



Strategic Collaboration Between Startups and Established Firms: Governance Mechanisms and Value Creation in Entrepreneurial Partnerships

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Abstrak

Collaboration between startups and established firms has emerged as an increasingly important mechanism for pursuing innovation in technologically dynamic environments. While prior research highlights the strategic value of such partnerships, existing studies often examine individual aspects of collaboration without integrating the mechanisms through which these partnerships generate innovation outcomes. This article develops a conceptual framework explaining how strategic collaboration between startups and established firms creates innovation value through governance and knowledge exchange processes. Drawing on insights from the resource-based view, open innovation research, and strategic alliance theory, the study proposes that collaborative innovation emerges through the interaction of resource complementarity, strategic alignment, governance mechanisms, and inter-organizational knowledge exchange. Resource complementarities motivate collaboration by combining entrepreneurial experimentation capabilities with the commercialization assets of established firms, while governance structures coordinate interactions between partners and mitigate collaboration risks. Knowledge exchange processes enable the recombination of technological and market knowledge that drives innovation outcomes. The framework also highlights the moderating role of entrepreneurial ecosystems in shaping collaboration effectiveness. By integrating multiple theoretical perspectives, the study advances understanding of how startup–corporate partnerships contribute to inter-organizational innovation.

Keywords

startup–corporate collaboration; collaborative innovation; resource complementarity; alliance governance; knowledge exchange; entrepreneurial ecosystems

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1. Introduction

Organizations increasingly operate in environments characterized by rapid technological change, shortened innovation cycles, and intensifying competition. Under these conditions, the ability to generate innovation has become a central determinant of sustained competitive advantage. Traditionally, large firms relied primarily on internal research and development (R&D) to create new technologies and products. However, growing technological complexity and the expansion of global knowledge networks have made it increasingly difficult for firms to rely solely on internal capabilities to sustain innovation (Chesbrough, 2003; Nambisan et al., 2019). Consequently, organizations increasingly pursue collaborative innovation strategies that extend beyond organizational boundaries.

One prominent form of such collaboration involves partnerships between entrepreneurial startups and established corporations. Startups typically possess strong capabilities in technological experimentation, rapid prototyping, and opportunity exploration, whereas established firms control complementary assets such as financial resources, production capacity, distribution channels, and market access (Katila et al., 2008; Rothaermel & Deeds, 2004). These asymmetries create opportunities for mutually beneficial collaboration in which startups contribute technological novelty while corporations provide the complementary assets necessary for commercialization.

The strategic importance of startup–corporate collaboration has attracted growing attention in entrepreneurship and strategic management research. Scholars have examined various forms of collaboration, including strategic alliances, corporate venture capital investments, joint innovation initiatives, and corporate accelerator programs (Dushnitsky & Lenox, 2005; Weiblen & Chesbrough, 2015). These collaboration mechanisms enable corporations to access external sources of innovation while allowing startups to leverage corporate resources and market infrastructure. In this sense, startup–corporate partnerships represent an important manifestation of the open innovation paradigm, which emphasizes the strategic integration of external knowledge into organizational innovation processes (Bogers et al., 2018; Chesbrough, 2003).

Recent research further highlights the role of startup–corporate collaboration within broader innovation ecosystems. Innovation increasingly emerges from networks of organizations rather than isolated firms, involving interactions among startups, corporations, investors, universities, and research institutions (Adner, 2021; Nambisan et al., 2019). Large firms increasingly establish structured collaboration mechanisms—such as corporate accelerators, venture client programs, and strategic partnerships—to access entrepreneurial experimentation and emerging technologies (Hallen et al., 2020; Usman & Vanhaverbeke, 2022). At the same time, startups benefit from corporate partnerships that provide resources and capabilities required to scale innovative technologies.

Despite these potential benefits, the outcomes of startup–corporate collaboration remain uneven. Some partnerships generate significant innovation value, whereas others fail due to governance conflicts, coordination challenges, or misaligned expectations between participating organizations (Kohler, 2016; Usman & Vanhaverbeke, 2022). Startups and established firms often differ substantially in organizational culture, strategic priorities, and decision-making processes. Startups tend to emphasize experimentation and flexibility, whereas corporations frequently rely on more formalized governance structures and risk management procedures.

Existing research has approached startup–corporate collaboration through several theoretical perspectives. The resource-based view highlights how collaboration enables firms to access complementary capabilities and resources (Barney, 1991; Rothaermel & Deeds, 2004). Open innovation research emphasizes the role of external knowledge integration in accelerating innovation processes (Bogers et al., 2018; Chesbrough, 2003).

Strategic alliance research focuses on governance mechanisms that coordinate inter-organizational relationships and mitigate opportunistic behavior (Gulati, 1998; Williamson, 1985). In addition, entrepreneurial ecosystem research emphasizes the broader institutional and network contexts that facilitate collaboration among innovation actors (Adner, 2021; Spigel, 2017).

Although these perspectives provide valuable insights, existing studies often examine individual aspects of startup–corporate collaboration in isolation. Some research focuses on resource complementarities, while other studies emphasize governance mechanisms, open innovation practices, or ecosystem dynamics. As a result, limited attention has been given to how these mechanisms interact to shape collaborative innovation outcomes. In particular, the processes through which complementary resources, strategic alignment, governance arrangements, and knowledge exchange jointly influence the effectiveness of startup–corporate partnerships remain insufficiently articulated.

Addressing this limitation requires a more integrative theoretical perspective that explains collaborative innovation as a multi-mechanism process. Understanding how complementary resources motivate collaboration, how governance mechanisms coordinate inter-organizational relationships, and how knowledge exchange enables the recombination of technological and market knowledge may provide deeper insight into the conditions under which startup–corporate partnerships generate innovation outcomes.

This article addresses this gap by developing a conceptual framework explaining how collaborative innovation emerges from partnerships between startups and established firms. Drawing on insights from the resource-based view, open innovation research, strategic alliance theory, and entrepreneurial ecosystem perspectives, the study proposes that collaborative innovation emerges through the interaction of four mechanisms: resource complementarity, strategic alignment, governance mechanisms, and inter-organizational knowledge exchange. The framework also highlights the moderating role of entrepreneurial ecosystems in shaping the effectiveness of collaborative partnerships.

2. Literature Review and Theoretical Background

Understanding how collaboration between startups and established firms generates innovation outcomes requires integrating insights from multiple streams of management and entrepreneurship research. Over the past decade, scholars have increasingly emphasized that innovation rarely occurs within the boundaries of a single organization. Instead, innovation emerges through complex interactions among firms, startups, institutions, and technological ecosystems that collectively shape value creation processes (Adner, 2021; Nambisan et al., 2019). Within such environments, collaboration between entrepreneurial ventures and established firms has become an important mechanism through which organizations access complementary resources, accelerate innovation processes, and explore new market opportunities.

Although a growing body of research examines startup–corporate collaboration, existing studies often address specific aspects of the phenomenon rather than developing an integrated explanation of how such partnerships generate innovation outcomes. Some studies emphasize resource complementarities between startups and corporations, while others focus on open innovation processes, alliance governance, or ecosystem dynamics. To develop a more comprehensive understanding, this section integrates four complementary theoretical perspectives: corporate–startup collaboration research, open innovation and knowledge exchange, resource complementarity in strategic partnerships, and governance mechanisms in inter-organizational alliances. Together, these perspectives provide the theoretical foundation for explaining how collaborative innovation partnerships between startups and established firms emerge and generate value.

The literature review integrates several theoretical perspectives that together explain why and how collaboration between startups and established firms generates innovation outcomes. The table below synthesizes these perspectives by clarifying their central concepts and their specific analytical role within the conceptual framework.

Table 1. Theoretical Foundations of Startup–Corporate Collaborative Innovation

Theoretical Perspective	Core Concept	Relevance for Startup–Corporate Collaboration	Key References
Resource-Based View (RBV)	Firms achieve competitive advantage through valuable, rare, and complementary resources and capabilities	Explains why startups and established firms form partnerships to access complementary technological and commercialization capabilities	Barney (1991); Rothaermel & Deeds (2004)
Open Innovation	Innovation performance improves when firms integrate external knowledge and technologies into internal innovation processes	Highlights the strategic importance of collaborating with startups as external sources of novel technologies and experimentation	Chesbrough (2003); Bogers et al. (2018)
Strategic Alliance Governance	Inter-organizational relationships require governance mechanisms that coordinate activities and mitigate opportunism	Explains how contractual safeguards, alliances, venture investments, and relational governance structures regulate startup–corporate partnerships	Gulati (1998); Williamson (1985); Reuer & Devarakonda (2017)
Knowledge-Based View of the Firm	Firms create value by integrating and recombining diverse knowledge resources	Clarifies how knowledge exchange between startups and corporations enables the recombination of technological and market knowledge leading to innovation	Grant (1996); Bogers et al. (2019)
Entrepreneurial Ecosystem Perspective	Innovation emerges within networks of interconnected actors such as startups, corporations, investors, and institutions	Explains how ecosystem conditions influence collaboration opportunities, knowledge flows, and the effectiveness of innovation partnerships	Adner (2021); Spigel (2017); Autio et al. (2018)

Source: Author's conceptualization

Table 1 synthesizes the theoretical foundations that underpin the conceptual framework developed in the article. By aligning each theoretical perspective with its analytical contribution, the table clarifies how resource complementarity, knowledge integration, governance structures, and ecosystem dynamics jointly inform the explanation of startup–corporate collaborative innovation. This structured integration also demonstrates that the framework does not rely on a single theoretical lens but instead builds on complementary insights from multiple research traditions.

2.1 Corporate–Startup Collaboration

Collaborations between startups and established firms have become increasingly prominent in contemporary innovation systems. As technological change accelerates and competitive environments become more uncertain, corporations increasingly seek external sources of

innovation to complement their internal capabilities (Bogers et al., 2019; Usman & Vanhaverbeke, 2022). Startups represent particularly attractive partners because they often operate at the technological frontier, experimenting with emerging technologies and novel business models that may not yet be fully integrated into established industries.

The strategic importance of startup–corporate collaboration reflects broader transformations in the organization of innovation. Rather than relying exclusively on internal research and development activities, firms increasingly adopt collaborative approaches that involve partnerships with entrepreneurial ventures, universities, and other innovation actors (Nambisan et al., 2019). These collaborations allow established firms to explore new technological opportunities while reducing the risks associated with internal experimentation. At the same time, startups benefit from access to complementary resources such as capital, distribution networks, and industry expertise that facilitate the commercialization of innovative technologies.

Empirical research has documented the growing prevalence of such partnerships across industries. Corporate venture capital investments, innovation alliances, and corporate accelerator programs have become widely adopted mechanisms for fostering collaboration between startups and established firms (Hallen et al., 2020; Weiblen & Chesbrough, 2015). Through these mechanisms, corporations gain early access to emerging technologies and entrepreneurial experimentation processes, while startups obtain financial support and market access necessary for scaling their innovations.

Despite these potential benefits, startup–corporate collaborations often encounter significant challenges. Differences in organizational culture, decision-making processes, and strategic priorities can complicate collaboration between entrepreneurial ventures and established firms (Usman & Vanhaverbeke, 2022). Startups typically operate with high levels of flexibility and experimentation, whereas large corporations often rely on more formalized governance structures and risk management practices. These differences may generate tensions that hinder effective collaboration, highlighting the importance of governance mechanisms capable of coordinating inter-organizational relationships.

2.2 Open Innovation and Inter-Organizational Knowledge Exchange

The increasing prevalence of startup–corporate collaboration is closely connected to the broader shift toward open innovation strategies. Open innovation theory proposes that firms should purposefully integrate external knowledge and technologies into their innovation processes rather than relying solely on internally generated ideas (Chesbrough, 2003). This perspective recognizes that valuable knowledge is widely distributed across organizations and that firms can enhance innovation outcomes by engaging in collaborative knowledge exchange.

Recent research has expanded this perspective by emphasizing the ecosystem nature of innovation. Firms rarely innovate in isolation; instead, they operate within networks of organizations that collectively contribute to technological development and market creation (Adner, 2021; Nambisan et al., 2019). Within these innovation ecosystems, startups frequently play a crucial role as sources of novel technological ideas and entrepreneurial experimentation.

Open innovation research highlights the importance of knowledge exchange across organizational boundaries in enabling collaborative innovation. By accessing external knowledge sources, firms can accelerate technological development, explore emerging opportunities, and reduce the uncertainty associated with exploratory innovation (Bogers et al., 2019). Partnerships with startups therefore allow corporations to integrate entrepreneurial experimentation with their own technological capabilities and market knowledge.

However, effective knowledge exchange across organizational boundaries requires mechanisms that facilitate communication, coordination, and trust between partners. Knowledge transfer between startups and corporations often involves differences in organizational culture, communication practices, and intellectual property concerns that may complicate collaboration (Randhawa et al., 2016). Consequently, successful collaborative innovation depends not only on access to external knowledge but also on governance structures that regulate knowledge sharing and protect the interests of collaborating organizations.

2.3 Resource Complementarity in Innovation Partnerships

The formation of collaborative partnerships between startups and established firms can also be explained through the resource-based view of the firm. According to this perspective, firms achieve competitive advantage by developing and deploying valuable resources and capabilities that competitors cannot easily replicate (Barney, 1991). However, no organization possesses all the resources necessary to compete effectively in complex and rapidly evolving technological environments. As a result, firms frequently collaborate with external partners to access complementary capabilities.

Resource complementarity represents a key driver of startup–corporate collaboration. Startups often possess technological expertise, entrepreneurial experimentation capabilities, and innovative ideas, while established firms control complementary assets such as production capabilities, marketing expertise, and distribution infrastructure (Rothaermel & Deeds, 2004). These differences create opportunities for mutually beneficial partnerships in which each partner contributes resources that enhance the collective capacity for innovation.

Strategic management research has long emphasized the importance of complementary assets in the commercialization of innovation. Teece (1986) argued that the successful exploitation of technological innovation often depends on access to complementary assets such as manufacturing capacity, marketing channels, and customer relationships. Startups frequently lack such assets, limiting their ability to scale innovations independently. Collaboration with established firms therefore enables entrepreneurial ventures to leverage corporate resources necessary for market expansion.

Recent studies have further highlighted how complementary resource configurations enable collaborative innovation within entrepreneurial ecosystems. Inter-firm partnerships allow organizations to combine diverse technological capabilities and market knowledge, creating opportunities for innovation that would be difficult to achieve within a single organization (Colombo et al., 2022; Ritala et al., 2021). In this sense, resource complementarities represent an important mechanism through which startup–corporate collaboration contributes to innovation outcomes.

Nevertheless, the presence of complementary resources alone does not guarantee successful collaboration. Even when partners possess valuable and complementary capabilities, partnerships may fail if coordination mechanisms are inadequate or if partners pursue conflicting strategic objectives. Consequently, understanding how collaborative innovation emerges requires examining the governance structures that regulate inter-organizational relationships.

2.4 Governance Mechanisms in Strategic Alliances

Governance mechanisms play a central role in coordinating inter-organizational collaboration and mitigating potential conflicts between partners. Strategic alliance research emphasizes that collaboration between independent organizations inevitably involves coordination challenges, information asymmetries, and risks of opportunistic behavior (Gulati, 1998). Governance structures therefore provide institutional arrangements that regulate partner interactions, allocate decision rights, and establish mechanisms for conflict resolution.

Transaction cost economics offers a useful framework for understanding how governance structures emerge in collaborative relationships. According to this perspective, organizations design governance mechanisms that minimize the transaction costs associated with opportunism, contractual uncertainty, and coordination difficulties (Williamson, 1985). In the context of startup–corporate collaboration, governance mechanisms must balance flexibility and control in order to facilitate innovation while protecting the interests of collaborating organizations.

Several governance mechanisms have emerged in practice to support startup–corporate partnerships. Corporate venture capital investments align incentives by providing corporations with equity stakes in entrepreneurial ventures while allowing startups to retain operational autonomy (Dushnitsky & Lenox, 2005). Strategic alliances and joint innovation projects represent another common governance structure that enables partners to share resources while maintaining organizational independence. In addition, corporate accelerator programs provide structured environments in which startups and corporations can collaborate on innovation projects (Hallen et al., 2020).

Recent research emphasizes that relational governance mechanisms—such as trust, shared norms, and long-term collaboration—play an increasingly important role in innovation partnerships characterized by high uncertainty (Reuer & Devarakonda, 2017). Because innovation processes often involve evolving knowledge and unpredictable outcomes, formal contracts alone may be insufficient to regulate collaboration effectively. Relational governance mechanisms help partners coordinate activities, facilitate knowledge exchange, and adapt to changing circumstances during the innovation process.

Taken together, the literature reviewed above suggests that startup–corporate collaboration represents a complex inter-organizational phenomenon shaped by multiple interacting mechanisms. Resource complementarities create incentives for collaboration, open innovation processes facilitate knowledge exchange, and governance mechanisms coordinate inter-organizational relationships. Understanding how these mechanisms interact provides an important foundation for explaining how collaborative partnerships generate innovation outcomes. Building on these theoretical foundations, the next section develops a conceptual framework that explains how governance mechanisms and knowledge exchange processes enable collaborative innovation in startup–corporate partnerships.

3. Conceptual Development

The literature reviewed above suggests that collaboration between startups and established firms cannot be adequately explained by a single theoretical mechanism. Rather, collaborative innovation emerges from the interaction of multiple organizational processes that connect resource complementarities, strategic coordination, governance arrangements, and inter-organizational knowledge exchange. Prior research has often examined these elements separately within distinct theoretical traditions such as the resource-based view, open innovation, and strategic alliance governance. However, understanding how startup–corporate partnerships generate innovation outcomes requires integrating these perspectives into a coherent explanation of collaborative processes.

Building on this perspective, the present study develops a mechanism-based conceptual framework explaining how collaborative innovation emerges from partnerships between startups and established firms. The framework proposes that collaborative innovation unfolds through a sequence of interrelated processes. The conceptual framework proposed in the article develops several propositions that explain how collaboration between startups and established firms produces innovation outcomes. The table below consolidates these propositions and clarifies the mechanisms through which collaborative innovation emerges.

Table 2. Mechanisms and Propositions in Startup–Corporate Collaborative Innovation

Proposition	Key Mechanism	Relationship Explained	Expected Outcome
P1	Resource Complementarity	Differences in technological and commercialization resources between startups and established firms motivate the formation of collaborative partnerships	Emergence of startup–corporate innovation collaborations
P2	Strategic Alignment	Alignment of strategic objectives and expectations between partners facilitates effective coordination during collaboration	Greater effectiveness of collaborative innovation partnerships
P3	Governance Mechanisms	Governance structures combining contractual safeguards and relational coordination stabilize inter-organizational collaboration	Increased stability and sustainability of partnerships
P4	Knowledge Exchange	Intensity of knowledge exchange mediates the relationship between collaboration and innovation outcomes	Recombination of technological and market knowledge leading to innovation
P5	Entrepreneurial Ecosystem Support	Ecosystem conditions such as network density, institutional support, and resource availability strengthen collaboration effectiveness	Enhanced collaborative innovation outcomes

Source: Author’s conceptualization

Table 2 consolidates the central propositions of the conceptual model and clarifies how each mechanism contributes to collaborative innovation outcomes. By organizing the propositions alongside their underlying mechanisms and expected outcomes, Table 2 provides a structured overview of the article’s theoretical logic. This synthesis supports the interpretation of the conceptual framework and facilitates future empirical research designed to test the relationships proposed in the study.

Resource complementarities motivate organizations to establish partnerships; strategic alignment shapes the effectiveness of inter-organizational coordination; governance mechanisms stabilize collaborative relationships; and knowledge exchange enables the recombination of technological and market knowledge that ultimately produces innovation outcomes. These mechanisms operate within broader entrepreneurial ecosystems that influence the conditions under which collaboration becomes productive.

Collaborative innovation between startups and established firms emerges through a sequence of interrelated mechanisms rather than a single causal factor. The conceptual architecture below integrates these mechanisms into a coherent framework linking collaboration drivers, coordination conditions, governance arrangements, and knowledge integration processes that ultimately generate innovation outcomes.

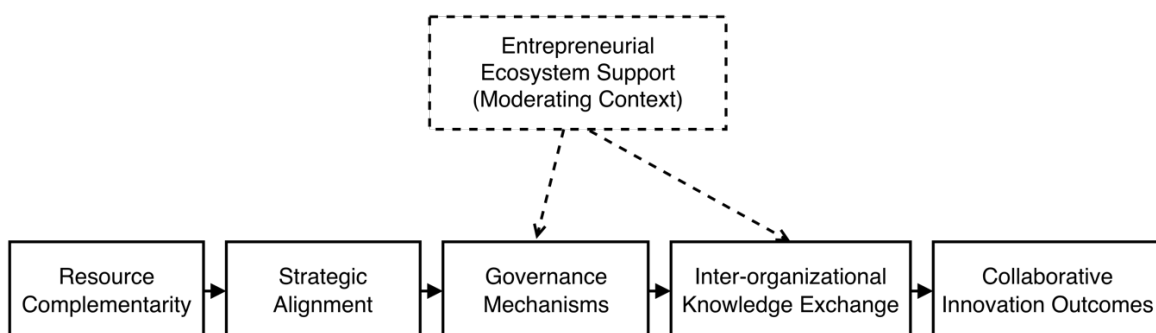


Figure 1. Mechanism-Based Framework of Startup–Corporate Collaborative Innovation

Source: Author’s conceptualization

The framework articulated in Figure 1 clarifies how collaborative innovation between startups and established firms emerges through a sequence of interconnected mechanisms. Resource complementarity motivates organizations to initiate partnerships by combining entrepreneurial experimentation capabilities with the commercialization assets of established firms. Strategic alignment then supports effective coordination between partners with different organizational priorities.

Governance mechanisms stabilize the collaboration by structuring decision rights, coordination practices, and relational trust between organizations. These governance arrangements enable sustained inter-organizational knowledge exchange, through which technological and market knowledge are recombined to produce collaborative innovation outcomes. The model further recognizes that the effectiveness of governance and knowledge exchange processes depends on the surrounding entrepreneurial ecosystem, which moderates collaboration by shaping access to resources, networks, and institutional support.

3.1 Resource Complementarity and Collaboration Formation

Collaborative partnerships between startups and established firms often originate from differences in the resources and capabilities possessed by each partner. The resource-based view suggests that organizations achieve competitive advantage by deploying valuable, rare, and difficult-to-imitate resources that enable them to implement effective strategies (Barney, 1991). However, firms rarely possess all the resources required to compete effectively in technologically complex environments. Consequently, organizations frequently form partnerships to access complementary capabilities that extend their strategic resource base.

Startups and established firms typically exhibit distinct resource profiles that create opportunities for collaboration. Entrepreneurial ventures often possess technological expertise, experimentation capabilities, and the flexibility required to explore emerging technological opportunities. Their small organizational structures enable rapid experimentation and iterative learning processes that support the development of novel technologies and business models (Katila et al., 2008; Nambisan et al., 2019). These characteristics position startups as important sources of technological novelty within innovation systems.

Collaborative partnerships between startups and established firms are often initiated by asymmetric but complementary resource profiles. The visual below isolates this formation logic by showing how entrepreneurial experimentation capabilities and corporate complementary assets combine to create the basis for innovation-oriented collaboration.

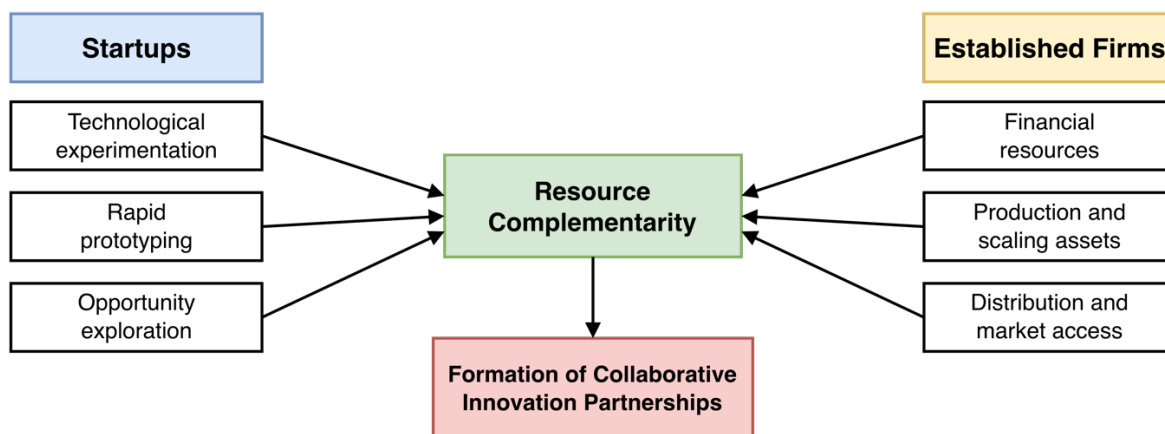


Figure 2. Resource Complementarity as the Basis of Startup–Corporate Collaboration.

Source: Author's conceptualization

Figure 2 isolates the initial logic through which collaboration becomes strategically attractive for both organizational actors. On the startup side, the model emphasizes experimentation, rapid prototyping, and opportunity exploration; on the corporate side, it highlights the complementary assets required for commercialization, scaling, and market penetration. Their combination creates a condition of resource complementarity that makes collaborative innovation partnerships more likely to emerge. In analytical terms, Figure 2 supports the article's argument by clarifying that partnership formation is not driven by similarity between the two organizations, but by the productive fit between distinct resource bases.

Established firms, by contrast, control complementary assets that facilitate the commercialization and scaling of technological innovation. Such assets include financial resources, production capacity, marketing expertise, established customer relationships, and global distribution networks (Teece, 1986; Rothaermel & Deeds, 2004). Although startups frequently generate innovative technologies, they often lack the complementary assets necessary to transform technological discoveries into commercially viable products.

When these distinct resource bases are combined through collaborative partnerships, organizations may generate innovation opportunities that neither partner could achieve independently. Research on innovation ecosystems suggests that the recombination of heterogeneous capabilities across organizational boundaries often enables new technological trajectories and market opportunities (Ritala et al., 2021; Colombo et al., 2022). Resource complementarities therefore represent a primary driver motivating collaboration between startups and established firms.

Proposition 1. Resource complementarities between startups and established firms increase the likelihood of forming collaborative innovation partnerships.

3.2 Strategic Alignment and Coordination Effectiveness

Although complementary resources create incentives for collaboration, partnerships between startups and established firms require alignment between the strategic objectives of participating organizations. Differences in organizational priorities, time horizons, and institutional logics may undermine collaboration even when partners possess valuable and complementary capabilities.

Strategic alliance research highlights that collaboration between independent organizations frequently involves partners with divergent interests and strategic orientations (Gulati, 1998). Startups often prioritize rapid growth, technological experimentation, and market disruption, whereas established firms may emphasize operational stability, risk management, and long-term market positioning. These differences may produce coordination challenges that reduce the effectiveness of collaborative initiatives.

Empirical studies of startup–corporate collaboration indicate that misalignment between partner expectations represents a common cause of partnership failure (Usman & Vanhaverbeke, 2022). For example, corporations may pursue partnerships primarily to explore emerging technologies or monitor technological trends, while startups may expect immediate access to commercialization resources and market opportunities. Such differences may generate disagreements regarding development priorities, intellectual property ownership, or commercialization timelines.

Strategic alignment therefore plays a critical role in shaping the effectiveness of collaborative partnerships. When partners share compatible strategic objectives and maintain a common understanding of collaboration outcomes, they are more likely to coordinate resources and sustain long-term innovation initiatives. Alignment reduces uncertainty regarding the roles and expectations of each partner, thereby facilitating inter-organizational coordination.

Proposition 2. Strategic alignment between startups and established firms enhances the effectiveness of collaborative innovation partnerships.

3.3 Governance Mechanisms and Collaboration Stability

Even when partners possess complementary resources and aligned strategic objectives, collaborative relationships require governance structures capable of coordinating interactions between independent organizations. Governance mechanisms regulate how partners allocate decision rights, manage resource contributions, and resolve potential conflicts that arise during collaboration.

Transaction cost economics provides an important theoretical foundation for understanding governance in inter-organizational relationships. According to this perspective, organizations design governance arrangements that minimize transaction costs associated with opportunism, contractual uncertainty, and coordination difficulties (Williamson, 1985). In the context of startup–corporate collaboration, governance mechanisms must balance flexibility with safeguards that protect the interests of collaborating firms.

Several governance structures have emerged in practice to support startup–corporate partnerships. Strategic alliances enable organizations to coordinate innovation activities while maintaining organizational independence. Corporate venture capital investments provide corporations with equity stakes in entrepreneurial ventures while allowing startups to retain operational autonomy (Dushnitsky & Lenox, 2005). Corporate accelerator programs represent another governance mechanism that facilitates structured collaboration between startups and established firms (Hallen et al., 2020).

Recent research further emphasizes the importance of relational governance mechanisms such as trust, shared norms, and repeated interaction in facilitating collaboration under conditions of uncertainty (Reuer & Devarakonda, 2017). Because innovation processes often involve evolving knowledge and unpredictable outcomes, formal contracts alone may be insufficient to regulate collaboration effectively. Relational governance helps partners coordinate activities, facilitate knowledge exchange, and adapt to changing circumstances during the innovation process.

Proposition 3. Governance mechanisms that combine contractual safeguards and relational coordination strengthen the stability of startup–corporate innovation partnerships.

3.4 Knowledge Exchange and Innovation Recombination

While resource complementarities and governance structures create the structural foundation for collaboration, innovation outcomes ultimately depend on the ability of partners to exchange and integrate knowledge. Knowledge exchange represents the central mechanism through which collaborative partnerships generate innovation.

Collaborative innovation does not emerge automatically once partnerships are formed. Instead, the transformation of collaboration into innovation outcomes depends on coordination mechanisms that structure interaction between partners and enable effective knowledge integration across organizational boundaries.

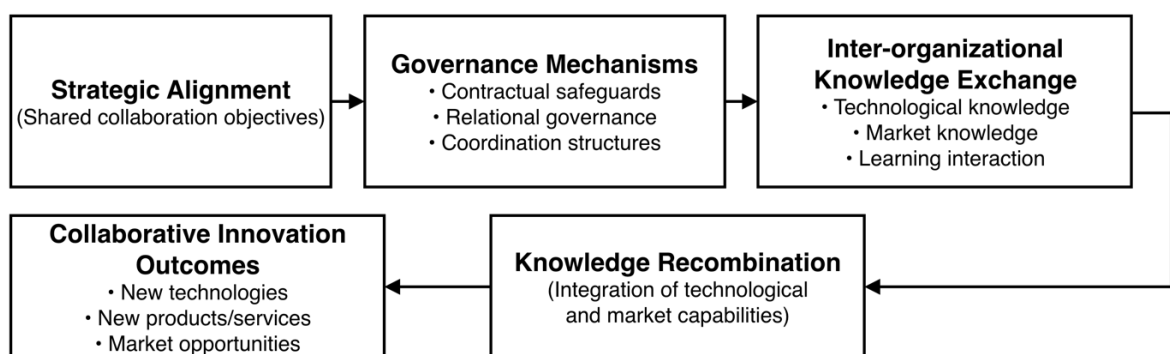


Figure 3. Governance and Knowledge Exchange in Collaborative Innovation

Source: Author's conceptualization

Source: Developed by the author

Figure 3 clarifies the organizational process through which collaborative partnerships generate innovation outcomes. Strategic alignment establishes a shared orientation between startups and established firms, creating the conditions for coordinated collaboration. Governance mechanisms—combining contractual safeguards and relational coordination—structure partner interactions and provide stability during collaboration.

These governance arrangements facilitate inter-organizational knowledge exchange, enabling partners to share technological and market knowledge. Through continued interaction, this knowledge is recombined into new technological and market solutions that ultimately produce collaborative innovation outcomes. In this way, Figure 3 highlights that governance structures are not merely safeguards against opportunism; they function as enabling mechanisms that structure knowledge integration across organizational boundaries.

The knowledge-based view of the firm suggests that organizations create value by integrating diverse knowledge resources and recombining them into new technological solutions (Grant, 1996). Collaborative partnerships enable such recombination by bringing together organizations with distinct technological expertise, market knowledge, and problem-solving capabilities.

Open innovation research similarly emphasizes that firms can enhance innovation performance by integrating external knowledge sources with internal capabilities (Bogers et al., 2019). In the context of startup–corporate collaboration, knowledge exchange may involve technological insights generated by entrepreneurial ventures combined with the operational expertise, market intelligence, and commercialization capabilities of established firms.

However, knowledge exchange across organizational boundaries is often challenging. Differences in organizational culture, communication practices, and intellectual property concerns may limit the willingness of partners to share information openly (Randhawa et al., 2016). Effective governance mechanisms and trust-building processes are therefore necessary to facilitate knowledge exchange and reduce concerns regarding knowledge appropriation.

When knowledge exchange processes function effectively, collaborative partnerships enable the recombination of technological and market knowledge that drives innovation outcomes.

Proposition 4. Knowledge exchange intensity mediates the relationship between startup–corporate collaboration and collaborative innovation outcomes.

3.5 The Moderating Role of Entrepreneurial Ecosystems

The effectiveness of startup–corporate collaboration is also shaped by the broader entrepreneurial ecosystem in which organizations operate. Innovation increasingly emerges within interconnected networks composed of startups, corporations, investors, research institutions, and policy actors (Adner, 2021; Spigel, 2017). These ecosystems influence the availability of resources, knowledge flows, and institutional support that facilitate collaborative innovation.

Entrepreneurial ecosystems provide infrastructure that enables collaboration among diverse innovation actors. Access to venture capital, skilled talent, research institutions, and supportive regulatory environments can significantly enhance the ability of startups and corporations to establish productive partnerships (Autio et al., 2018). Ecosystems characterized by dense networks and strong institutional support enable organizations to identify potential partners and access complementary capabilities more easily.

Conversely, weak ecosystems may constrain collaborative innovation due to fragmented networks, limited resources, or institutional barriers. In such contexts, organizations may encounter greater difficulties in establishing effective partnerships or accessing the capabilities required to support innovation.

The broader ecosystem context therefore conditions the effectiveness of collaborative innovation partnerships by influencing the resources, institutions, and network structures that support collaboration.

Proposition 5. Entrepreneurial ecosystem support strengthens the relationship between startup–corporate collaboration and collaborative innovation outcomes.

4. Discussion

The conceptual framework developed in this study offers a mechanism-based explanation of how collaborative innovation emerges from partnerships between startups and established firms. Rather than viewing collaboration as a simple exchange of complementary resources, the framework suggests that innovation outcomes arise from a sequence of organizational processes involving resource complementarity, strategic alignment, governance arrangements, and knowledge exchange. By integrating insights from several theoretical traditions, the framework contributes to a more comprehensive understanding of how inter-organizational collaboration generates innovation in contemporary entrepreneurial ecosystems.

4.1 Collaborative Innovation as a Multi-Mechanism Process

Prior studies have often examined startup–corporate collaboration through isolated theoretical lenses. Resource-based research has emphasized the role of complementary assets in enabling firms to access external capabilities (Barney, 1991; Rothaermel & Deeds, 2004), while open innovation research has focused on the strategic importance of integrating external knowledge into internal innovation processes (Chesbrough, 2003; Bogers et al., 2018). Although these perspectives provide important insights, they typically explain only particular aspects of collaborative innovation.

The framework proposed in this study suggests that collaborative innovation should instead be understood as a multi-mechanism process in which several organizational dynamics interact simultaneously. Resource complementarities create incentives for organizations to establish partnerships, but these incentives alone do not guarantee successful collaboration. Strategic alignment, governance arrangements, and knowledge exchange processes play critical roles in translating collaboration into innovation outcomes.

Recent research increasingly highlights the importance of process-based explanations in innovation studies. Studies of open innovation ecosystems indicate that innovation performance often depends not only on access to external knowledge but also on the organizational mechanisms that coordinate knowledge exchange and resource integration across organizational boundaries (Bogers et al., 2019; Nambisan et al., 2019). The present framework contributes to this emerging perspective by clarifying how multiple organizational processes collectively shape collaborative innovation outcomes.

4.2 Integrating Complementarity, Governance, and Knowledge Exchange

A second theoretical contribution concerns the integration of several theoretical streams that have traditionally been studied separately. Research on startup–corporate collaboration has often focused on specific governance mechanisms, such as corporate venture capital, strategic alliances, or accelerator programs (Dushnitsky & Lenox, 2005; Hallen et al., 2020). While these studies have provided valuable insights into the structure of collaborative

arrangements, they have paid relatively limited attention to the broader mechanisms that connect resource complementarities, governance structures, and knowledge exchange.

The conceptual model proposed here suggests that collaborative innovation emerges when complementary resources are effectively coordinated through governance mechanisms that enable sustained knowledge exchange. This perspective builds on transaction cost economics, which emphasizes the role of governance structures in coordinating inter-organizational relationships (Williamson, 1985), while also drawing on the knowledge-based view of the firm, which highlights the importance of knowledge recombination in innovation processes (Grant, 1996).

Recent empirical studies further support the importance of such integrative perspectives. Research on corporate–startup partnerships indicates that the success of collaborative innovation initiatives often depends on the ability of partners to develop governance arrangements that facilitate knowledge sharing while protecting proprietary capabilities (Reuer & Devarakonda, 2017; Usman & Vanhaverbeke, 2022). The present framework therefore contributes to the literature by positioning governance not only as a safeguard against opportunism but also as an enabling mechanism that structures knowledge exchange between collaborating organizations.

4.3 Ecosystem Context and Boundary-Spanning Collaboration

The framework also highlights the broader ecosystem context in which collaborative innovation takes place. Innovation increasingly occurs within interconnected networks of organizations rather than within the boundaries of individual firms (Adner, 2021; Spigel, 2017). These ecosystems shape the availability of resources, the density of knowledge networks, and the institutional conditions that facilitate collaboration among diverse innovation actors.

Collaborative innovation between startups and established firms is not equally effective across all environments. The surrounding entrepreneurial ecosystem shapes the conditions under which partnerships can successfully exchange knowledge, coordinate governance structures, and generate innovation outcomes. The figure below conceptualizes the ecosystem as a set of contextual boundary conditions influencing collaborative innovation processes.

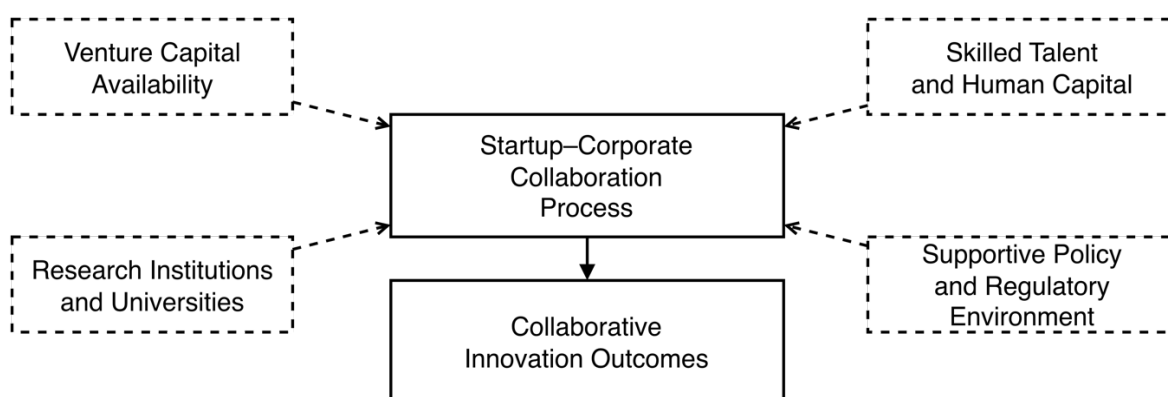


Figure 4. Boundary Conditions of Startup–Corporate Collaborative Innovation

Source: Author's conceptualization

Figure 4 introduces the ecosystem-level conditions that influence the effectiveness of collaborative innovation partnerships. Rather than treating startup–corporate collaboration as an isolated organizational process, the visual situates collaboration within a broader entrepreneurial ecosystem composed of venture capital availability, skilled talent, research institutions, and supportive regulatory environments.

These ecosystem components shape the resources, knowledge flows, and institutional support available to collaborating organizations. As illustrated in Figure 4, favorable ecosystem conditions strengthen the capacity of startups and established firms to coordinate collaboration and exchange knowledge, thereby increasing the likelihood that collaborative partnerships generate sustained innovation outcomes.

Entrepreneurial ecosystems may influence collaborative innovation in several ways. Dense networks of startups, investors, universities, and corporations create opportunities for organizations to identify potential partners and access complementary capabilities. Institutional support mechanisms such as venture capital availability, innovation policy frameworks, and technology transfer institutions may further facilitate collaboration across organizational boundaries (Autio et al., 2018).

Recent studies of innovation ecosystems suggest that collaboration between startups and corporations often functions as a boundary-spanning mechanism that connects entrepreneurial experimentation with established organizational capabilities (Adner, 2021; Nambisan et al., 2019). The present framework extends this perspective by proposing that ecosystem conditions moderate the effectiveness of collaborative partnerships, influencing whether collaborations translate into sustained innovation outcomes.

4.4 Implications for Future Research

Although the conceptual framework developed in this study provides a structured explanation of collaborative innovation between startups and established firms, several opportunities remain for future empirical research. First, empirical studies could examine how different governance structures influence knowledge exchange dynamics within startup–corporate partnerships. Comparative analyses of alliances, corporate venture capital investments, and accelerator programs may provide deeper insight into the mechanisms through which governance arrangements shape collaborative innovation.

Second, future research may explore the temporal dynamics of collaborative innovation processes. Partnerships between startups and corporations often evolve over time as organizations develop trust, adjust governance arrangements, and accumulate shared knowledge. Longitudinal research designs may therefore provide valuable insight into how collaborative innovation mechanisms develop and interact over the lifecycle of partnerships.

Finally, future research may investigate how variations in entrepreneurial ecosystems influence the effectiveness of startup–corporate collaboration. Differences in institutional support structures, innovation policy environments, and network density across regions may shape the conditions under which collaborative innovation emerges. Understanding these contextual factors may help explain why similar collaboration strategies generate different outcomes across ecosystems.

5. Conclusion

Collaboration between startups and established firms has become an increasingly important mechanism for innovation in technologically dynamic environments. As firms confront accelerating technological change and growing competitive pressures, partnerships between entrepreneurial ventures and established organizations provide opportunities to combine complementary capabilities that extend beyond the boundaries of individual firms. Despite the growing prevalence of such collaborations, prior research has often examined startup–corporate partnerships through fragmented theoretical perspectives. This study addresses

that limitation by developing an integrative conceptual framework that explains how collaborative innovation emerges from the interaction of multiple organizational mechanisms.

The framework proposed in this article highlights four key mechanisms shaping collaborative innovation: resource complementarity, strategic alignment, governance mechanisms, and inter-organizational knowledge exchange. Resource complementarities motivate collaboration by combining the exploratory capabilities of startups with the commercialization assets of established firms. Strategic alignment facilitates coordination between partners with distinct organizational priorities, while governance mechanisms stabilize collaborative relationships and mitigate potential conflicts. Through effective knowledge exchange processes, these mechanisms enable the recombination of technological and market knowledge that ultimately drives innovation outcomes.

By integrating insights from the resource-based view, open innovation research, strategic alliance theory, and entrepreneurial ecosystem perspectives, this study contributes to a more comprehensive understanding of startup–corporate collaboration. The framework emphasizes that collaborative innovation should be understood as a multi-mechanism process in which complementary resources, governance arrangements, and knowledge exchange interact to shape innovation outcomes. In doing so, the study advances theoretical understanding of how inter-organizational partnerships support innovation within increasingly interconnected business ecosystems.

Future research may build on this framework by empirically examining the proposed relationships across different industries and institutional contexts. Longitudinal studies may further illuminate how collaborative partnerships evolve over time as organizations develop shared knowledge and governance structures. Such research may provide deeper insight into the conditions under which startup–corporate collaboration generates sustainable innovation and long-term value creation.

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