms provide similar kinds of resources, which, when integrated, "create more value…than the sum of the separate values of the resources with individual firms" (Das and Teng 2000, p. 49). An example could be a company (say Firm Y) bringing in software development personnel with skills similar to those in another company (say Firm X). Through the application of the proprietary development methodologies and quality standards of Firm X, and the economies of scale achieved, the team (with personnel from Firms X and Y) is able to create products of much greater value than either company could generate without the alliance. In Figure 1, we highlight how cocreated value results from the alignment of the resources that two partnering firms bring to an alliance.

The Role of the Enablers/Inhibitors

Although value may be cocreated by *complementary* or *supplementary alignment* of resources, the degree to which value generation occurs is subject to contextual factors. Alliances are subject to the pulls and pressures of multiple contingency forces whose effects may complement or counteract one another (Ahuja 2000; Gresov 1989; Sambamurthy and Zmud 1999). In an effort to understand relevant factors, we reviewed the general alliance literature, studies focusing on value creation within alliances, and the literature on packaged software. The general alliance literature and studies focusing on value creation within alliances allude to the role of *governance mechanisms* and *power and politics,* while both of these bodies of literature, along with studies on packaged software implementation, suggest the important role of *collective strength*. We discuss these factors in further detail below.

Alliance governance refers to enforcement mechanisms that can counter the threat of opportunism inherent in an alliance and safeguard partners' interests (Madhok and Tallman 1998; Sambamurthy and Zmud 1999). The general alliance literature delineates several categories of mechanisms to address governance issues in an alliance. For example, Poppo and Zenger (2002) and Reuer and Arino (2007) refer to contractual provisions with enforcement for intellectual property protection and informational provisions that facilitate required coordination between alliance partners. Other researchers emphasize relational governance that is largely self-enforcing based on goodwill and trust (Granovetter 1985; Gulati 1995; Uzzi 1997), with Gulati et al. (2009, p. 1214) highlighting the effect of "informal safeguards."

While alliance governance mechanisms focus on the maintenance of order within the relationships, *power and politics* recognize "opposing interests and the ubiquitous role of conflict" within an alliance relationship (Lacity and Willcocks 1998, p. 37; Markus and Bjørn-Andersen 1987). Scholars (e.g., Lacity and Willcocks 1998; Pfeffer 1981) argue that while power refers to an individual actor's (or relationship partner's) ability to influence the behavior of others, politics focuses on the use of authority to cause changes in goals and directions within organizations. Several tactics such as authority, resource acquisition, and selective use of decision criteria are used to exercise power and engage in political maneuvering within interorganizational relationships (Lacity and Willcocks 1998). Agarwal et al. (2009, p. 417) highlight several politicking techniques such as partners' attempts to "privately benefit at the expense of the others'" in the alliance" that can hinder the generation of value.

Das and Teng (2000) argue for the importance of the *collective strength* as a key enabling factor in alliances. Similarly, Dong et al. (2009) refer to the combined resources and capability of the alliance partners as being important in value creation. Collective strength is often reflected in the strength of the product around which the alliance has been formed (Sankar et al. 1995). For example, if the product is a technology, it has been argued that technology-related factors will have an important role in the outcome of the alliance relationship (Blodgett 1991). The packaged software implementation literature also alludes to the role of the collective strength of the vendor and the customers in the form of their (1) know-how, (2) the functionality, reliability, and other characteristics of the software itself, and (3) the fit between the vendor and the customer, among others, as playing an important role in implementation success. Several other factors, such as those related to basic IT infrastructure, computer networks that facilitate basic communication and transactions, and interfaces, can all play a role (Powell and Dent-Micallef 1997; Sambamurthy and Zmud 1999). Finally, the capability to create, transfer, and exploit *knowledge is also seen as a manifestation of collective strength in the general alliance literature* (Lane et al. 2006; Zahra and George 2002). We capture the factors influencing value cocreation in B2B alliances in Figure 1.

In the next section, we provide a brief narrative on our case organization and discuss our adopted methodology. However, before proceeding, we would like to clarify that the spirit of our study is one of *discovery*; our objective was not to deductively test the theoretical framework set up in Figure 1, and thus we were not pre-committed to finding instantiations of the concepts in our data. Rather, this section may be viewed as a snapshot of our theoretical sensitivity. It
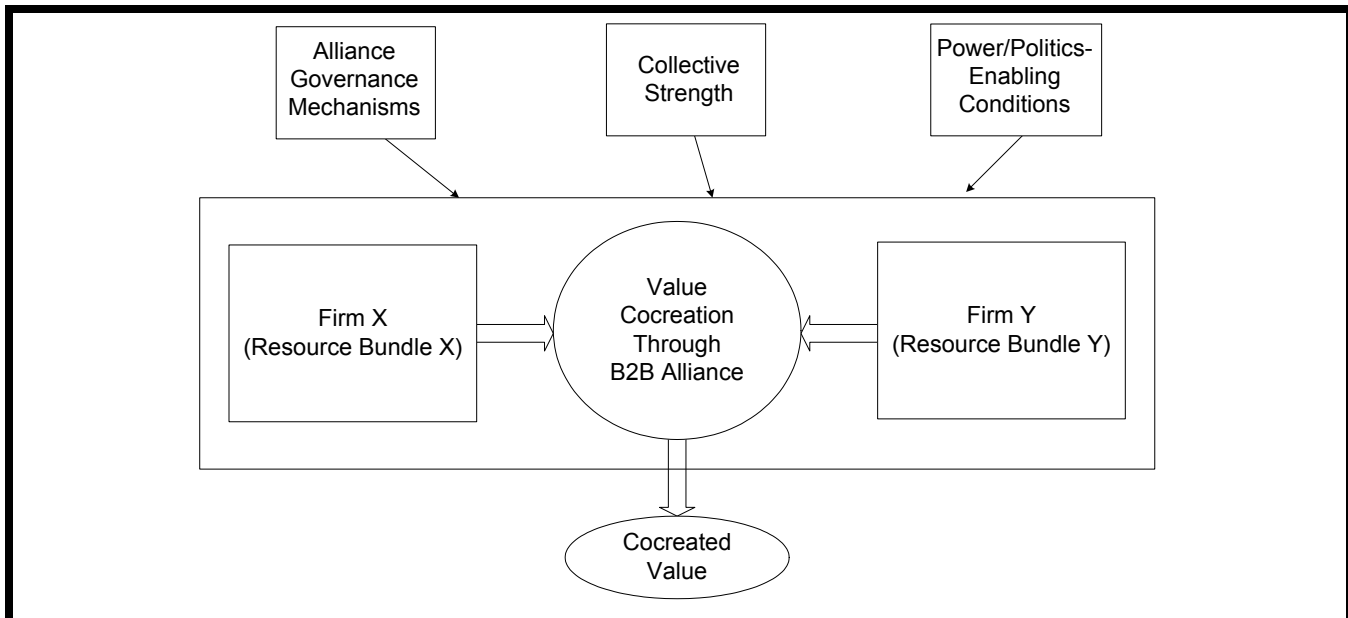
Figure 1. Literature-Based Pre-Understanding on Value Cocreation and the Factors Influencing It

provided us with a legitimate frame and potentially useful vocabulary to anchor our interpretation without straying in different directions.

The Context of Our Study and Methodological Overview

Context: Case Background

We examine the phenomenon of value cocreation in a unique context, that of a packaged software (i.e., an ERP) vendor (ERPCo) delivering solutions to client organizations through its partner(s). ERPCo today is part of a global organization that offers ERP products for SMEs in more than 40 countries, primarily in Europe, North America, and Asia Pacific. The license fee for ERPCo's popular ERP system per SME is only around $50,000 (naturally, with significant variations) compared to several millions associated with one ERP system sale in the large enterprise market; thus, *ERPCo does not, and cannot,* afford to deal directly with individual clients. Moreover, the leading vendors in the large enterprise market are estimated to have about five times greater development resources than ERPCo. The partners are thus absolutely critical to ERPCo's business model, and they serve as ERPCo's link to client organizations, providing sales support, consulting, customization, and enhancement services. In addition, partners also serve as an extension of ERPCo's

software development workforce, creating add-on products for industry verticals and, in some cases, contributing to the core of the ERP package. Some of the partners specialize in the sales, consulting, and customization-related activities, while others focus on development-related activities. A small proportion of partners contribute in both of these ways.

Given our interest in the concept of value cocreation in this paper, and our access to key informants of ERPCo and partner organizations, we sought to intensively examine how the company and its partners operate in (and around) a northern European country (NEC).[2] It is worth mentioning that ERPCo was founded in NEC[3] and undertakes a significant proportion of the ERP software development there even today. Within ERPCo, the development of the ERP products and the overall channel strategy formulation is undertaken centrally with a view toward the global market, while the sales and channel management functions are organized nationally to manage the relationship with the partners in a given country. Figure 2

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[2]Based on our conversations with managers of ERPCo, we believe that, while the way ERPCo operates in different countries and regions varies, the nature of relationships with partners and the dynamics of value creation remain fairly uniform across the regions and national markets.

[3]To protect the identity of the company and its partners to the extent possible (Walsham 2006), we use the pseudonyms ERPCo (for the company) and NEC (for the country). We also try to simplify the situation in our narrative while retaining the key relevant elements of the case.
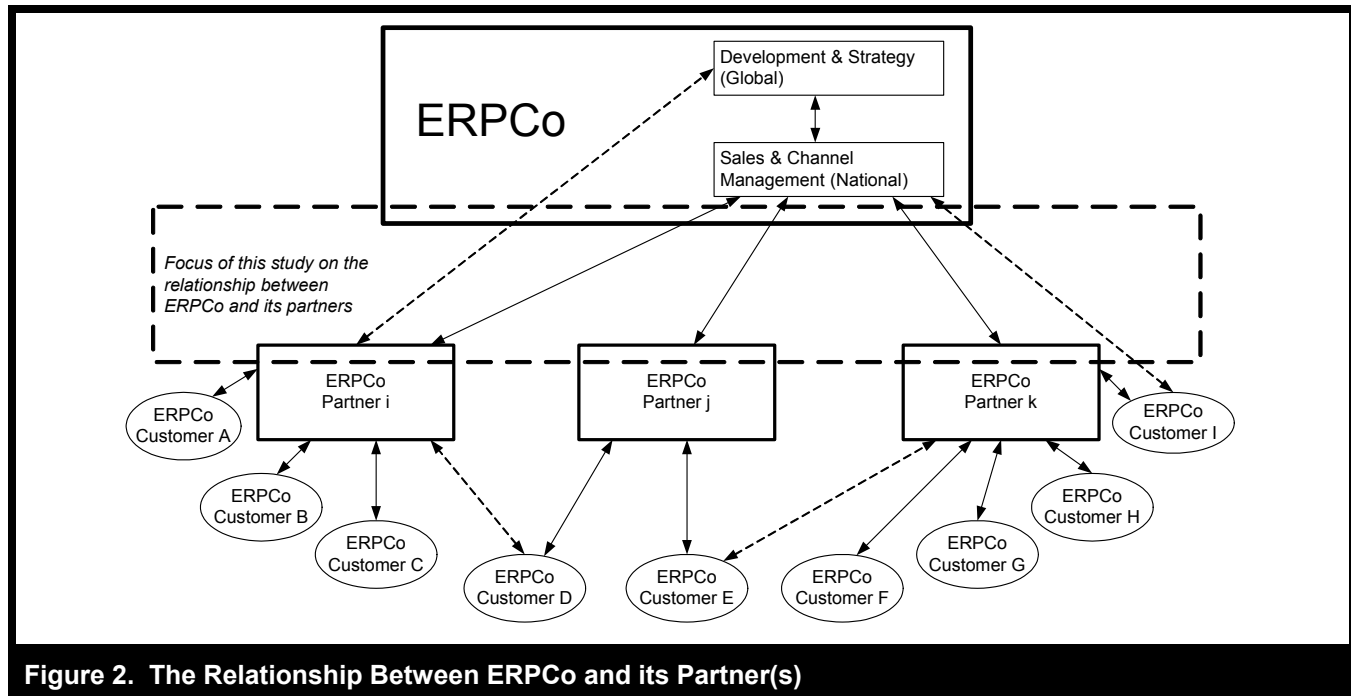
Figure 2. The Relationship Between ERPCo and its Partner(s)

depicts a simplified view of the players in the ERPCo partnership ecology and the typical linkages between and among the players.

As Figure 2 shows, in general, the sales and channel management unit works directly with the partners, and only on very few occasions does anyone from the unit becomes involved in direct interaction with clients. Partner relationship managers are assigned to manage and support partners, particularly those that are, or are likely to soon become, very profitable. Generally, clients interact closely with one partner, although on rare occasions multiple partners may collaborate or even compete for a client's business. Likewise, the development and strategy unit does not generally communicate directly with individual clients, although in some cases it does communicate with select partners.

Methodology

Our case study approach may be characterized as "revelatory" (Yin 1994). Recognizing the paucity of in-depth field studies on value cocreation surrounding information systems that go beyond collaborative e-commerce examples, our strategy was to study one relatively unexplored case in depth. Based on the recommendations of methodologists (e.g., Patton 1990), we sought to identify an organization that could potentially be a unique and exemplary source of insights on this topic. The

ERPCo case appears to be uniquely suited to our study's objective in that the company utilizes a business model that entails cocreation of value, the key phenomenon of interest here. Moreover, as mentioned earlier, we were unable to find any study in the IS literature on packaged software highlighting how a vendor–partner alliance can be an effective way to sell, extend, and implement ERP systems for client organizations. We see ERPCo as exemplary because ERPCo is among the most successful ERP vendors globally, particularly in the market for SMEs,[4] where its success, in part, can be attributed to its cocreation approach.[5] Because of our preexisting relationship with ERPCo, and our engagement

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[4]The total ERP market (for large enterprises as well as SMEs) is often characterized as having three tiers, with Tier 1 consisting of two large vendors (SAP and Oracle, the latter having acquired, among others, J.D. Edwards and PeopleSoft), Tier 2 vendors consisting of 5 to 8 vendors (including ERPCo), and Tier 3 with more than 10,000 vendors, typically focused on a local market and having a very small fraction of the world market. Based on market share reports and recent growth rates (e.g., Panorama 2011), it seems fair to characterize ERPCo as a successful ERP vendor on the global market.

[5]One particularly interesting piece of evidence we gathered through our interviews illustrates the value of the partner–alliance model. In the mid-1990s, there were two ERP vendors in NEC with fairly similar ERP packages, one selling directly and one (i.e., ERPCo) selling through partners. Both were acquired by global U.S.-based ERP vendors within just a short span of years. Because partners had enabled ERPCo's ERP product to be sold in around 40 markets (through an effective partner channel), the price paid for ERPCo was 20 times higher than the amount paid for the other vendor offering the ERP product without mediation by partners (Antero and Bjørn-Andersen. 2011).

with the company on other fronts, we were able to recognize the fact that ERPCo and its partner ecology presented a fascinating context where the topic of interest (value cocreation) could be investigated in depth.

Our prolonged period of engagement with ERPCo, along with intensive data collection on cocreation through semi-structured interviews and other documentary evidence, contributed to our broader understanding of ERPCo's business environment. Specifically, 25 interviews focusing on the value cocreation phenomenon surrounding ERP products were conducted between August 2009 and January 2011. We conducted the interviews with representatives from ERPCo, partner firms (P1, P2, P3, P4, and P5), and competitor organizations (COMP1 and COMP2) (see Table 1).

Our methodological stance may be seen as "interpretive" in that it uses texts reflecting the subjects' experiences with value cocreation to develop a second-order theoretical understanding of the phenomenon (Lee 1991; Sarker et al. 2006; Walsham 1995). Overall, the methodological guidelines summarized in Sarker and Sarker (2009, pp. 445-446) were utilized. We examined and made sense of our data, guided by the logic of *constant comparative analysis* to identify initial concepts, to link this evolving set of concepts to higher-level categories, and then to identify potential linkages between the categories as appropriate (Charmaz 2000; Sarker and Sahay 2003). Implicitly, the constant comparative process involved data triangulation across respondents, types of organizations, and organizational roles of respondents, and the like (e.g., Patton 1990). This process led to the discovery of the different modes of value cocreation. In understanding the role of the key enabling and inhibiting factors, we first examined data from relevant interviews of the partner organizations, and then identified the enablers and inhibitors that respondents mentioned. Next, we organized them under the three major theoretical categories of enablers and inhibitors (i.e., alliance governance mechanisms, collective strength, and power/politics), and attempted to discern correlational tendencies (Walsham 1995) between the cocreation modes and the enablers and inhibitors. Once empirical patterns started to emerge, we placed them in the context of the existing literature, as advised by Bryant and Charmaz (2007).

Interpretation and Results

One of the notable issues that emerged from our interpretation of data is that there are different modes of value cocreation, a point that we surprisingly do not see in the extant literature.

Cocreation of Value

Before proceeding to elaborate on the modes of value cocreation, in line with the resource-based view (RBV), we reiterate the key (and valuable) resources that ERPCo and its partners bring to the relationship. To start with, ERPCo brings to the table its "brand," which was highlighted by a number of respondents, including P1_M#1. In addition, ERPCo_M#1 explained why the ERPCo brand was an important resource for the alliance:

> You're sort of almost on the short list if you're [an ERPCo] partner. You go straight to...discuss[ing] your solution, your capabilities and your relevancy for the customer.

In addition to the brand, ERPCo_M#2 noted that ERPCo's products provide:

> Out of the box…horizontal functionality and some core industry capabilities [with] all the technical… stuff taken care of.

And, for the most part, according to P1_M#1, "it [i.e., the technology] works." In this regard, ERPCo_M#1 highlighted the constant innovation being introduced into the technology:

> I think the innovation is just unbelievable…you won't find any other vendor out there that will continue to just put these kinds of ideas into the technology itself.

ERPCo brought in other resources to continue innovative development, including its financial strength and the technical platform through which knowledge sharing between ERPCo and its partners (and among partners) could occur. It may be argued that ERPCo's primary contribution to the alliance is its "inside-out" resources (Wade and Hulland 2004), that is, capabilities that are internally focused within the alliance. While inside-out resources are important to value creation, Wade and Hulland argue that "outside-in" resources, which are more "externally oriented" and include components such as "durable customer relationships" and market responsiveness, are also critical to value creation. In our study, the partners of ERPCo are the ones that primarily contribute to the outside-in resources, by reaching out to diverse client organizations through their human resources (e.g., sales personnel and consultants), and by having deep knowledge of a variety of industry verticals and the specific challenges faced by clients in these verticals. In some cases, the partners also provide inside-out resources such as development staff that augment ERPCo's development. ERPCo_M#1 explained

Table 1. Organizations and Profiles of the Interviewees		
Organization (pseudonyms)	**Brief Description**	**Interviewee Position/Role**
ERPCo	ERPCo, which started as a local company with a successful ERP product locally in NEC, is part of a global organization today that offers ERP products for small and midsized companies primarily in Europe, North America, and Asia Pacific. ERPCo itself is less than 5% of the global organization, and it often leverages the resources of the larger organization (e.g. for sales and support).	Director in-charge of all partner channels (ERPCo_M# 1)
		Manager in-charge of partner strategy (ERPCo_M#2)
		Manager in-charge of acquiring software modules from partners (ERPCo_M# 3)
		Partner relationship programs manager (ERPCo_M#4)
		Manager in-charge of setting up educational relationships for the benefit of partners and universities (ERPCo_M#5)
		Partner Relationship Manager (ERPCo_M#6)
		Former Senior Executive (ERPCo_M#7)
		Partner Channel Manager (ERPCo_M#8)
Partner #1	Small local partner of ERPCo with 7 employees; formed in 1993; uses workers from its "partner organizations" when necessary to get jobs done; serving clients primarily in NEC, also in a few countries in central and eastern Europe. Primarily involved in sales, customization, enhancements, and consulting services surrounding ERP system products from ERPCo.	CEO, who also undertakes consulting activities himself (P1_M#1) (two interviews, including one follow-up interview)
		Project Manager (P1_M#2)
Partner #2	Among the largest global partners of ERPCo, head-quartered in the U.S., and having operations in 32 countries within EU, Asia Pacific, and North America with over 2000 employees; has significant presence in NEC, with around 64 employees in the country, having recently downsized from about 120. Primarily involved in sales, customization, enhancements, and consulting services surrounding ERP systems from ERPCo.	Finance, Business and HR Director (formerly in-charge of relationship management with ERPCo) (P2_M#1) (two interviews, including one follow-up interview)
		Sales Director (P2_M#2)
		Manager in charge of Business Development, the highest position in NEC reporting directly to U.S.-based head-office of this partner (P2_M#3)
Partner #3	Small local partner founded in 2000; holds highest level of certification from ERPCo; currently has about 30 employees, most of whom are consultants; key area of expertise is in the development of applications; popular vertical add-ons to ERPCo's ERP systems for ware-housing and for legal service.	Technical Director (P3_M#1)
		Sales Manager (who had earlier been employed in ERPCo as a manager involved in managing partners) (P3_M#2)
		CEO (P3_M#3)
Partner #4	A very large partner primarily serving European markets and working with the ERPCo's products since 1999. Primarily involved in sales, customization, enhancements, and consulting services surrounding ERP systems, though it has small initiatives developing applications/add-ons for ERPCo's products. Overall, Partner #4 is a "systems integrator" that sells and implements ERPCo's competitors' products as well.	Alliance Manager of Partner #4 with ERPCo. (P4_M#1)
		Director of ERPCo's product (P4_M#2)
Partner #5	A small local partner with 25 consultants and 5 sales-people focusing on selling and implementing. Has been involved in selling development resources to ERPCo on an hourly basis. It has been working with ERPCo for many years.	CEO , who also undertakes consulting activities himself (P5_M#1)
		Chief Consultant in charge of key accounts (P5_M#2)
Competitors	COMP1 is one of the "Big Five" in the market for ERP systems, and is gradually making its presence known in the SME market as well. COMP2 is an ERP vendor that also originated in NEC, though it pursues a direct sales and implementation model without mediation by a partner.	Sales Director of one of the "Big Five" in the market for ERP systems responsible for sales to a group of industries in Northern Europe (COMP1_M#1)
		Sales Manager for SME market in NEC, one of the "Big Five" in the market for ERP systems (COMP1_M#2)
		Former CEO of a competitor (COMP2_M#1)

how the partner channel contributes to the alliance and this view was confirmed by COMP1_M#1:

> Given that we're playing in the mid-market where we're trying to address not hundreds or a few thousand customers, but literally hundreds of thousands of customers, there's just no way a vendor…can reach that number of customers. There's no way you can justify the cost of sale or having a direct sales force selling into that amount of customers knowing that…the deal sizes are smaller….So the only way to get a reasonable reach and scale…is by going through a channel. (ERPCo_M# 1)

> The implementation partner really understands that part of the customer's business fairly well. No vendor in the world…could actually build that deep micro vertical expertise across literally hundreds of micro verticals. Again, given that we have got thousands of partner organizations, we can actually deliver that. So we've got partners out there who are specialists…in cookie production or pick one….That will really be micro vertical level where customer relevancy is just so much better than if a vendor came in and said well, we can sell you this horizontal ERP application… we honestly believe we have the best mid-market ERP channel in the world. (COMP1_M# 1)

These two sets of resources (inside-out and outside-in) brought in by ERPCo and its partners respectively, when combined appropriately under the right conditions (e.g., suitable incentive systems and support structures), can lead to substantial value for the client organization as well as the partners (Wade and Hulland 2004). Some of the value that the alliance generates by combining these resources and capabilities for a given client downstream is captured back by the alliance (i.e., ERPCo and the relevant partner) in the form of additional and sustained revenue streams from the client in return for new or improved services.

We now outline the three ways in which we found cocreation to occur: *exchange*, *addition*, and *synergistic integration*. We note that our claim is not that these modes of cocreation are completely independent of each other, but rather that they represent qualitatively distinct patterns, with different dynamics and implications for practice.

Exchange: Cocreating Value through Bartering

This mode of value development may be seen as a nominal form of cocreation, where the two participants in an alliance develop value by each providing resources/competencies that the other partner needs to effectively serve the clients. A number of instances of such value cocreation through exchange are evident, especially in P5, but also in P1 and P3. The simplest case is that of *partners offering development resources to ERPCo*, as in many outsourcing (body-shopping) arrangements, *in exchange of hourly compensation*. For example, P5_M#1 acknowledged: "What we have delivered is service that was paid by the hour….This was 10 to 15 percent of our revenue." Even though ERPCo today is a large company, with operations in many countries, the practice of using partners to develop code and to license functionality remains, reflecting ERPCo's origins. On this note, one of the managers (ERPCo_M#3) observed that when this company started, it was a "small company with very limited development teams," and whenever it needed to cover additional functionality, it had to use partner staff as "work for hire," since ERPCo was "not able to add headcounts." Such use of partners' resources typically reduces the total cost of development of the package and delivers value to ERPCo's clients in the form of reduced total cost of ownership (TCO).

Value cocreation through such an exchange is also in evidence whenever ERPCo undertakes major updates to the core ERP systems. Partners, such as P3, provide their insights into what enhancement/changes customers would (or would not) appreciate, and in return, ERPCo offers the new versions (and detailed information on them) earlier so that these partners can have a head start in delivering the products to the marketplace. As ERPCo_M#2 explained,

> When we make changes or updates either to products or business programs…we always make sure to talk to some partners of some countries in advance, just to get their feedback. "You know what, we are thinking about doing this…what do you think?"….We are highly dependent on our partners to tell us what we should put in there [in the new release]…."Are we going in the right direction, are we going the wrong direction?"….We also try to give those partners that help us...information [about the changes] earlier than the other partners…and [so] they get…[a] head-start, and they had an input on [what we do]....So, [this is] kind of a win-win.

Given that ERPCo does not generally maintain linkages with its client base directly, as discussed earlier, the *partners' inputs regarding changes* being implemented to the products (or new versions of the products) are of great value to it. This is because a wrong direction in terms of the product functionality would ultimately result in the client organizations not being able to run their business effectively, and this would eventually be experienced as a substantial loss in revenue for

ERPCo, with customers choosing alternate ERP packages. In return, the contributing partners have *a chance to learn about and develop expertise on the new product even before the product version is released*. This potentially results both in a competitive advantage (for the partner) once the product is officially available for the clients and in value to the client in terms of faster implementation of the new products.

We note that in the case of exchange, no value is generated because of any specific alignment of resources involved, nor is there any requirement regarding the kind of resource (outside-in or inside-out) that needs to be brought in by ERPCo or its partner.

Addition: Cocreating Value through Layering

This mode of value cocreation is evident in the way in which one of the two parties (i.e., ERPCo or its partners, especially those involved in sales, implementation, and customization) build on contributions of the other in order to develop revenue streams for both. ERPCo_M#2 explained how the additive model of cocreation works:

> They [the partners] actually get a vehicle for providing additional service…when they sell [ERPCo's products]....That is a value added service of a typical implementation.... [The partners] would …probably [gain] one-third to one-half license value but then the other value…actually comes from implementation services, training services, and ongoing maintenance services…this business would be much smaller if they did not actually have the opportunity to sell these…services to the customers. It is additive all the way through....The way revenue is split [in a way where] everybody gets a fair share of the cake.

In essence, for every sale that a partner makes, ERPCo receives its share of the license fee, without having to invest in building a worldwide sales force; likewise, with each sale, the partner receives a proportion of the licensing fee and the opportunity to sell additional consulting services, typically two to four times the amount of the license. Indeed, for P1, P2, and P4, this is the primary way to generate revenue for themselves and ERPCo and also create more value for their customers by providing them with a world class ERP-system customized to their clients' industry. As ERPCo_M#2 asserted,

> Customers in this [SME] segment, they want local advisors; they want someone who understands the local business....[For example,] we have no clue

what the paint manufacturing industry in [NEC's neighboring country] needs.

In taking advantage of this mode of cocreation, all that ERPCo needs to do to sustain this model is keep their core ERP products technically sound and relevant to the marketplace and continue to sign up more partners capable of selling and providing consulting (of which there are many). Emphasizing the importance of this mode of value cocreation, P1_M#1 stated:

> We bring the product to life…without us, they [ERPCo] could not sell it…customers alone cannot kick-start the product and ERPCo does not have the capacity [to help customers kick-start the ERP system in the client organization].

While the scenario described above explains how partners add a layer of contribution to ERPCo's product in order to develop value for both sides, in some instances ERPCo does the same for the partners. For example, many ERPCo partners have packaged routine customizations that they need to perform in many different client sites. As ERPCo_M#2 explained,

> Whenever they go to a customer, they often have to do the same customizations and instead of doing the customization over and over again, they actually realize…"well let us create a small package of that, and then we can resell it…we can sell this to other [partners]…we can sell this to other countries."

Yet most partners, except for the truly global ones such as P2 and P4, simply do not have the means to obtain international exposure on these modules by themselves. ERPCo_M#2 noted that in such situations they try to "help partners who want to go international to do that…trying to connect them with partners in different countries," thereby making innovative add-ons available to client organizations across the globe that could potentially allow them to run their business better. Along these lines, ERPCo started the practice of listing the partners' solutions on ERPCo's website via a solution finder and distributing catalogs to partners globally. As we can see, the value here is cocreated by layering ERPCo's ability to provide global reach to products created by its partners.

It may be argued that, in the additive mode, the alliance partners bring unique, rare, and complementary resources to the alliance, thereby enabling the alliance and the firms involved to develop the capacity to earn Ricardian rents (Peteraf 1993). The concept of Ricardian rents highlights the

point that whenever firms have a bundle of resources that are rare and complementary, an opportunity exists to create value and earn rents (Das and Teng 2000). However, these resources cease to generate value if they can be imitated or owned by another alliance or set of firms (Madhok and Tallman 1998). Indeed, this appears to be the case for ERPCo's partners. Given that the level of collaboration required between ERPCo and its partners is relatively superficial for the additive mode of value cocreation, entry into the partner network is fairly easy; this ease of entry is reflected in the high number of ERPCo partners that engage in this mode of value cocreation. Further, while the rent-earning capacities of small partners help in generating economics-related value, learning-based value is typically missing (Kale and Singh 2009; Madhok and Tallman 1998). Accordingly, the rent-earning capacity through this mode of cocreation may be short-lived and not transferable outside the alliance transaction.

Synergistic Integration: Cocreating Value through Amalgamation

In this mode, both sides have to (1) work together *with* each other, in a mutually reinforcing manner, (2) surrender some of their own autonomy, (3) have trust in the other to do what is in the interest of both sides of the relationship, and (4) invest in the relationship rather than *just* look for gains out of it (Madhok and Tallman 1998; Sarker and Sahay 2003). There is often *a recursive element to the value addition process,* which can result in significantly higher levels of value being synergistically cocreated in comparison to the other two modes discussed earlier (exchange and addition). Further, in synergistic integration, the alliance partners can bring in both complementary and supplementary resources, which when harnessed in unison can generate new products or services with substantially more value potential than what each alliance partner can generate separately with its own resources (Das and Teng 2000).

To illustrate this synergistic mode of cocreation, we continue with the second scenario discussed in the context of cocreation by addition. A number of partners in the ERPCo–partner ecology, such as P3, and to some extent P2, dedicate a large proportion of their resources to develop add-on modules for industry verticals or micro-verticals, based on their in-depth understanding of their local clients' industry. A small proportion of these modules, which are seen as being of strategic importance, may be "acquired" by ERPCo for integration into the core product. Such acquired modules are often redeveloped under the guidance of ERPCo development staff using ERPCo standards of software engineering. Through this

collaborative effort between the partner firms and ERPCo, a new and enhanced version of the ERP product (part or extension) is created. This is a case where the alignment between the resources brought into the relationship by the partner firms can be supplementary, complementary, or, in many cases, both complementary and supplementary; the process of cocreation is best described as amalgamation, involving close, seamless collaboration to *fuse* the resources and recursive value addition by the two parties (Madhok and Tallman 1998). This is in sharp contrast to the layering mechanism of the additive mode.

According to ERPCo_M#3, the value comes from putting together "*the ERPCo way* of building products and [the] *partners' deep domain knowledge* about the industry." The entire process is quite complex, and according to ERPCo_M#3, involves a lot of work in the form of coordination, negotiation, and bargaining. The business case is built first, and then co-marketing of the module with the partner may be done to see how the market responds to the module. Thereafter, ERPCo management approval for the intellectual property (IP) transfer must be obtained, and the price must be negotiated with the partner. Next, acquisition of IP rights needs to be managed, followed by knowledge transfer to the internal team and the development of the new version of the module using partner human resources primarily under ERPCo supervision. Throughout the process, *a collaborative spirit needs to be maintained,* since breakdown in the relationship between the partner and ERPCo is always possible. As a result of such synergistic integration, ERPCo is able to gain entry into certain markets that were earlier off limits because of lack of a given functionality. In many cases, the product offered by ERPCo becomes more competitive in the market as a result of the functionality made available through the new module. As P2_M#3 noted,

> Traditionally, we would sell them [clients] a solution....we have a catalogue now, with almost 50 different kinds of add-on solutions....We have developed a module for graphically showing stock levels, which is now widely used.

Further, by integrating the add-on module with the core system, the sales process of the ERP product (with an added external module) to clients is significantly streamlined, which saves on overall costs, thereby contributing to the bottom line of both ERPCo and its partners. Naturally, the partner also gains financially in a significant way when ERPCo acquires its module.

For add-on products that are excellent but do not have the level of scalability and universal applicability for the cus-

tomer base, ERPCo offers a sophisticated certification program, which then allows the partners to differentiate their products through ERPCo branding and sell their products worldwide. As part of the certification program, ERPCo guarantees the quality of products that pass its "tests" and then features them on the ERPCo website, promotes them in marketing material and events, and makes the add-on product part of the standard "price list." As ERPCo_M#4 explained,

> We made the [certification] program because our partners asked us to....They would like a stamp from ERPCo that this solution is quality solution…a good solution…a proven solution. [It benefits]…partners that are going international.

ERPCo_M#3 and ERPCo_M#4 described some of the tests to which the products are subjected. They include *technical compatibility tests,* which examine how well the add-on module integrates with ERPCo's products; *development methodology-related tests,* which examine the nature of methodological practices used to build the module, including documentation; *functionality tests,* which verify that the add-on-product is being used by at least 10 customers, and that they are satisfied with it; and finally, *security tests,* ensuring that one is unable "to hack the system by entering through this functionality."

The return on investment on the certification programs is realized in many ways. First, partners that would like their products certified use *a more disciplined approach* to their development, *using standards that are comparable with those used in ERPCo's development process*, which in turn leads to the development of a more robust add-on product. Additionally, the partners *document their processes and products* more carefully, which leads to gains because new personnel who are involved in developing or enhancing the product can start being productive faster, reducing the development costs. Greater robustness of the product and lower costs make the add-on more attractive in the industry for which it is built and, consequently, this increases the possibility that ERPCo's product would be purchased by the client. As ERPCo_M#3 noted,

> We gain in a way that if these functionalities are not existing, then [our ERP system] is not able to meet [the client's] needs and so [the client] will go to another product. At the end of the day…hopefully, it creates more business for ERPCo and our partners....Without industry solutions, we would have a tough time in the specific industries.

P2_M#2 emphasized that the related initiatives of ERPCo and P2 are undertaken jointly:

> [ERPCo] certifies our add-ons, for example, our retail solution and a solution for discrete industry… where we work strategically on market segments and we build dedicated solutions, that create cocreated value, and lobby to influence the market, [conduct] joint marketing, joint development, [and] jointly invest more on resource development

It is important to note that the value generated for the alliance structure in this mode is generally *multifaceted and long-term*, and it can be viewed as the alliance partners' ability to develop collaboration-specific quasi rent (CSQR) earning capacity (Madhok and Tallman 1998). Our case study highlights that ERPCo and its partners were able to combine their resources into "synergistic bundles" through intense collaboration (Madhok and Tallman 1998) and develop new ERP add-ons and enhanced modules. Through this intense collaboration, not only are the participants able to receive value while engaged in the alliance, but they also gain other benefits such as technical compatibility, better documentation, and certifications related to development and methodology providing them with the capability to enjoy learning-based value in the form of greater skills and organizational maturity. This is consistent with the CSQR concept, which is believed to enable firms to "increase their rent-generating capacity outside of the collaborative relationship" (Madhok and Tallman 1998, p. 329).

To provide a high-level perspective on value cocreation in the ERPCo case setting, and to highlight what value is created and for whom, we show (in Figure 3) how ERPCo and any given partner bring resources to the alliance (arrows a and b), and these resources when combined through the value cocreation mechanisms of exchange, addition, and synergistic integration lead to value for the client organization (arrow c). Part of this additional value enjoyed by the client organization is passed back to the alliance partners (arrow d). Two additional points are worth highlighting: First, the resources that the two parties in the dyad bring to the relationship do not *automatically* lead to (higher) value for the client—the value emanates *from the cocreation process* surrounding the ERP technology; and second, *certain factors facilitate or inhibit effective value cocreation* in the partnership.

We highlight the key enabling and inhibiting factors related to the cocreation mechanisms next (see Figure 3). In our theoretical section, we discussed the role of three categories of factors that tend to influence the cocreation process in interfirm relationships: governance mechanisms; collective strength, especially the technology-related issues; and the power/politics. We revisit these three categories and unearth the salient elements within each category and the nature of
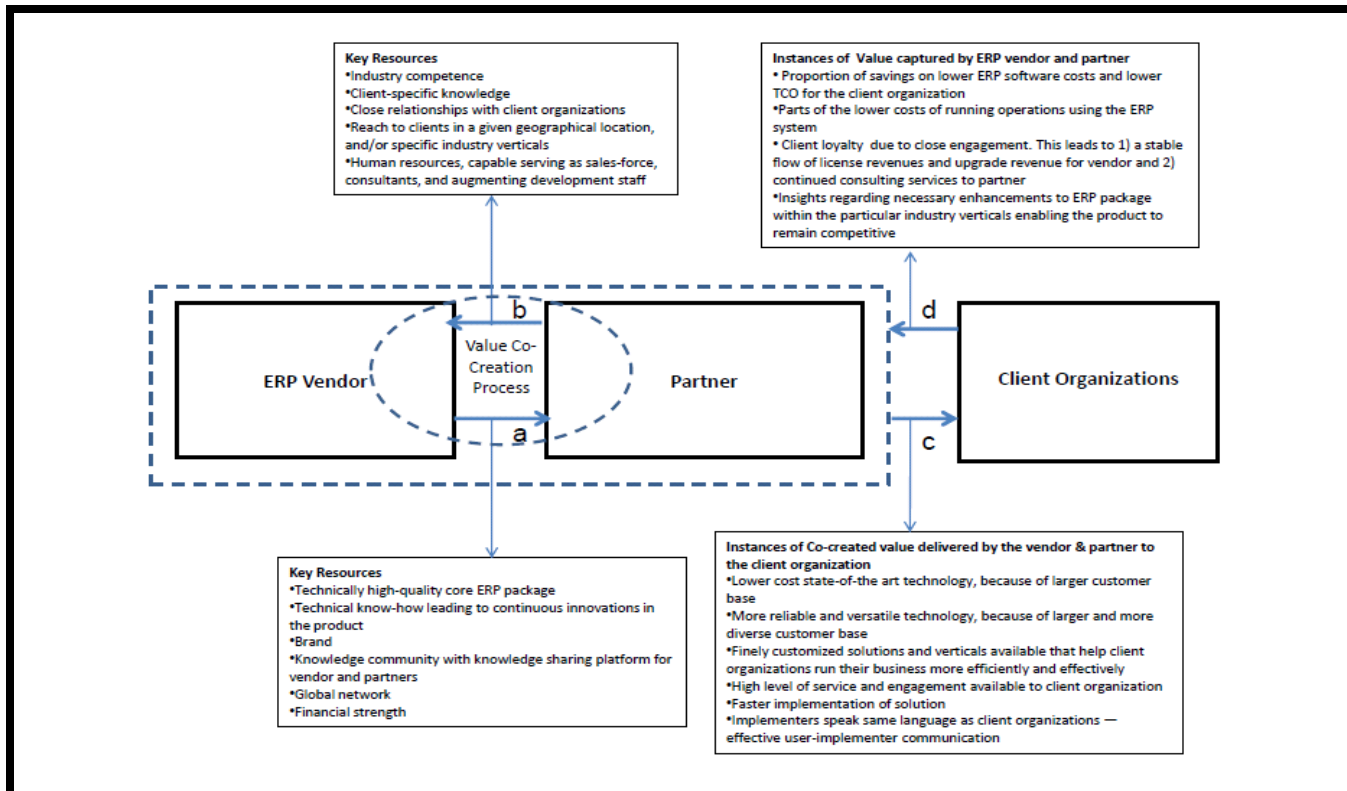
Figure 3. Overview of Value Cocreation for the Client by the ERP Vendor–Partner Alliance

Table 2. The Role of the Key Enablers/Inhibitors in Each Mode

Cocreation Type/Enabling Factors	Synergistic Integration	Additive	Exchange
Governance Mechanism			
Self-reinforcing mechanisms	+ (especially)	+	
Contractual agreements	+	+	+
Technology-Related Collective Strength			
Collective IT capability	+	+	
Simplicity of the technology	+	+ (especially)	
Adaptability of the technology	+		
IT-related support availability	+	+	
IT-related knowledge transfer, and learning capability	+ (mutuality in sharing)	+ (unidirectional/bidirectional sharing)	
Power/Politics Enabling Conditions			
Status differences between alliance partners	–	–	– (especially)
Conflict of Interests	–	–	

Legend:

(+): The presence of this factor was found to enhance or contribute to value cocreation in the given mode.

(–): The presence of this factor was found to negatively contribute to value cocreation in the given mode.

their influence in relation to ERPCo and its partners. The discussion is summarized in Table 2.

Alliance Governance

Alliance governance mechanisms are seen to play an important role in alliances (e.g., Poppo and Zenger 2002). In our case study, we noticed the effect of several governance-related factors on the extent and mode of value cocreation. One such factor is the presence/absence of *self-reinforcing mechanisms* such as trust and goodwill in the relationship. It has been argued that one of the "best and least costly mode[s] of governance for an alliance" is trust, and that "mutual trust in an alliance reduces…bureaucratic complexity" (Park and Ungson 2001, p. 51). P2_M#2 emphasized the importance of trust:

> Value comes from trust in relationships….[It is]…not about the value but about the relationship.

Similarly, ERPCo_M#4 highlighted the role of the partner advisory council ERPCo had initiated to develop trust and the goodwill of their partners, where they jointly discussed

> what we could do to promote their solution…what we could do to help them sell more….They would like some way to stand out from the crowd. If we [fail to] include the partners in…the projects that we do…[we have the] risk of being a failure.

Along similar lines, P3_M#1 noted

> Now, they [ERPCo management] are thinking more long term. How can they help partners in order to help themselves?

However, P4_M#1 expressed some concern regarding ERPCo bypassing partners, and P2_M#1 talked about ERPCo caring about nothing but profit, which affected the well-being of partners engaged in additive activities. In fact, ERPCo_M#7 acknowledged that "there is a big fear in the channel…that ERPCo [is] eating partners' business," which limits the investments that partners are willing to make in the alliance.

Further, our data indicates that self-reinforcing mechanisms in such contexts refer not only to trust and goodwill but also to the extent of commitment the alliance members have to the relationship (Park and Ungson 2001). As an ERPCo manager (ERPCo_M#1) explained,

> Based on a partner economic survey, a trusted third party will publish a white paper in October. They

said, "We are working with all large vendors in the IT industry, we've seen no one who really cares about their partner's profitability the way you do." But to us it's really logical given the dependency we have on them [the partners]; if they're not healthy businesses…it will ruin us.... It is something that we spend a lot of…energy and investments on.

Self-reinforcing mechanisms are most relevant to the synergistic integration mode, where the alliance partners work more collaboratively, and value emanates from the level of unison that they develop and the innovations that result from their joint efforts. As ERPCo_M#8 stated,

> "trust" is an absolute requirement ....Partners have to trust that the vendor will do its utmost to maximize the possibilities for partners to serve their customers, and make a good revenue. ERPCo has to trust the partners to do a good job.

While trust, goodwill, and commitment enable value cocreation within the synergistic integration mode, *contractual agreements* help protect against opportunism and help facilitate value cocreation. This is especially the case when the alliances (between ERPCo and its partners) are more loosely coupled and somewhat transactional, characteristic of situations where value is cocreated in the exchange or additive modes. Contractual agreements explicitly lay down terms and conditions of responsibilities and other coordination-related issues (Park and Ungson 2001; Poppo and Zenger 2002; Reuer and Arino 2007), thereby reducing duplication and redundancy, and ultimately lead to more effective value cocreation. COMP1_M#2, referring to the additive mode of value cocreation, stated that

> software selling via partners [is accomplished] with one global framework with respect to agreements, terms and conditions, commitments, rules for engagements....Rules of engagement is key to the success for the partner model.

On a related note, P1_M#1 and P2_M#1 highlighted the importance of implementing a business model that was not biased as the framework underlying the rules of engagement. Obviously, value cocreation within the additive or the synergistic mode would be difficult, if not impossible, when the overarching business model for the alliance is not well-aligned to interests of both sides and does not create incentives for both parties to work toward common interests of the alliance. We would like to note that while suitable contractual agreements appear to underlie all modes of (positive) value cocreation in our case study, the synergistic integration

mode especially requires the trust and goodwill of both sides (see Table 2).

Technology-Related Collective Strength

Another category of factors that emerged as important in all of the modes of cocreation was the collective strength of the alliance, particularly those related to technology, which is naturally of interest to us. This is consistent with prior literature that argues that the "aggregate of all resource endowments of the alliance" (Das and Teng 2000, p. 290) such as technology (Blodgett 1991) and knowledge (Simonin 1999) are critical for the success of the alliance.

One of the factors under this category is the *collective IT capability* of the alliance. This capability refers to the compatibility of ERPCo's IT infrastructure with that of the relevant partner (e.g., hardware and software and skills pertaining to IT-related tasks such as customization and consulting). Collective IT capability also incorporates considerations regarding the symmetry between ERPCo and a given partner in the use of methodologies and IT-based practices. Indeed, the compatibility of technologies, methodologies, and practices is consistent with the concept of *resource similarity*, which is known to reduce conflicts among the alliance partners. ERPCo_M#1 explained his perspective on the methodology that ERPCo provides:

> Method_ERP [pseudonym of the ERPCo's proprietary implementation methodology] is supposed to do two things, really drive a much more consistent implementation which drives honestly customer satisfaction and partner profitability. We want products delivered on time, within the budget and obviously on specs as well, and we think that having a consistent methodology is the way to achieve that.

P3_M#3 highlighted the importance of shared methodologies for additive activities, saying

> We are a strongly committed partner, and we have a dedicated person, a whole team that [serves as] our [Method_ERP] methodology evangelists.

Collective IT capability can be a relevant factor in the additive mode, where the alliance partners bring in technology-related resources (ERPCo provides the ERP system, and the partners bring IT-related skills helpful in planning, customization, and implementation, in addition to knowledge of the customers' requirements and existing technological environ-

ment). Naturally, value cocreation depends on how well these resources complement each other, and complementing needs a degree of compatibility. Collective IT capability can also become critical during synergistic integration, where the technology platform (the ERP system and the development toolkit), methodology, IT-based practices, and skills become the basis for integrated and joint innovation. The importance of the technology platform is reflected in the words of P3_M#2, who noted that ERPCo provides the "technical platform to do what we do."

Another technology-related factor is the *simplicity of the technology* (in this case, the ERP product) around which the alliance has been formed (Keil and Tiwana 2006; Lucas et al. 1988). Simplicity refers to the degree of difficulty experienced in using and adapting the technology platform (Aiman-Smith and Green 2002). In other words, in the context of our study, if a large number of partners that do not necessarily have the most technically oriented staff find, in P5_M#2's terms, that the technology is "intuitive" and that it is easy to customize and develop add-ons, then the ERP package can be considered to be simple. Such simplicity appears to help significantly in the additive mode. P4_M#1, in particular, stressed the importance of the software having a recognizable graphical user interface, and the tools being easy for consultants to understand. Simplicity also appears to positively influence the synergistic integrative model (where ERPCo and the partners collaboratively develop product features for an existing product). As P3_M#2 explained,

> There's no doubt to me that the strength [of ERPCo's system] is the abstraction of the platform....It is not necessarily technical people…here you have… business consultants that can provide all of it [the functionality]. And that to me is the real strength.... I can actually provide all the services to the client because the abstraction of the platform is something that I can…understand, even though I'm more business oriented.

Likewise, ERPCo_M#7 highlighted the importance of simplicity a number of times during the interview, describing ERPCo's product as a strong, high-quality "kernel" with "a simple tool kit," and then declaring:

> the only thing that scales is simplicity....what you can learn in 2 hours and apply in the afternoon tends to have better effect on business....If a training program is [a] 2 week program, [by the] fifth day you are sleeping....you may not even join the program....simplicity is the key.

He added that the simplicity of the technology was *the* reason that high value could be delivered to clients, given that the partners "could think business instead of thinking IT."

Yet another technology-related factor that emerged as being important in the value cocreation modes is the *adaptability of the technology*. Adaptability can be viewed as the extent to which a technology is malleable to changing (or different) requirements (e.g., Sarker et al. 2005). In our study, it refers to the extent to which the ERP software was open to change with respect to core business rules and processes, given that the European market was a "conglomerate of...small things, with significant diversity."[6] Indeed, ERPCo_M#7 attributed much of the value cocreated by the ERPCo–partner alliance in Europe to the adaptability of the ERP system. In fact, he noted that one of the leading ERP systems in the United States was not successful in Europe because

> [ERPCo competition] did not want partners to customize directly into the software, but do everything on the top of it. If you need to change fundamental rules in the way business is running at a certain point, you can't live with it....The localization model needs to go on the source code. Business apps are so deeply involved that you will need to do some degree of source code changing.

He noted that this was because of the complexities arising from inconsistencies in the rules in the different parts of the system. Given our lack of past awareness of this explanation for the competitor's lack of success, and the fact that ERPCo_M#7 had not been working with ERPCo for some time, and thus may not have recalled this issue accurately, we checked this claim with P1_M#1, who promptly confirmed ERPCo_M#7's assertion. The ability to undertake deep changes due to the openness of the source code is especially relevant when ERPCo and its partners seek to collaboratively develop innovative product features and extensions. In fact, P2_M#1 rather clearly indicated that the system's adaptability and openness was applicable in activities associated with synergistic integration rather than with the additive mode, where relatively superficial modifications of the software are required. Our study also unearthed the significant role of *IT-related support* provided by the alliance partners as being

critical for value cocreation. This factor was viewed as critical during the additive mode when partners had to customize and implement the ERP package. As P3_M#1 explained,

> I would say a key cocreational value would also be [dependent on] the level of responsiveness with the service level. One problem for all partners is usually that when you're entering your project…there are all kinds of problems....And it's quite critical that we can easily … support in an agile way.

P2_M#1 expressed dismay over the reduced support that ERPCo was providing, noting that ERPCo was "depending on their partners to be able to add…value to the customer," and without support, cocreation would be impeded. The importance of support is also evident in the synergistic integration mode when the alliance partners work hand-in-hand. P3_M#2 elaborated:

> it's all about new innovation that is coming up with an enhanced focus. At times the partner and ERPCo go hand in hand. [ERPCo] has a dedicated team that is ready to support us whenever something happens.

The final subcategory under the collective strength that emerged in our study is related to the *knowledge transfer and learning* of the alliance partners, both individually and collectively. The important role of knowledge and the ability to create, transfer, and exploit knowledge in alliance success has been alluded to in prior research (e.g., Lane et al. 2006; Swanson and Wang 2005; Zahra and George 2002). Davenport and Prusak (1998) argue that for successful knowledge transfer and exploitation, it is important for the source to share knowledge and the recipients to absorb and internalize that knowledge. In the context of our study, we found that the extent of *knowledge sharing* by the alliance partner firms contributed positively to value cocreation during both the additive and synergistic integration modes. During the additive mode, knowledge sharing by ERPCo helped the partner firms effectively make the sales and customize the generic ERP offered by ERPCo, while during the synergistic integration mode, such knowledge sharing helped in the coordinated production of add-ons and new modules, as well as in the penetration of new markets. Knowledge, in this case, refers not only to technical information but also broader issues such as ERPCo's long-term vision for the alliance partners. As one manager (P3_M#1) explained,

> There are several types of knowledge [relevant to value-cocreation with ERPCo]. Of course there are the technical bits…which is learning different technical skills…for the products. [In addition]…if we are going to spend a couple of hundred thousand

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[6]One example mentioned was related to how VAT (value-added tax) was handled in different countries. Another fundamental difference that had "astonished" our interviewee (in the role of an ERPCo manager many years ago) was the kind of business processes (e.g., invoicing practices) that northern Italy allows. These differences, according to our interviewee, could not be easily handled by building a module of software over the core ERP code.

dollars a quarter on [building add-ons to ERPCo's products] we would like to know in as good time as possible the directions that ERPCo is moving in relation to that particular product [to reduce the] risk of developing something that ERPCo already has planned...or if they have anything else that would impact our...business.

We would like to note here that the nature of knowledge sharing is different in the additive and the synergistic integrative modes. During the additive mode, knowledge sharing is typically unidirectional, generally flowing from ERPCo to its partners. For example, a manager from ERPCo (ERPCo_M#1) emphasized this point by highlighting "we provide a lot of knowledge to the partners." Multiple managers at the partner firms (P2_M#2 and P5_M#1) alluded to this point. However, sometimes knowledge transfer can be bidirectional, with partners providing feedback to ERPCo. It is useful to note that such transfer in both directions during the additive mode is likely to be on *separate* issues, and is thus not synchronized or coordinated. Interestingly, P2_M#1 noted that, in many cases, ERPCo enacted the "not invented here" syndrome, resisting willingness to absorb valuable knowledge about customer needs from the partners, which would ultimately lead to less than optimal value cocreation as clients would not get the highest possible value from the relationship and could look to shift from the ERPCo product.

During the synergistic integration mode, however, knowledge sharing is on the same topic (or pertaining to a shared goal) in both directions, in a synchronized and coordinated fashion, wherein a shared frame of reference for the value cocreation needs to result. Indeed, with reference to an instance of value cocreation by synergistic integration (P3's joint product development with ERPCo), P3_M#1 noted that knowledge sharing in an early phase provided "a chance to influence [product-related] decision(s) both ways."

As discussed earlier, knowledge transfer/exploitation involves not only the sharing but also the successful learning of that knowledge (Davenport and Prusak 1998). In the context of our study, along with this sharing of information, the alliance partners' ability to absorb the shared knowledge and learn from the knowledge source was seen as valuable. For example, ERPCo_M#7 indicated that "ability to learn" or absorptive capacity was critical for value cocreation. Similarly, P3_M#2 talked about a "lot of learning" on both sides to determine "how we can do more together."

To summarize, technology-related capabilities do not have any discernible effects on the exchange mode, while it affects both the synergistic and additive modes, although with inter-

esting differences (see Table 2). In particular, openness and deep adaptability of core technology is relevant for synergistic mode, but arguably not for the additive mode. Further, while knowledge sharing and learning capability is critical in both of these modes, the nature of sharing involved is different. The additive mode involves unidirectional (partner → vendor or vendor → partner) learning, and when there is bidirectional learning, it is usually not coordinated. On the other hand, the synergistic mode demands mutuality in learning, where both sides share, learn, and enhance their own capabilities in a significant way. Not surprisingly, self-reinforcing mechanisms appear to be more salient for synergistic integration, given that both partners depend on each other to be effective. Also, the simplicity of technology was found to be more relevant for additive mode activities, where the partner's goal is to layer its knowledge of the client with ease onto the generic ERP system.

Power and Politics-Enabling Conditions

As discussed earlier, and also in the literature (e.g., Kogut 1988; Lavie 2007; Park and Ungson 2001), an alliance is characterized not only by "cooperative activities" but also by "competitive activities," motivated by the alliance partners' self-interests (Park and Ungson 2001, p. 37). Such activities (initiated intentionally or accidentally) can negatively affect value cocreation.

Researchers argue that many of the problems that lead to alliance failures are related to internal factors such as political behaviors on behalf of the alliance partners themselves (Park and Ungson 2001). In our study, one related factor contributing negatively to the cocreation of value was the *conflicting interests* pursued by ERPCo and its partners. A manager at ERPCo (ERPCo_M#1) elaborated on this issue:

I think [a] fundamental issue is that partners are in the game to sell services. We are in the game of selling software....That's probably the fundamental conflict between us and the partners…that in the end will impact customers.

Such conflicting interests fuel opportunism and "hold-up" behaviors (Lacity and Willcocks 1998), such that either ERPCo or its partners are tempted to appropriate away resources/value from the other, reducing the alliance's ability to cater to customer needs and thus diminishing value for all parties. In particular, P2_M#1 talked about cannibalism among partners selling licenses (a simple additive activity), with ERPCo looking away because it gained as the partners competed by offering drastically higher rebates. Such activi-

ties, driven by conflicting interests, could potentially weaken the partners and push them out of business. All of this, in the end, would eventually undermine ERPCo's partner ecology. Of course, conflict of interests would naturally undermine synergistic integration mode as well.

Finally, one other factor that emerged as a significant inhibitor of value cocreation is the *status differences* between the alliance partners. This asymmetry between the alliance partners can lead to dependencies and vulnerabilities, to the point where there are "hostage situations," such that the stronger partner tends to appropriate resources away from the disadvantaged party (Park and Ungson 2001, p. 50). We found evidence of this in our interviews (e.g., P1_M#1, P2_M#1), where it was suggested that, owing to its stature and position in the global market, ERPCo appeared to be adopting a unilateral perspective on issues and squeezing its more localized, small partners that were not viewed as contributing significantly to ERPCo's license income. For example, both interviewees from P1 expressed the view that ERPCo did not particularly care about the interests of (small) partners such as themselves despite their contributions to ERPCo's bottom line. Confirming the difficulties of small partners, P4_M#1 (a manager of a large partner) stated that ERPCo gets a "well-known brand" [of P4] in many countries where P4 had a large customer base, and added, "I think we can benefit more from the partnership than the small partners." P1_M#1 noted that ERPCo is "tightening the belt" on the smaller partners, mandating a minimum sale of what is seen by small partners as an unreasonably large number of new licenses. This new move by ERPCo appears to be dramatically hurting the smaller partners in NEC, and a potentially large number of these partners are considering leaving the ERPCo ecology to start selling a competing product. If this exodus happens in significant numbers, ERPCo's belt-tightening would lead to significant value co-destruction for both sides.

To summarize, while status differences affect all three modes, the exchange mode is likely to suffer the most from it. When status difference between the exchanging parties is too large, it is more than likely that the exchange would not be equitable and there would be asymmetric appropriation of value by one side of the alliance (see Table 2).

In Figure 4, we present our theoretical model summarizing the different modes of value cocreation and the different enablers/ inhibitors affecting it.

Limitations

In this study, we have implied a hierarchy of cocreation modes with respect to how desirable and value generating they are (from the highest, synergistic integration, to the lowest, exchange). Such an order seems to make logical sense. It has face validity as established through member checking with selected interviewees, and no data contradicts this hierarchy. However, we believe that more research to validate our provisional findings regarding such a hierarchy is needed.

The study focuses on alliances surrounding the development/ deployment of a specific technology, that is, an ERP system. We feel that ERP technologies, especially those similar to the one studied here, provide an excellent platform to study cocreation because of their open nature (despite being proprietary), which allows an ecology of partners to customize the systems and develop suitable add-ons for clients. However, it is widely known that ERP technologies are complex, and ERP implementation projects are often accompanied by organizational business process change initiatives, with their success depending on the intense collaboration and commitment of all stakeholders (e.g., clients, the software vendor). Value cocreation in such a complex environment may not resemble cocreation surrounding simpler technologies such as an extranet. However, we believe that the theoretical abstractions (e.g., modes of cocreation) emerging through the analysis of ERPCo's case are likely to be applicable in other technology contexts, whether simple or complex.

Contributions

Theoretical/Research

As highlighted above, this study addresses both the theoretical and empirical gaps in the IS and strategy literature by systematically investigating value cocreation in a revelatory B2B alliance context. Specifically, our study has identified the different modes of cocreation of value within the vendor–partner alliance surrounding an ERP product. We believe this to be an important contribution since our literature review reveals the point that past research has treated cocreation as a "black box." This study is arguably the first that attempts to look *into* the cocreation phenomenon in some depth, offering a more penetrative understanding of the concept. Further, the study goes a step further than past studies that have dwelled on antecedents and consequences of value creation by unearthing different sets of enablers/inhibitors that influence value cocreation for different modes. In addition, our study emphasizes the importance of IT in value cocreation in two ways: first, by studying cocreation within the context of an IT product; and second, by highlighting the different IT-related enablers that influence the value cocreation process. To the best of our knowledge, explicit consideration of IT-related issues has been minimal in prior cocreation studies.
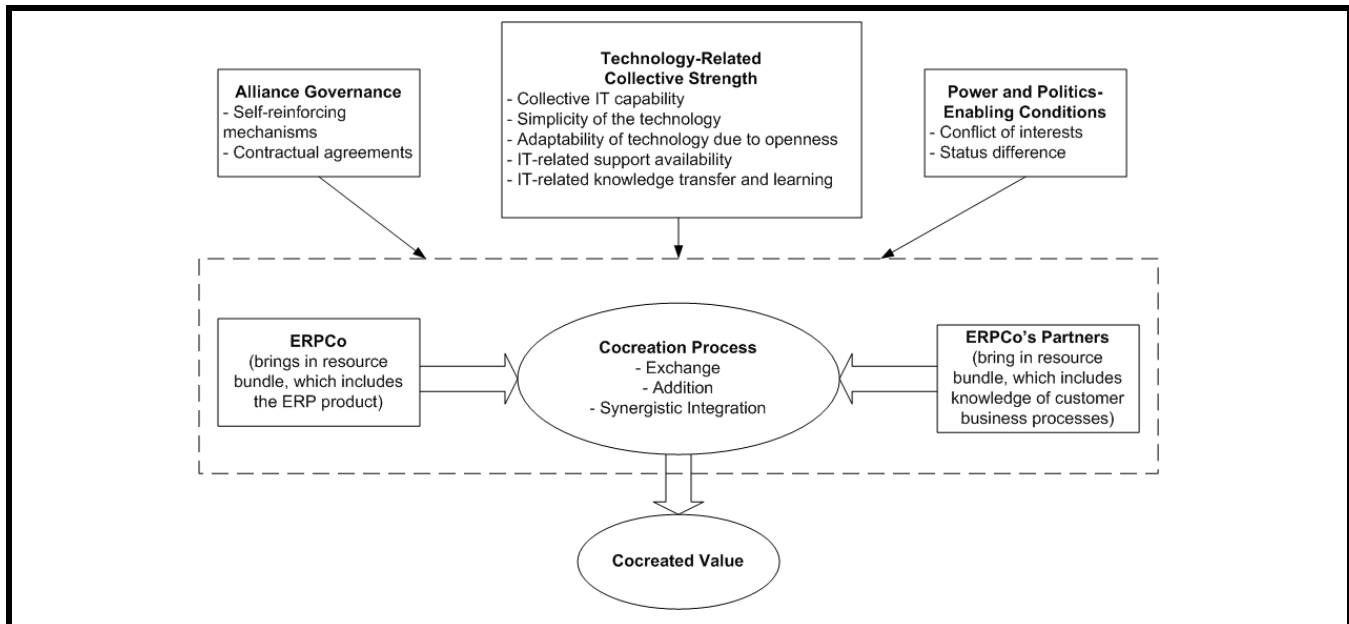
Figure 4. Revised Theoretical Model

Even though the concept of value itself has been acknowledged as being multidimensional in the literature, prior research has focused primarily on the economic components of value. Given the complexities involved in today's organizational ecology, researchers believe that the sole focus on economic value creates blinders for us as researchers, leading to incomplete understanding; consequently, scholars are calling for broader definitions of value, particularly in the context of interfirm alliances (e.g., Kohli and Grover 2008). Our study represents some progress in this regard, given that it adopts a more holistic conception of value. Furthermore, our study contributes not only to the literature on B2B alliances and value cocreation but also to the research on packaged software. First, much of this literature assumes that packaged software implementation involves only a vendor and the customer. As our case study illustrates, package software vendors can, in some cases, form B2B alliances with partner organizations to deliver a more customized solution to their customers. However, the existing literature has failed to capture these instances or inform us about how these alliances are formed and how the software package is delivered. Our study thus makes an important contribution to this literature by unearthing how a packaged software vendor can deliver software to client organizations by forging innovative alliances with partners and how value is cocreated through these alliances. Further, our case study, by focusing on SMEs, fills an important void in the packaged software literature, which has tended to focus primarily on large firms.

Finally, our study highlights the important role of the cocreation mechanism, where greater involvement from the ERP vendor and partners can actually help reduce the many identified mismatches in packaged software implementation (e.g., Strong and Volkoff 2010). While the literature has implicitly suggested that a co-development process might help reduce the mismatches, our study highlights how such a cocreation process might work.

We believe that our study's results have important implications for other related areas such as open-source software development (OSS), participatory user design, and outsourcing/offshoring, all of which involve significant collaboration and often a close coupling between multiple stakeholders who bring in different resources to the process.

Practice

We are hopeful that the modes of cocreation discovered in this study will provide managers with the language and conceptual clarity to discuss this topic, enabling them to set up appropriate relationships with other organizations. Given that value cocreation is a goal for most alliances, organizations can select the cocreation mode that is most appropriate for their alliance.

The factors (that is, the enablers and inhibitors of the different value cocreation modes) highlighted through our study should also be valuable reference for practice. Because extant research shows that between 30 percent and 70 percent of alliances fail (Bamford et al. 2004, Kale et al. 2001) and that the rate of alliance termination is substantial (over 50 percent; see Lunnan and Haugland 2008), the set of contingencies can serve as a checklist for organizations to ensure that they are headed toward value cocreation and not co-destruction.

Finally, we believe that the case narrative of ERPCo itself can be seen as an important contribution to practice, serving as a consultable record (Walsham 1995). The case highlights the unique business model of an exemplary organization that formed alliances with smaller partner organizations to deploy its core product to customers. Such a model can be valuable for other resource-scarce organizations (say, with respect to their sales force or development staff) that may be motivated to reach out to a broader base of customers but may be unable to do so because of resource constraints. We are hopeful that such organizations would benefit from reflecting on ERPCo's experiences with value cocreation, and consciously utilizing relevant conceptual knowledge embedded in this work.

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References

Agarwal, R., Croson, R., and Mahoney, J. T. 2009. "Decision Making in Strategic Alliances: An Experimental Investigation," *Strategic Management Journal* (31:4), pp. 413-437.

Ahuja, G. 2000. "The Duality of Collaboration: Inducements and Opportunities in the Formation of Interfirm Linkages," *Strategic Management Journal* (21), pp. 95-112.

Aiman-Smith, L., and Green, S. G. 2002. "Implementing New Manufacturing Technology: The Related Effects of Technology Characteristics and User Learning Activities," *Academy of Management Journal* (45:2), pp. 421-430.

Amit, R., and Schoemaker, P. 1993. "Strategic Assets and Organizational Rent," *Strategic Management Journal* (14:1), pp. 33-46.

Anand, B. N., and Khanna, T. 2000. "Do Firms Learn to Create Value? The Case of Alliances," *Strategic Management Journal* (21:Special Issue), pp. 295-315.

Antero, M., and Bjørn-Andersen, N. 2011. "A Tale of Two ERP Vendors—And the Crucial Decision of Choosing the Right Business Model," in *Proceedings of the Conference on ENTERprise Information Systems*, Algarve, Portugal, October 5-7.

Bamford, J., Gomes-Casseres, B., and Robinson, M. 2004. *Envisioning Collaboration: Mastering Alliance Strategies*, San Francisco: Jossey-Bass.

Barney, J. 1991. "Firm Resources and Sustained Competitive Advantage," *Journal of Management* (17:1), pp. 99-120.

Blodgett, L. L. 1991. "Partner Contributions as Predictors of Equity Share in International Joint Ventures," *Journal of International Business Studies,* (22) pp. 63-78.

Bryant, A., and Charmaz, K. 2007. "Grounded Theory in Historical Perspective: An Epistemological Account," in *The Sage Handbook of Grounded Theory*, A. Bryant and K. Charmaz (eds.), London: Sage Publications Inc., pp. 1-28.

Charmaz, K. 2000. "Grounded Theory: Objectivist and Constructivist Methods," in *Handbook of Qualitative Research* (2nd ed.), N. K. Denzin and Y. S. Lincoln (eds.), London: Sage Publications Inc., pp. 509-536.

Das, T. K., and Teng, B. S. 2000. "A Resource-Based Theory of Strategic Alliances," *Journal of Management* (26:1), pp. 31-61.

Davenport, T. H., and Prusak, L. 1998. *Working Knowledge*, Boston: Harvard Business School Press.

Dong, S., Xu, S. X., and Zhu, K. X. 2009. "Research Note—Information Technology in Supply Chains: The Value of IT-Enabled Resources Under Competition," *Information Systems Research* (20:1), pp. 18-32.

Ernst, D., Halevy, T., Monier, J., and Sarrazin, H. 2001. "A Future for E-Alliances," *McKinsey Quarterly* (2), pp. 92-102.

Fryling, M. 2010. "Estimating the Impact of Enterprise Resource Planning Project Management Decisions on Post-Implementation Maintenance Costs: A Case Study Using Simulation Modeling," *Enterprise Information Systems* (4:4), pp. 391-421.

Gil-Saura, I., Frasquet-Deltoro, M., and Cervera-Taulet, A. 2009. "The Value of B2B Relationships," *Industrial Management & Data Systems*, (109:5), pp. 593-609.

Granovetter, M. 1985. "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* (91:3), pp. 481-510.

Gresov, C. 1989. "Exploring Fit and Misfit with Multiple Contingencies," *Administrative Science Quarterly* (34), pp. 431-453.

Gulati, R. 1995. "Social Structure and Alliance Formation Patterns: A Longitudinal Analysis," *Administrative Science Quarterly* (40), pp. 619-652.

Gulati, R., Lavie, D., and Singh, H. 2009. "The Nature of Partnering Experience and the Gains from Alliances," *Strategic Management Journal* (30:11), pp. 1213-1233.

Hill, R. C., and Hellriegel, D. 1994. "Critical Contingencies in Joint Venture Management: Some Lessons from Managers," *Organization Science* (5:4), pp. 594-607.

Hitt, L. M., and Brynjolfsson, E. 1996. "Productivity, Business Profitability, and Consumer Surplus: Three Different Measures of Information Technology Value," *MIS Quarterly* (20:2), pp. 121-142.

Janson, M. A, and Subramanian, A. 1996. "Packaged Software: Selection and Implementation Policies," *Information Systems and Operational Research* (34:2), pp. 133-151.

Kale, P., Dyer, J. and Singh, H. 2001. "Value Creation and Success in Strategic Alliances: Alliance Skills and the Role of Alliance Structure and Systems," *European Management Journal* (19:5), pp. 463-471.

Kale, P., and Singh, H. 2009. "Managing Strategic Alliances: What Do We Know Now, and Where Do We Go from Here," *Academy of Management Perspectives* (23:3), pp. 45-62.

Keil, M., and Tiwana, A. 2006. "Relative Importance of Evaluation Criteria for Enterprise Systems: A Conjoint Study," *Information Systems Journal* (16:3), pp. 237-262.

Kogut B. 1988. "Joint Ventures: Theoretical and Empirical Perspectives," *Strategic Management Journal* (9), pp. 319-332.

Kohli, R., and Devaraj, S. 2003. "Measuring Information Technology Payoff: A Meta-Analysis of Structural Variables in Firm-Level Empirical Research," *Information Systems Research* (14:2), pp. 127-145.

Kohli, R., and Grover, V. 2008. "Business Value of IT: An Essay on Expanding Research Directions to Keep Up with the Times," *Journal of the AIS* (9:1), pp. 23-39.

Lacity, M., and Willcocks, L. 1998. "An Empirical Investigation of Information Technology Sourcing Practices: Lessons from Experience," *MIS Quarterly* (22:3), pp. 363-408

Lane, P. J., Koka, B., and Pathak, S. 2006. "The Reification of Absorptive Capacity: A Critical Review and Reconceptualization," *Academy of Management Review* (31:4), pp. 833-863.

Lavie, D. 2007. "Alliance Portfolios and Firm Performance: A Study of Value Creation and Appropriation in the U.S. Software Industry," *Strategic Management Journal*, (28:12), pp. 1187-1212.

Lee, A. S. 1991. "Integrating Positivist and Interpretive Approaches to Organizational Research," *Organization Science* (2:4), pp. 342-365.

Lucas Jr., H. C., Walton, E. J., and Ginzberg, M. J. 1988. "Implementing Packaged Software," *MIS Quarterly* (12:4), pp. 537-549.

Lunnan, R., and Haugland, S. 2008. "Predicting and Measuring Alliance Performance: A Multidimensional Analysis," *Strategic Management Journal* (29:5), pp. 545-556.

Madhok, A., and Tallman, S. B. 1998. "Resources, Transactions and Rents: Managing Value Through Interfirm Collaborative Relationships," *Organization Science* (9:3), pp. 326-339.

Mahoney, J., and Pandian, J. R. 1992. "The Resource-Based View Within the Conversation of Strategic Management," *Strategic Management Journal* (13:5), pp. 363-380.

Markus, L., and Bjørn-Andersen, N. 1987. "Power Over Users: Its Exercise by Systems Professionals," *Communications of the ACM*, (30:6), pp. 498-504.

Möller, K., Rajala, R., and Westerlund, M. 2008. "Service Innovation Myopia? A New Recipe for Client Provider Value Creation," *California Management Review* (50:3), pp. 31-48.

Panorama. 2011. "ERP Vendor Analysis," Panorama Consulting Group, Denver, Colorado.

Park, S. H., and Ungson, G. R. 2001. "Interfirm Rivalry and Managerial Complexity: A Conceptual Framework of Alliance Failure," *Organization Science* (12:1), pp. 37-53.

Patton Q. M. 1990. *Qualitative Evaluation and Research Methods*, London: Sage Publications Inc.

Payne, A. F., Storbacka, K., and Frow, P. 2008. "Managing the Cocreation of Value," *Journal of the Academy of Marketing Science* (36:1), pp. 83-96.

Penrose, E. 1959. *The Theory of Growth of the Firm*, New York: John Wiley.

Peteraf. M. 1993. "The Cornerstone of Competitive Advantage: A Resource-Based View," *Strategic Management Journal*, (14:3), pp. 179-192.

Pfeffer, J. 1981. *Power in Organizations*, Marshfield, MA: Pitman Publishing.

Poppo, L., and Zenger, T. R. 2002. "Do Formal Contracts and Relational Governance Function as Substitutes or Complements?," *Strategic Management Journal* (23:8), pp. 707-725.

Powell, T. C., and Dent-Micallef, A. 1997. "Information Technology as Competitive Advantage: The Role of Human, Business, and Technology Resources," *Strategic Management Journal* (18:5), pp. 375-405.

Prahalad, C. K., and Ramaswamy, V. 2004. "Co- Creating Unique Value with Customers," *Strategy & Leadership* (32:3), pp. 4-9.

Ramaswamy, V. 2009. "Leading the Transformation to Cocreation of Value," *Strategy and Leadership* (37:2) pp. 32-37.

Reuer, J., and Arino, A. 2007. "Strategic Alliance Contracts: Dimensions and Determinants of Contractual Complexity," *Strategic Management Journal* (28:3), pp. 313-330.

Sambamurthy, V., and Zmud, R. 1999. "Arrangements for Information Technology Governance: A Theory of Multiple Contingencies," *MIS Quarterly* (23:2), pp. 261-290.

Sankar, C. S., Boulton, W. R., Davidson, N. W., Snyder, C. A., and Ussery, R. W. 1995. "Building a World-Class Alliance: The Universal Card–TSYS Case," *Academy of Management Executive,* (9:2), pp. 20-29.

Sarkar, M. B., Aulakh, S. P., and Madhok, A. 2009. "Process Capabilities and Value Generation in Alliance Portfolios," *Organization Science* (20:3), pp. 583-600.

Sarker, S., and Sahay, S 2003. "Understanding Virtual Team Development: An Interpretive Study," *Journal of the AIS* (4:1), pp. 1-38.

Sarker, S., and Sarker, S. 2009. "Exploring Agility in Distributed Information Systems Development (ISD) Teams: An Interpretive Study in an Offshoring Context," *Information Systems Research* (20:3), pp. 440-461.

Sarker, S., Sarker, S., and Sidorova, A. 2006. "Actor–Networks and Business Process Change Failure: An Interpretive Case Study," *Journal of Management Information Systems* (23:1), pp. 51-86.

Sarker, S., Valacich, J., and Sarker, S. 2005. "Technology Adoption by Groups: A Valence Perspective," *Journal of the AIS* (6:2), pp. 37-72.

Seddon, P., Calvert, C., and Yang, S. 2010. "A Multi-Project Model of Key Factors Affecting Organizational Benefits from Enterprise Systems," *MIS Quarterly*, 34(2), pp. 305-328.

Simonin, B. 1999. "Ambiguity and the Process of Knowledge Transfer in Strategic Alliances," *Strategic Management Journal* (20:7), pp. 595-623.

Strong, D. M., and Volkoff, O. 2010. "Understanding Organization–Enterprise System Fit: A Path to Theorizing the Information Technology Artifact," *MIS Quarterly* (34:4), pp. 731-756.

Swaminathan, V., and Moorman, C. 2009. "Marketing Alliances, Firm Networks, and Firm Value Creation," *Journal of Marketing* (73:5), pp. 52-69.

Swanson, E. B, and Wang, P. 2005. "Knowing Why and How to Innovate with Packaged Business Software," *Journal of Information Technology* (20:1), pp. 20-31.

Uzzi, B. 1997. "Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness," *Administrative Science Quarterly* (42:1), pp. 35-67.

Wade, M., and Hulland, J. 2004. "*Review:* The Resource-Based View Information Systems Research: Review, Extension, and Suggestions for Future Research," *MIS Quarterly* (28:1), pp. 107-142.

Walsham, G. 1995. "Interpretive Case Research in IS: Nature and Method," *European Journal of Information System*s (4:2), pp. 74-81.

Walsham, G. 2006. "Doing Interpretive Research," *European Journal of Information Systems* (15:3), pp. 320-330.

Wernerfelt, B. 1984. "A Resource-Based View of the Firm," *Strategic Management Journal* (5), 1984, pp. 171-180.

Yin, R. K. 1994. *Case Study Research, Design and Methods* (2nd ed.), Newbury Park, CA: Sage Publications Inc.

Zahra, S. A., and George, G. 2002. "Absorptive Capacity: A Review, Reconceptualization, and Extension," *Academy of Management Review* (27:2), pp. 185-203.

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