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Collaborative Entrepreneurship for Continuous Innovation: A Strategic Alliance Perspective

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Abstract

Strategic alliances act as a platform to implement collaborative entrepreneurship while exposing a range of challenges. By capitalizing on entrepreneurial opportunities for continuous innovation, alliance partners can promote the productive utilization of resource-pooling systems and facilitate innovation processes for value co-creation. Simultaneously, the heterogeneity of partners in terms of different motivations and interests interferes with the advancement of collaborative entrepreneurship for resource exchange and orchestration. The objective of this paper is thus to explore how to deal with the potential coordination issues that can make an alliance vulnerable and its returns diminished through a preliminary integrative approach to the interface between collaborative entrepreneurship and strategic alliances. From this approach, three elements that can contribute to leverage values of collaborative entrepreneurship for continuous innovation are identified: social capital, entrepreneurial orientation, and interorganizational learning. Based on the discussion about the functions of each element in the context of alliance partners' dynamic interactions, a model of analysis on collaborative entrepreneurship for continuous innovation is proposed. Hence, this chapter contributes to a better understanding of how firms can enact collaborative entrepreneurship productively to gain greater benefit from the alliance configuration for collaborative advantage.

Keywords: collaborative entrepreneurship, strategic alliances, continuous innovation, social capital, entrepreneurial orientation, interorganizational learning

1. Introduction

In the current complex and turbulent business environment, continuous innovation has been viewed as an important strategy for gaining sustainable competitive advantage and the capacity to consistently carry on innovative initiatives as a necessary condition for the long-term growth of firms [1]. The continuing need for strategic response to changes in environments forces a firm to innovate constantly, but continuous innovation is one of the most challenging tasks for firms [2]. Accordingly, research interest in how ventures could be innovative on a continuously efficient basis has emerged, and scholars provide a rational explanation that one of the answers is linked with the firms' capability to configure and manage strategic alliances [3, 4].

As a collective process where two or more parties work with each other to achieve mutual and private benefits, strategic alliances enable firms to be entrepreneurial in capitalizing on new opportunities through continuous innovation [2]. Alliance firms find it easy to identify and explore opportunities with partners who possess complementary resources and capacities, thus having an advantage over those who are not able to do so [5]. As noted by Antoncic [6], firms can enact entrepreneurial behavior to be innovative, proactive, and risk-taking with a capacity for constant innovation when configuring collaborative partnerships across organizational boundaries. As such, strategic alliances are gaining the attention of research on entrepreneurship, as represented by the concept of collaborative entrepreneurship.

Collaborative entrepreneurship addresses a firm's managerial process to collaborate outside the organization for collaborative advantage [1]. Research on entrepreneurship emphasizes the potential role of firms' collaborations with external parties in an entrepreneurial process from opportunity discovery to value creation [4, 7–9]. In this process, collaborative entrepreneurship involves a group of firms with a common strategy to facilitate innovation processes through the construction of collaborative partnerships [10]. The alliance configuration can be motivated by a firm's entrepreneurial intention to leverage resource complementarity and economies of scales, gain low costs of new market entry, build new capabilities by learning, manage risks by sharing, and, ultimately, create economic value [7]. By capitalizing on entrepreneurial opportunities to co-develop innovations in continuous ways, firms enacting collaborative entrepreneurship can promote the productive utilization of the resource-pooling system for value co-creation.

While interfirm collaboration performs as a strategic platform for collaborative advantage, it also exposes a range of challenges [11]. The heterogeneity of partners with different motivations and interests interferes with the advancement of common grounds for resource exchange and orchestration. Potential coordination issues, including opportunism to manipulate alliances, conflicts between sharing and protecting knowledge, and high transaction and monitoring costs, can make a partnership vulnerable and its returns diminished [12, 13]. As such, failing to manage these challenges discourages the productive dissemination, assimilation, and incorporation of network-available assets that are complementary to continuous innovations.

The performance-creating mechanisms underlying collaborative entrepreneurship remain a “black box” in the literature and are an interesting research topic [4]. The knowledge gap is not as much about whether ventures benefit from enacting collaborative entrepreneurship in their partnerships but rather about how and why its potential performance implications occur. Specifying potential elements to enhance a process of collaborative entrepreneurship will contribute to developing existing theories of strategic alliance as well as practical approaches that need to be fine-grained for better collaborative advantage. To fill this caveat, this book chapter examines the elements that would form and affect that collaborative entrepreneurial process by integrating theoretical models and philosophical principles.

Considering that the success of collaboration depends heavily on a firm's entrepreneurial ability to manage the relationship with its counterpart(s) possessing complementary knowledge-based resources needed for continuous innovation [14], we draw upon the theories of social capital, entrepreneurial orientation, and interorganizational learning. The basic assumptions for this theoretical perspective are that (a) social capital at the alliance level may serve as a strategic asset that sparks partners' decisions to get more entrepreneurially involved in the value-co-creation process [15], (b) entrepreneurial orientation may address the strategic intention of alliance firms to transform network-available resources into a source of collaborative

advantage [7, 9], and (c) interorganizational learning may elucidate a systematic combination of the partners' collective learning initiatives [16, 17].

The main contribution of this book chapter is to establish an interface among the research constructs in the process of collaborative entrepreneurship which becomes an important research area in the strategic management literature. Examining the potential contributions of each of the proposed elements to continuous innovation will improve an understanding of how firms can leverage the value of collaborative entrepreneurship in sustaining competitive advantage. Therefore, the remainder of this paper is organized as follows: Section 2 explores some characteristics of collaborative entrepreneurship and strategic alliances. Section 3 offers the concept and dimensions of each element that affects collaborative entrepreneurship. The paper concludes by proposing a conceptual model for future analysis, which explains how the alliance configuration can be a form of productive collaborative entrepreneurship for continuous innovation.

2. Collaborative entrepreneurship and strategic alliances

2.1 Collaborative entrepreneurship

2.1.1 Entrepreneurship for alliance configuration

Entrepreneurship addresses the managerial process by which individuals—either on their own or inside organizations—pursue new business opportunities without regard to resources they currently control [17]. According to Stevenson and Jarillo [17], a key feature of entrepreneurship is a focus on achieving exceptional growth, which is a goal that motivates firms to take risks and become innovative and proactive. To achieve growth, entrepreneurial firms—in Miller's [18] explication, those being innovative, proactive, and risk-taking simultaneously—aggressively pursue opportunities in their environment. Teng [19] evinces that entrepreneurship is about the relentless pursuit of entrepreneurial opportunities that indicates the situations in which new market offerings, resources, and operational methods can be introduced in novel ways. The ongoing pursuit of opportunities is not only a fundamental objective of entrepreneurship, but also an approach in entrepreneurship [19]. As such, entrepreneurship can be identified by a firm's activities to recognize and realize new opportunities for economic value creation.

In the process of entrepreneurship, a strategic alliance is perceived as a valuable fertilizer for entrepreneurial firms to better explore and exploit new opportunities [20]. Firms with high entrepreneurial orientation tend to constantly scan their environment to identify new opportunities to improve their competitive positions [21]. As part of their environment-scanning and opportunity-pursuing activities, entrepreneurial firms look for external sources in greater depth, which advances innovation development for performance [7, 9]. Being more open to new ideas and resilient from risks, they are willing to use new approaches to transfer internal innovation to external parties in profitable ways and overcome some barriers in integrating complementary knowledge bases among alliances [8]. Kreiser [8] attests that within interfirm partnerships, non-entrepreneurial firms may not be sufficiently motivated to make necessary investments and commit resources to make partnerships configure and succeed.

This notion leads to a rational question: Is the creation of a strategic alliance as a body of organizations with different functions an entrepreneurial behavior to pursue an opportunity? While personal independence or self-fulfillment is one of the most important reasons why people would prefer to be self-employed,

their entrepreneurship does not occur without interactions with environments [19, 22]. Under certain conditions, the firm's collaboration with external parties can be more efficient to leverage potential returns than pursuing the opportunity alone [4]. Ribeiro-Soriano and Urbano [1] explain that entrepreneurship is a collective phenomenon that is as much the outcome of a joint effort as an individual endeavor. Covin et al. [22] observe that to interact with environments, entrepreneurs tend to seek alternative ways to pursue the opportunity by configuring collaborative networks or consortia rather than exploiting an opportunity alone.

2.1.2 Collaborative entrepreneurship by alliances

The establishment of strategic alliances is regarded as a way of putting entrepreneurial activities to promote the productive utilization of its resource- pooling system into practice. Behind alliances, there is the objective of attaining or sharing valuable resources when these cannot be obtained through market exchanges or fusions or acquisitions. Montoro-Sánchez et al. [23] show that entrepreneurial firms use strategic alliances as a way of filling gaps in their resources. For firms to exploit new opportunities, they need to obtain resources beyond those they already possess and control, and for that reason, they are often subject to greater risk. Teng [19] explains that strategic alliances emerge when firms in vulnerable strategic positions need new resources, or, when strong, very well-positioned firms capitalize on their resources to create entrepreneurial opportunities for cooperation. Collaborative entrepreneurship involves developing a firm's strategy which allows continuous innovation in its entrepreneurial process to exploit new opportunities for value co-creation [2, 4, 6].

These selective reviews lead to a rational explanation that the alliance configuration is particularly involved with the phenomenon of collaborative entrepreneurship which produces new market offerings by utilizing and combining knowledge-based resources that each partner possesses. Alliances allow integration of fundamental strategic resources and other businesses so that increasingly entrepreneurial firms manage to reach their objectives [24]. This resource-pooling system for value co-creation is one of the contributive elements to collaborative entrepreneurship [14]. Gupta and Govindarajan [25] state that collaborative entrepreneurship is predicated on the creation of economic value arising out of jointly created original ideas that emerge from sharing knowledge-based resources. Accordingly, the entrepreneurial motives of alliance configuration include leveraging resource complementarity and economies of scales, gaining low costs of new market entry, learning capabilities, and managing risks by sharing [7].

The rationale for explaining the concept of collaborative entrepreneurship is that entrepreneurial firms show a strong tendency to proactively seek and form potential partnerships that are complementary to the productive exploitation of new opportunities [8]. According to Franco and Haase [4], collaborative entrepreneurship is adopted by various firms to remain competitive, allowing growth. Thus, the firm's objectives must include increased flexibility, innovation, collaborator initiative, and risk acceptance. Ribeiro-Soriano and Urbano [1] identify collaborative entrepreneurship by a firm's ability to collaborate outside the organization, arguing that collaboration enables a firm to entrepreneurially explore and exploit new opportunities for collaborative advantages. During the co-creation of new resources and competences for continuous innovation, enacting the entrepreneurial behavior of individual alliance partners is needed for productive entrepreneurship in collaboration. Strategic alliances can thus provide a fertile ground that enables

alliance partners' entrepreneurial interactions, which are contextualized by an institutionalized system of their social exchange, toward continuous innovation.

2.2 Strategic alliances

Strategic alliances refer to "a process in which autonomous actors interact through formal and informal negotiation, jointly creating rules and structures governing their relationships and ways to act or decide on the issues that brought them together" [26], p. 23. It occurs when a group of autonomous stakeholders in a domain engages in an interactive process to act or decide on issues related to that domain, using shared rules, norms, and structures [9]. Teng [19] explains that strategic alliances are interfirm cooperative arrangements that allow firms to temporarily seek resources from others. To ascertain a unit of analysis, we define strategic alliances as interdependent partnerships adopted by two or more organizations to commit resources conjointly under common objectives. In line with Franco and Hasse [4], we consider all formats of alliances, including contractual agreements and temporal partnerships, both with and without shared risks and rewards, minority equity positions, and shared equity ownerships.

To address the phenomenon of alliance configuration in practice, research has adopted multidisciplinary theoretical perspectives to study the alliances' managerial implications. First, network-based research analyzes the interactional structure of social contexts where partners' collaborative process takes place [8, 9]. This line of research addresses how to efficiently form and maintain the collaborative networks of alliance partners. Second, strategic-based research addresses sources of collaborative advantage achieved through alliances [4, 7]. This stream highlights the importance of the orchestration between alliance environment and internal resources/capabilities. Last, knowledge-based research regards alliances as a path for knowledge sharing and learning among partners [11, 16]. This line emphasizes the expansion and creation of knowledge bases in alliances, which occur through learning mechanisms.

Along with the development of such theoretical perspectives, a large body of research focuses on investigating factors that affect the effectiveness of alliance configuration. Thomson and Perry [26] argue that the success of alliances is a matter of the choice of appropriate partners, the accumulation of relational capital, and the management of partnerships. According to Meier et al. [13], the performance mechanism of interfirm alliances relies heavily on trust, mutual commitments, and dedicated support of key actors, which help reduce transaction costs. The collaborative behavior of each actor can be influenced by the organizational and individual experience of alliances [4]. Particularly, organizational culture connected with personal attitudes toward the external environment can determine the quality and quantity of alliance activity. Research also reports some barriers that impede the development of effective alliances. For instance, Lisowska [27] points out some barriers for successful alliances, such as the lack of funding for collaborative projects, knowledge about cooperation, propensity for cooperation, innovativeness, willingness to change, qualified employees, and the inability to visualize the goals and benefits of collaborations.

The notion that firms can receive clear benefits (bright side) from strategic alliances is not novel, but scholars only pay attention to the potential disadvantage (dark side) of the partnership. The discussion of the bright and dark sides of strategic alliances in this section highlights that firms often find it challenging to achieve collaborative advantage from engagement in partnerships for continuous innovation. Thus, how to create and capture the value of strategic alliances remains an important practical matter for alliance firms.

2.2.1 The bright side of strategic alliances

The alliance configuration helps to expand a firm's knowledge base and accelerate its innovation process by exchanging and mobilizing complementary knowledge-based resources across partners [8]. As a result, pooling knowledge in the partnership allows small firms to overcome the liability of smallness by increasing rents from the interaction activities [26]. By sharing costs and risks of continuous innovation with external parties, alliance firms can capitalize on new opportunities for value creation in more efficient ways than doing alone [28]. These benefits of strategic alliances can be summarized as follows.

- *Resource sharing.* Some alliances are designed for sharing knowledge-based resources for better innovation performance. By building a common resource pool that each partner possesses, their resource base can be more expanded than by investing in internal resource development [26].
- *Competence sharing.* Strategic alliances frequently need the engagement of specialized labor who has tacit knowledge needed for the achievement of common goals [29]. Recruiting such experts is challenging for a firm that suffers from resource constraints. Collaborative partnerships enable the acquisition and assimilation of unique competences of its counterparts.
- *Cost/Risk sharing.* An innovative initiative is typically costly, requiring huge resource commitments [12]. It also involves risks of failure, derived from the uncertainty about its outcomes. Sharing the costs and risks with partners contributes to the managerial stability of alliance firms [28].
- *Reward sharing.* Depending on the nature of partnerships, alliance partners have joint ownership of collective outputs developed jointly [26]. In this case, they share a percentage of alliance partners receive a percentage of profits generated through the commercialization of collective outputs [5].
- *Idea co-creation.* Engagement in strategic alliances is a source of creativity and innovation. Intellectual interactions of alliance partners with heterogeneous resources often result in the cross-fertilization of original ideas that are effective in solving current business issues [24].
- *Decreased time-to-market.* The resource-pooling system in an alliance helps a firm produce innovative outcome faster than they could alone [30]. This allows the firm to introduce product/service (s) to a market and stay ahead of the competition.
- *Access to new markets.* Some alliances become a pathway to enter new markets or access new customers. Alliance configuration often provides an entrepreneurial opportunity to experiment and commercialize product/service(s) in new markets [12].

Research emphasizing the bright side of strategic alliances offers a rationale behind the benefits that firms can gain from their alliance participation. Given this basis, the mainstream of research advocates positive contributions of the firms' engagement in strategic alliances with external parties to their competitive advantage and innovation [1]. However, the next section about some barriers to successful alliances indicates that achieving the collaborative advantage is challenging due to potential issues in the network of relationships among alliance partners.

2.2.2 The dark side of strategic alliances

The heterogeneity of collaborating partners with different motivations and interests interferes with the advancement of common grounds for resource exchange and orchestration. Multiparty-involved collaboration creates significant barriers to success, including higher coordination costs, communication barriers, a lack of shared understanding, and disagreements over invention and innovation strategy [29]. Along this vein, scholars explain several factors that make collaborative partnerships vulnerable. For instance, working together for a joint project with different stakeholders adds difficulty to controlling the innovation process [7, 12]. The more partners involved in the joint project, the more complex the exchange of knowledge and information [29]. In addition, the coordination of partners' collaborative behaviors for resource exchange becomes a source of the increase in transaction costs [31]. The following are the potential disadvantages of strategic alliances, which may lead to diminishing returns of collective actions.

- *Opportunistic behavior.* While maximizing the effectiveness of resource exchange in an alliance requires behavioral transparency [32], opportunism to manipulate the partnership for one's interests and not for mutual benefits can increase the transaction costs in resource exchange [28].
- *The tension between sharing and protection.* The potential leakage of knowledge in a partnership dilutes one's source of competitive advantage [12]. For this reason, although the success of strategic alliances is based on the mutual effort to fertilize resource exchange, partners are reluctant to share specific knowledge-based resources with their counterparts [33].

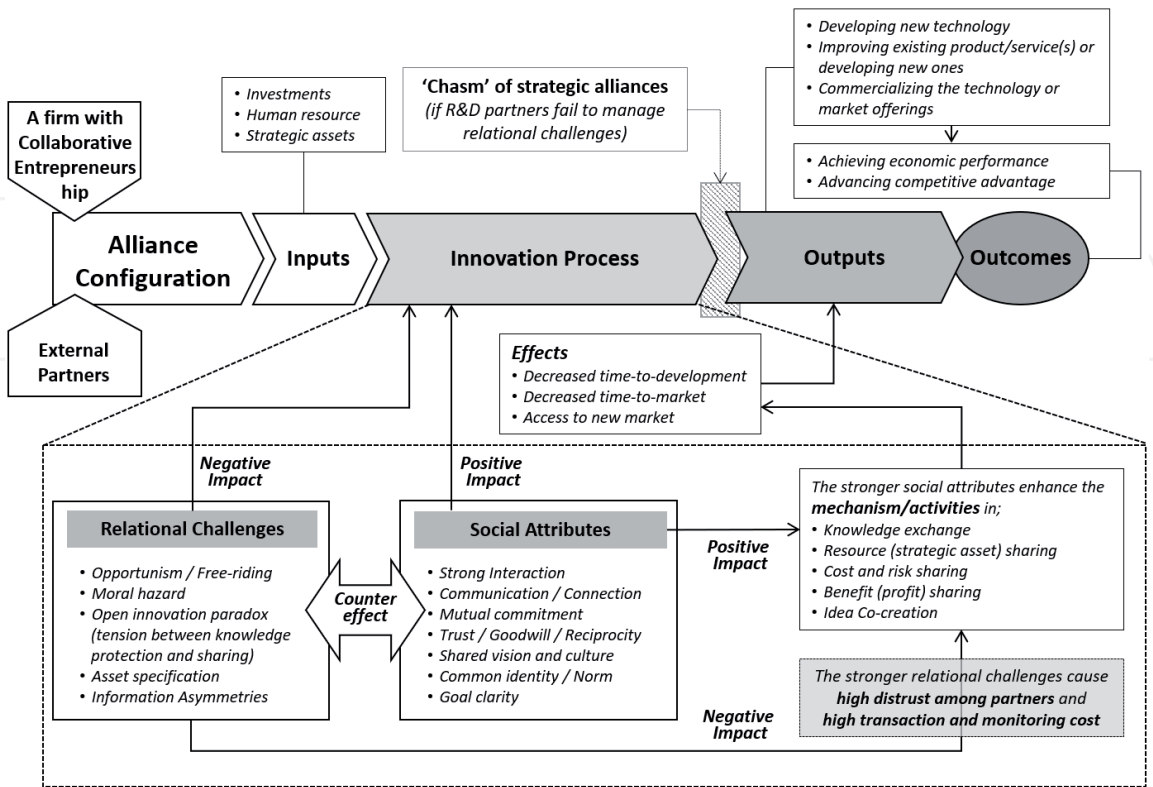


Figure 1.
Collaborative entrepreneurial process of strategic alliances.

- *Lack of mutual trust.* Distrust among alliance partners prevents gaining potential benefits from collaborative entrepreneurship [13]. If partners fail to build trustful relationships in an alliance, they experience communication breakdown, vague role/responsibility set-up, and due diligence based on faulty assumptions in the partnership as well as higher transaction costs than expected [31].

We call these unfavorable conditions to collaborative entrepreneurship the “chasm” of strategic alliances. The chasm built by failing to reduce the negative impact of these disadvantages hinders alliance partners from taking advantage of their partnership. Under this circumstance, alliance partners tend to depreciate their interdependency and safeguard themselves to protect knowledge, resulting in alliance inefficiency. **Figure 1** illustrates the collaborative entrepreneurship process of strategic alliances, discussed above.

3. Collaborative entrepreneurship for continuous innovation

In today’s globally competitive business environment, firms are forced to productively implement continuous innovation and thus seek an opportunity for collaboration entrepreneurship for collaborative advantage. The configuration of strategic alliances with various potential benefits is one of the effective strategies for firms to address the challenging demands of overcoming the insufficient internal resources and the restricted competence base [34]. For alliance firms at a crossroads between the bright and dark sides of alliances, however, how to create and capture the value of collaborative partnerships while resolving the dark side remains an important matter for the firms’ continuous innovation. For the “how” question, we suggest several intrafirm-level and interfirm-level factors that can determine the level of collaborative entrepreneurship in strategic alliances. As this requires adopting the theoretical lenses addressing specific constructs at the multilevel of alliances, we draw upon the longstanding theories of social capital (SC), entrepreneurial orientation (EO), and interorganizational learning (IOL). In the following sections, we explain the definition, dimensions, and roles of each construct in the context of collaborative entrepreneurship and strategic alliances.

3.1 Linking social capital to collaborative entrepreneurship

As delineated earlier, interfirm partnerships for value co-creation are sensitive to partners’ relational characteristics contextualizing the common platform in which they interoperate [35]. As such, the relational characteristics of strategic alliances become a critical unit of analysis in explaining learning-related outcomes associated with collaborative advantage [36].

Accordingly, extant research emphasizes the relational traits featuring the contexts where collaborative entrepreneurship is used, evincing that trustfulness among partners is crucial for learning effectiveness [13]. While the benefits of trust-based relationships are acknowledged, trustfulness is only one of the various relational traits characterizing social exchanges in the consortia; others include network ties/configuration/stability and shared goals/value that can contextualize the collective learning mechanism [37]. The extent of collective entrepreneurship is determined by the partners’ interactive and conjoint routines based on these relational traits [38]. However, considering one-dimensional traits in isolation provides a narrow perspective on the multifaceted mechanism; a single approach to

incorporate the traits can provide a better viewpoint of the institutionalized social contexts underlying alliance partners' interactions for resource exchange.

The SC theory takes advantage of its comprehensive description of the different traits characterizing the idiosyncratic nature of collaborative entrepreneurship at the alliance level. Referring to "the sum of actual and potential resources embedded within, available through, and derived from the networks of relationships possessed by individuals or social units" [39], p. 243, SC encompasses three dimensions: structural, relational, and cognitive capitals [37–40]. According to Inkpen and Tsang [37], structural capital refers to the strength and stability of consortium members and facilitates knowledge flow across organizational boundaries; relational capital, represented by trust and reciprocity, contributes to repressing the risk of relational issues and conflicts; and cognitive capital, defined as shared vision and value, conveys a sense of identity and homogeneity among members and coordinates individual actions as a unique entity to achieve common goals.

One of the dominant arguments in the literature is that high-quality SC can create network-level conditions favorable for collaborative interactions across heterogeneous organizations [41]. The degree of SC embedded in a network affects participants' decisions on whether to engage actively in collective action with counterparts (structural capital), interact faithfully in responding to a shared understanding of counterparts' interests (relational capital), and work within collaborative institutions inside the network to achieve common goals (cognitive capital) [15, 42]. Pinheiro et al. [41] explain that the accumulation of SC in an alliance can serve as an assimilated fertilizer that spurs partners to productively exchange and generate knowledge assets by producing collaborative orchestrations.

This notion allows a postulation that the system of conjoint research activities based on high SC can create an institutionalized social platform that enables alliance partners to exploit innovation opportunities for value co-creation; this is because the network-based asset helps them transform firm-specific resources into collaborative advantages [37, 40]. The structural capital of networks between organizational units enhances their network-related ability to recognize fine-grained opportunities for the refinement of existing resources and the creation of new resources through experimentation [15].

SC also determines the socio-institutional background that enables partners to expand a spectrum of resource pools for joint problem-solving and risk-sharing [41]. Partnerships embedding higher relational and cognitive capitals can also provide partners with perceived safety to actively interact with each other with a strong mutual belief toward shared goals [43]. Under such circumstances, alliance partners will enrich the information being shared because the development of normative reciprocity and trust within networks changes the nature of information exchanged. Such an exchange based on the high-quality SC is geared toward collective performance as alliance partners commit to joint problem-solving.

We thus propose that SC embedded in strategic alliances, represented by structural, relational, and cognitive capitals, can be a source of collaborative advantage that incentivizes alliance partners to commit to common goals toward continuous innovation. This proposition is theoretically supported by the resource-based view, suggesting that possessing firm-specific resources allows firms to outperform competitors by doing things differently. When strategic alliances entail higher SC that makes the partnerships distinct from others, the partner will conceive it as an interfirm-specific resource to be exploited for performance improvement. Contrarily, alliances with lower SC will suffer from coordination issues that disrupt the productive dissemination and incorporation of network-available resources, thus limiting the partners' performance potential.

3.2 Linking entrepreneurial orientation to collaborative entrepreneurship

EO, by far the most popular construct in entrepreneurship literature, is defined as a firm's strategic posture to simultaneously exhibit innovativeness, proactiveness, and risk-taking [44] and represents the firm's priority in identifying and exploiting entrepreneurial opportunities [45]. Its first dimension, innovativeness, is the tendency to support new ideas and experiments to introduce new products and processes. Proactiveness is the propensity to seize market opportunities and develop a first-initiative preference ahead of competitors. Risk-taking is the willingness to accept high risk by venturing into the unknown with strong commitments. As a combination of these dimensions, EO has been theorized to contribute to firm growth and facilitate innovation [21, 45].

The literature accepts that EO plays a significant role in affecting a firm's strategic behaviors and managerial beliefs, emphasizing the proactive deployment of diverse innovation types with uncertainty. Within this wave, research explicating mechanisms underlying the EO's performance implication urges more studies to explore the relationships in diverse contexts, which are contingent upon contextual conditions that firms encounter [22, 44]. In the contexts of strategic alliances, higher EO can promote firms' participation in alliances to translate dynamic and complex resource-exchanging interactions among partners into higher competitive positions in markets.

The resource-based view posits that not all resources translate into competitive advantage; the novel, competitive resources make a real difference for innovation to occur in alliances [5]. This will not be a major concern for alliance firms with high EO, as they focus on breaking through old routines and procedures to make a difference [8]. EO embedded in an organization can address the managerial process of alliance firms to capture the nucleus of heterogeneous resources and convert competitive resources for collaborative advantage [9]. Li et al. [9] document that the higher the EO of alliance firms, the more they commit to their dynamic interactions for resource mobilization and utilization with counterparts for the success of the alliance.

The dimensions of EO, including innovativeness, proactiveness, and risk-taking, can help alliance firms generate greater competitiveness. Specifically, partners must face challenges in combining knowledge-based assets, which are rooted deeply in individual organizations. Innovative alliance firms can be motivated to address such challenges in novel ways with continuous experiments for problem-solving [45]. Second, strong proactiveness may help alliance firms create a first-mover advantage through an early collaborative response to market needs and trends, thereby enhancing the market appeal of collective outputs [46]. Finally, the success of alliances requires all partners to commit to alliance-relevant activities for competitive development with high uncertainty. Risk-taking alliance firms are willing to deal with the risks involved in interorganizational activities by making a strong commitment to and a valuable investment in their alliance projects [7].

The extent to which alliances produce competitive collective outputs is a critical determinant of alliance performance. Entrepreneurial firms' engagement in strategic alliances can contribute to the joint development of collective outputs that will promote their competitive position in industries. Li et al. [9] explain that EO remains an enabler for alliance firms to identify productive routines to manage dynamic resource-integrating activities and develop superior resource-managing capability through entrepreneurial processes. Shu et al. [47] find the positive impact of EO on knowledge spillover in alliances, suggesting that it helps discriminate valuable resources contributing to the achievement of common goals. Thus, EO can motivate alliance firms to contribute inputs to the partnerships for the cogeneration of

competitive outputs [8]. In contrast, firms with low EO may be unable to exploit the output-cogenerating opportunities due to high concerns about protecting their valuable resources from the appropriation for their interests [19]. Thus, we can postulate that the EO of alliance firms potentially determines the extent to which they gain the mutual benefits of strategic alliances.

Few studies elaborate on the SC–EO interface, arguing that firms take advantage of the value of SC which drives them to engage entrepreneurially in external networks. For instance, Wu et al. [43] found that the SC/EO degrees simultaneously determine a firm's intention and ability to seek and utilize external complementary resources. Stam et al. [20] stress that both SC and EO affect new ventures' performance, contingent on their network positions. According to Gedajlovic et al. [48], as SC can be logically both an antecedent and a consequence of entrepreneurship, the relationship between SC and EO needs to be situated within a temporal context, here, strategic alliances. Thereupon, high-quality SC among alliance partners will promote their dynamic entrepreneurial collaboration to (1) solve technical problems and commercial issues in innovative ways, (2) proactively identify and embed market needs in their joint projects, and (3) tolerate risks of their resource commitment to the project.

3.3 Linking interorganizational learning to collaborative entrepreneurship

As an avenue for sustaining innovativeness and competitiveness, IOL becomes one of the key mechanisms to refine existing knowledge and generate new knowledge, expressing the purpose of partnership formations [16]. IOL refers to the network-based learning process that involves knowledge exploitation and exploration between or among different organizations in the presence of high interdependency [32]. Its outcomes should either be enhanced capabilities for adapting environmental changes or strategic decisions for radical and/or incremental changes in an existing knowledge base for competitive advantage [49].

Despite no unified IOL dimensionality, scholars have conceived IOL's two distinctive forms, which are exploitation and exploration, since March's [49] seminal research [35, 50, 51]. Exploitation involves the utilization and refinement of existing knowledge to strengthen the excellence of present operations, whereas exploration is the search for new knowledge, the use of unfamiliar knowledge, and the creation of products with unknown demand. IOL supports alliance partners' common refinement and utilization of existing knowledge available in their network—exploitation—and their joint discovery and generation of new knowledge that can be a future source of collaborative advantage—exploration [51].

Along this vein, Westerlund and Rajala [50] argue that distinguishing exploration in seeking effectiveness of new knowledge development from exploitation in seeking efficiency of existing knowledge bases captures better the IOL process because the two learning forms produce different results. In this vein, exploitative learning and exploratory learning can be drawn as IOL practices. According to March [49], p. 71, exploratory learning entails “search, variation, risk-taking, experimentation, play, flexibility, discovery,” whereas exploitative learning involves “refinement, choice, production, efficiency, selection, implementation, execution.” Holmqvist [35] asserts that exploitative learning refers to refining and deepening existing knowledge to improve current technical value, whereas exploratory learning refers to the pursuit of new knowledge that leads to more variations in original technical value.

Research recognizes the value of collective learning to achieve common goals, ensuring that expanding a knowledge base by learning at the consortium level is essential for collaborative advantage [30, 35]. A primary purpose of the alliance configuration is the advancement of a co-innovation process to develop novel,

competitive outputs by exchanging and combining the complementary knowledge-based assets of each partner [7, 13]. Using a common learning platform improves the process, supporting alliance partners' conjoint routines to refine and using current knowledge bases to improve technical value (exploitative learning) and to create new knowledge that leads to more variations in original technical value (exploratory learning) [50].

The potential contribution of explorative and exploratory learning at the alliance level to continuous innovation deserves further scrutiny in the context of strategic alliances. The enjoyment of collaborative advantage requires partners to transform their existing knowledge with high asset specificity into exchangeable and understandable forms of resources. For this, they should access, assimilate, and apply existing and complementary knowledge, introducing fine-grained opportunities to fill the mutual knowledge gaps and initiate the best innovation practices. This process is based on exploitative learning, which improves the accessibility, veracity, and availability of heterogeneous knowledge and expands an existing knowledge base in the network [52]. For a consortium to remain effective for innovation, collaborators need to move the focus of their learning from exploitation to exploration to co-create new knowledge. This exploratory learning process supports the multiplication of knowledge throughout the network and the ongoing innovations of market offerings. Consequently, the original knowledge base becomes a source of collaborative advantage that motivates partners to engage actively in the alliances and provide resource commitments for better collective outputs [33, 52].

We thus propose that IOL, represented by exploitative and exploratory learning, enables alliance firms to benefit from their alliances in terms of better advantage in innovation. For exploitative learning, existing knowledge and its further utilization will conduce to the development of a common knowledge base within an alliance. This base not only provides partners with chances to improve their operational routines by adapting others' best practices or know-how, but also allows companies to promote fine-tuned capabilities for continuous innovation. Refining and using the network-available existing knowledge by exploitative learning cannot be solely responsible for alliance results. To transform a collaborative partnership into a source of collaborative advantage, exploratory learning is necessary to codevelop new technical knowledge that helps partner firms to be capable of competing against others and cope with the changing environment. The new knowledge will be better reconciled with the alliance firms' innovation strategies than the counterparts' knowledge gained by exploitative learning.

4. Concluding remarks

In today's highly uncertain and rapidly changing environment, strategic alliances can provide a common ground that enables alliance firms' exploitation in seeking the efficiency of existing resource bases and their exploration in seeking the effectiveness of new resources and competencies. Despite the increasing research interest in strategic alliances, value-co-creating mechanisms underlying the alliance partners' dynamic interactions were a missing link. Given the basis that collaborative entrepreneurship involves motivating firms to configure strategic alliances in their entrepreneurial processes to exploit new opportunities for continuous innovation [2, 10], this paper explores the potential roles of SC, EO, and IOL that may contribute to the success of strategic alliances.

First, research posits that the collaborative advantage depends on the social context of partner interactions at the alliance level, focusing on relational traits

such as trustfulness, mutual commitment, common vision, or shared value [13, 37]. The literature advocates these traits’ potential contribution to the enhancement of interactions across organizations, which cannot be a spontaneous phenomenon in the presence of high interdependency and heterogeneity, representing the idiosyncratic nature of strategic alliances [39]. SC can offer the holistic view of the multiple traits that institutionalize the alliance partners’ conjoint routines toward common goals by encompassing various traits—such as network ties/stability, trustfulness, and shared value/vision—in three dimensions: structural, relational, and cognitive capitals [40]. SC involves regulating and relieving physical/mental relational issues and leveraging entrepreneurial initiatives of actors in a partnership [36, 48].

Second, we introduce the alliance firms’ entrepreneurial orientation (EO) as one of the possible explanations that contextualize the success of continuous innovation through collaborations. Referring to a firm’s strategic posture to be innovative, proactive, and risk-taking for value creation [44], EO becomes an important element for firm growth [45], while the EO–performance relationship is contingent on specific contexts which firms encounter [21]. According to Jiang et al. [7], the system of conjoint research activities renders an idiosyncratic context in which partners entrepreneurially substantialize the economic values of network-available assets. In this instance, SC at the network level may serve as a strategic asset that sparks partners’ decisions to get more entrepreneurially involved in the value-co-creation process, and their EO may address the strategic intention to transform the network-embedded asset into a source of collaborative advantage.

Lastly, research deliberates the importance of adopting IOL elucidating a systematic combination of alliance partners’ collective learning initiatives [16]. IOL addresses the network-based learning practices that involve mutual exploitation and exploration of knowledge in the presence of high interdependency and heterogeneity [32, 35, 50] which underscore the idiosyncratic nature of collaborative entrepreneurship toward continuous innovation [14, 17]. The literature advocates the IOL’s potential contribution to the knowledge mobilization over organizations,

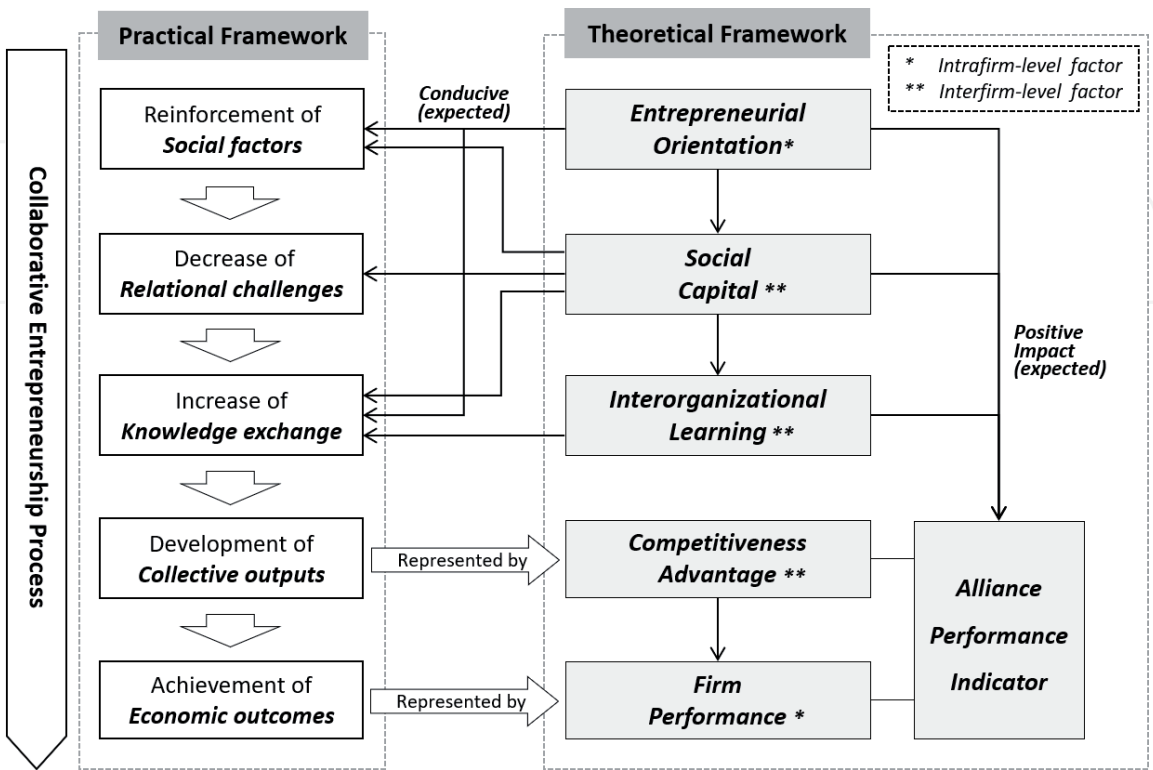


Figure 2.
Proposed model of analysis on collaborative entrepreneurship.

which is presumed as a critical success factor of strategic partnerships but cannot be a spontaneous phenomenon of the alliance configuration [11, 50].

By shedding new light on the managerial implications of SC, EO, and IOL in the context of interfirm collaborations, the present paper contributes to advancing the understanding of the interface between collaborative entrepreneurship and strategic alliances. According to the theoretical framework developed, we suggest a model of analysis on collaborative entrepreneurship for the potential effects of SC, EO, and IOL on alliance performance (see **Figure 2**). The prescriptive value of the model lies in supporting entrepreneurs and entrepreneurship scholars to understand strategic decisions leading to successful alliances. Empirical verification, in particular adopting a holistic perspective, is almost absent from the literature. Hence, what remains is the empirical testing of the approach and the investigation of the quantitative impact of defined variables. In terms of guidelines for future research, this topic should be addressed by collecting information for expanding the model presented here.

This paper is subject to several limitations that can be addressed in future research. First, given the linear linkages among the phenomenon for the model conciseness, it is important to acknowledge that each construct has its unique impact on the optimal conditions for continuous innovation. For instance, a firm's over-embeddedness in the networks of strong ties can provide liability, instead of benefit, which inhibits from sensing emerging innovation opportunities and realizing potential growth [53]. Thereby, the potential performance implications of high SC in an alliance could level off or remain negative beyond a certain threshold. Future research can adopt this view in explaining more deeply the performance-creating mechanism of strategic alliances.

For an empirical study to test our model, measuring the levels of SC and IOL in the interorganizational context, which can be affected by partners' motivations and expectations toward an alliance, may differ from that of their counterparts. Single respondent's perception of an alliance may generate more than the usual amount of random error in measuring the research constructs. Future research could avoid this single-respondent bias by collecting dyadic or even polyadic data from all partners in an alliance.

Lastly, potential endogeneity problems stemming from an implicit recursive model in our theoretical framework should be considered. While we introduce a strategic alliance as a platform of collaborative entrepreneurship for continuous innovation, our conceptual framework still prevents the elaboration of causal inferences regarding the chain of effects. Due to the potential for endogeneity, we interpret the model of analysis as correlational relationships rather than causal relationships. Avenues for future research are to pay explicit attention to the dynamics of the interface of SC, EO, and IOL and clarify the directions of their causality with continuous innovation.

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