

**Holistic Stakeholder Engagement with Corporate Venture Capital Unit for
Collaborative Innovation: An Integrative Review and Research Agenda**

Authors

Mr. Arpan Mondal

Ph.D. Scholar

Strategic Management

Indian Institute of Management - Lucknow,

Prabandh Nagar, Off. Sitapur Road, Lucknow -226013, Uttar Pradesh, India

Phone: +91- 7364090163

Email: phd22032@iiml.ac.in; arpanmondal694@gmail.com

<https://orcid.org/0000-0002-9030-9022>

Prof. Sabyasachi Sinha (Ph.D., IIM-Ahmedabad)

Professor

Strategic Management Group,

Indian Institute of Management - Lucknow,

Prabandh Nagar, Off. Sitapur Road, Lucknow -226013, Uttar Pradesh, India

Phone: +91-522-669-6677 (Off) | +91-9140751775 (Mobile) |

Email: sabyasachi@iiml.ac.in; sabyasachi@iima.ac.in

<https://orcid.org/0000-0003-2016-032X>

Prof. Dhirendra Mani Shukla

Associate Professor

Strategic Management Group,

Indian Institute of Management - Lucknow,

Prabandh Nagar, Off. Sitapur Road, Lucknow -226013, Uttar Pradesh, India

Phone: +91-8853589008

Email: dhirendra.mani.shukla@iiml.ac.in

<https://orcid.org/0000-0003-3898-4079>

Prof. Kshitij Awasthi
Professor
Strategic Management Group,
Indian Institute of Management - Lucknow,
Prabandh Nagar, Off. Sitapur Road, Lucknow -226013, Uttar Pradesh, India
Phone: +91- 9902399708
Email: kshitij.awasthi@iiml.ac.in

ABSTRACT

Corporate venture capital (CVC), an important mode in corporate entrepreneurship (CE), but related research is fragmented. The theoretical contribution of the CVC process for pursuing collaborative innovation (CI) is poorly understood. To understand this, we conducted an integrative literature review of 171 peer-reviewed publications from 2003 to 2024 using the Gioia method and developed a process framework highlighting the engagement of stakeholders for doing CI through the CVC investment mode. Through this study, we are trying to understand how corporate CVC motives result in CI outcomes through integration and knowledge absorption from venture firms. Furthermore, how do various levels of individual, group, firm, and market-level stakeholders facilitate and impede the process? Further, we have provided theoretical contributions and direction for future studies.

Keywords: *Corporate venture capital, Collaborative Innovation, Integrative Literature Review, Gioia methodology, Stakeholders engagement*

1. INTRODUCTION

Corporate venture capital (CVC), is an important mode of pursuing corporate entrepreneurship (CE), refers to a minority equity investment by an established firm in an entrepreneurial venture which has gained significant traction from practitioners and researchers (Dushnitsky & Lenox, 2005), having a worldwide involvement of 66 billion USD with 20% growth from 2023 to 2024 (CB Insights report, 2024). Firms initiate CVC investments for strategic gains, intending to collaborate between corporations and startups, spinoffs, and spinouts (Dushnitsky & Lenox, 2005; Hill & Birkinshaw, 2012b; Becker & Gassmann, 2006). Extant CVC literature highlights various drivers (Fels et al., 2021), paradoxical tensions (Jeon & Maula, 2022), context (Aragaw et al., 2025), CVC characteristics and their value creation outcomes (Narayanan et al., 2009), life cycle stages (Robbie, 1998; Ma, 2020) and factors affecting lifespan of CVCs (Brinkmann & Kanbach, 2023). Despite CVC being an emerging study domain within the CE literature (Phan et al., 2009), the understanding of the topic is fragmented (Anokhin et al., 2011; Kolte et al., 2023) and demands an integrated approach for a holistic understanding of the phenomenon (Frey & Kanbach, 2023; Ogink et al., 2023) in the context of collaborative innovation (CI). Moreover, previous studies lacked how stakeholder relationships should be managed in the context of CI (Phan et al., 2009; Narayanan et al., 2009; Huggins & Thompson, 2015; Limaj & Bernroider, 2019) warrants the necessity of analyses that incorporate integrative models of CVC.

Thus, our study investigates how CVC units proficiently conduct external knowledge exploration and integration for collaborative innovation. How do corporate motivations influence the CVC investment strategy for collaboration, and what are its outcomes? Furthermore, what are the different levels of stakeholders that facilitate and raise barriers that influence the process?

To address these concerns, we extensively assess the current literature on CVC and investigate the motives for CVC implementation, highlighting various individual, group, firm and market levels of stakeholders and the collaborative innovation outcomes and finally, suggesting future research directions. Our study enhances the understanding of CVC linkages with the CI outcomes and holistic interplay among stakeholders and the CVC unit.

The research article is structured as follows. Firstly, we elucidated the comprehensive technique employed to complete our articles, establish parameters, and conduct theme analysis utilizing the Gioia methodology (Gioia et al., 2013), followed by highlights of the main characteristics of the identified articles. Secondly, we emphasised the diverse strategic motivations of corporate entities to create a CVC unit for investing in ventures, identified various CVC approaches and explained the collaboration process and its outcomes. Third, we identified the role of individual, group, firm and market level stakeholders as enablers and barriers by using stakeholder theoretical lens extending the RBV and KBV theory. Finally, we discerned multiple study gaps and numerous potential avenues for further investigation.

2. LITERATURE BACKGROUND

Among various avenues to obtain knowledge from external sources (Cassiman & Veugelers, 2006), corporations choose CVC, an intermediate level of integration with venture firms (Guttmann et al., 2023) while acting as a complement (Chesbrough, 2002) to other modes (Figure 1).

3.2 Study selection

Considering only (FT50, A*, and A) articles, 761 were found. Only 129 articles were retained after thoroughly reviewing the abstract. We added 42 research articles by forward and backwards snowballing. We eliminated publications that, although mentioning CVC or CE in the title or abstract, did not primarily focus on CVC in the article's main content. We specifically omitted any publications in the abstract that do not mention CVC as the base of the study. After doing content analysis, we identified 171 peer-reviewed journal articles deemed suitable for our integrative evaluation of various program approaches that lead to CVC investment in the firm, impacting various outcomes (Figure 1).

3.3 Data Analysis:

Research in this area gained significant momentum starting in 2015 and has since continued to grow at an accelerating pace. For the 171 articles, detailed categorisation of the articles was mentioned in Table 1 and Figure 2. Extant research based on the articles covered in our review has primarily drawn on various theories. Additionally, we conducted a thematic analysis employing the Gioia method (Gioia, 2013) to enhance rigour and transparency in the inductive synthesis, by identifying under-explored gaps and themes; it facilitates developing new frameworks and refining existing theories (Moore & Gino, 2015; Kerr & Coviello, 2019; Jeon & Maula, 2022). The Gioia approach is a three-tiered coding process that systematically categorizes literature by identifying themes, patterns, and links. We subsequently classified the first-order concepts into six composite dimensions: motives, investment approaches, Enabling Stakeholders, Impeding Stakeholders, barriers, collaborative processes, and Collaborative Innovation outcomes (Appendix Figure 1).

4. FINDINGS OF THE INTEGRATIVE LITERATURE REVIEW

Based on our Gioia findings, we streamline the themes and synthesise the literature review to form a comprehensive framework.

4.1 Aligning Corporate CVC Motive with Approaches:

Corporations have diverse motivations for engaging in CVC investments, which may be either or mix of financial and strategic goals (Dushnitsky & Lenox, 2005; Clercq et al., 2006; Gutmann, 2019; Enkel & Sagmeister, 2020; Zhang, 2021; Weber & Weber, 2005). According to KBV, knowledge gained through collaboration can serve a variety of purposes, where companies frequently refer to various strategic motives which dominate when effective adaptation requires acquiring knowledge (Dushnitsky, 2006; Lorenzo & Vrande, 2018). The sub-dimensions of CVC motive include synergy development, seeking capability, knowledge acquisition, and technology development, all aligned together to advance innovation. These motives are associated with different CVC investment approaches, which could be CVC investments' operational capabilities and are categorised into four types (driving, emergent, enabling, and passive) (Chesbrough, 2002) or depend on investment location (peripheral or distant) and scope of investment (depth and breadth). Reshaping absorptive capacity is followed by corporations which develop in-depth competence, such as specific knowledge and experience, and look for focused capability development, while generating diverse capabilities, the investment scope remains broad (Keil, 2004; Vrande et al., 2011). When knowledge acquisition is the prime objective, in order to gain access to specialised knowledge and novel technologies (Wadhwa & Kotha, 2006; Maula et al., 2013; Wadhwa et al., 2015) corporations choose complementary synergy development, partnership formation by integrating with ventures. Technology development corresponds to investing in external knowledge for various technologies, resources, and ideas; thus, if peripheral investments won't work out, corporations go for distant investment. While corporates look for synergy development for sustainability and innovation purposes, they follow an emergent operational capability approach by building complementarities and synergy with ventures, selecting a

peripheral investment location and a focused investment scope. By developing the ecosystem, corporations follow enabling and emergent operational capabilities while they choose both peripheral and distant locations to improve their network, engage with multiple stakeholders and do ecosystem interaction with a broad scope of focus (Figure 4).

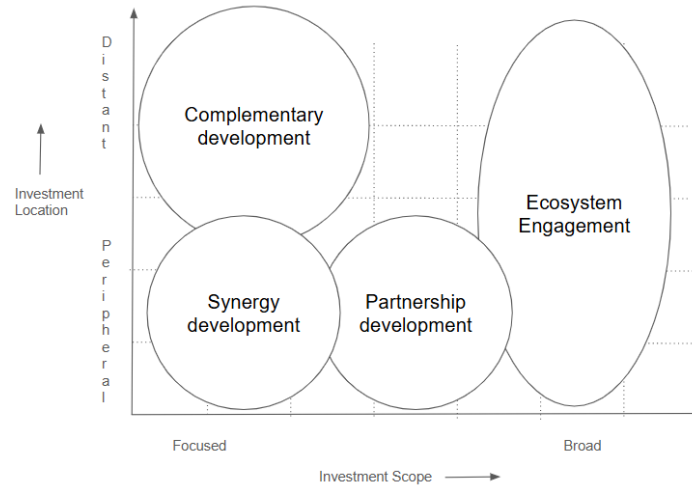


Figure 4: Typology of collaboration practices depends on CVC investment location and scope.

4.2 Knowledge absorption and integration through CVC Investment:

According to the Knowledge-Based View (KBV), a firm looks for knowledge resources from external entities by collaborating with the primary and secondary stakeholders. The sort of resource and information (or knowledge) that stakeholders can share influences their decision (Ozdemir et al., 2023). Thus, collaboration with stakeholders (startups, spinoffs and spinouts) enables businesses to gain access to specific resources, information and innovation (Ozdemir et al., 2023). Collaboration through CVC investment refers to a corporation leveraging its depth and breadth of investments in a portfolio of startups, spinoffs, and spinouts (Agarwal et al., 2007; Weiblen & Chesbrough, 2015; Kurpjuweit & Wagner, 2020), enhancing ecosystem interaction, fostering improved networks and forming synergies by interacting with multi-stakeholders for value creation which provides insights into other appropriate startups or the latest technical advancements in startup zones. Corporations follow a combination of exploration and exploitation (Hill & Birkinshaw, 2014). Exploration activities encompass searching for knowledge (March, 1991) that is well aligned with their existing knowledge bases. Corporations seeking cutting-edge technologies and information that could yield ground-breaking new technology, companies involved in exploration may participate in acquisitions substantially more frequently. Technology exploration leads to purposive inflows of knowledge and technology exploitation, reflecting innovation techniques to organise purposive outflows of knowledge. Outside-in information flows support collaborative innovation initiatives, enhance knowledge sharing and give access to diverse networks (Lin & Lee, 2011; Wang & Hu, 2017; Gutmann et al., 2023; Ghazinoory & Aghaei, 2023; Dizdarevic et al., 2024). Further, studies suggested that driving CVC fosters partnerships with startups by taking ownership stakes and board positions, allowing firms to obtain direct and valuable information and to gain insight into emerging technologies they cannot fully develop independently (Weiblen & Chesbrough, 2015). CVC enriches ecosystems while at the same time building synergies, leading to better knowledge management by facilitating technology window, spinoff, and spinout knowledge. CVC investment harvests innovations from startups by offering a technological window into emerging technologies and managing IP portfolios, enabling access to many new and improved externally available technologies and valuable

information (Dushnitsky & Lenox, 2005; Ketchen et al., 2007; Benson & Ziedonis, 2009; Wadhwa et al., 2015; Uzuegbunam et al., 2019). Corporations' patent citation of another organisation leads to knowledge transfers generated due to interfirm collaborations (Gomes-Casseres et al., 2006; Oxley & Wada, 2009; Corsino et al., 2019; Runge et al., 2022). CVC offers exploratory benefits by providing access to emerging markets and complementary newer technologies, facilitating the exploration and exploitation of innovative opportunities of the existing technologies, leading to firms' capital and knowledge gains, access to new business models and prospects, improving idea generation, knowledge flows and learning (Chesbrough, 2002; Maula et al., 2003; Schildt et al., 2005; Napp & Minshall, 2011; Felin & Zenger, 2014; Titus et al., 2014; Zhang, 2021). It improves firms' learning, absorptive capacity and strengthens technological and social capital (Maula et al., 2009; Lin & Lee, 2011; Wadhwa et al., 2015) and improves portfolio selection.

4.3 Innovation Networks: Linking individual, firm and market level stakeholders:

4.3.1 Stakeholders as Enablers: Supporting Collaborative Innovation Process:

Access to a varied range of information sources is more successful when working with spinoffs, spinouts, and startups which are connected with the corporation. Though RBV only describes how resources might be effective, stakeholder theory extends it by understanding the partnerships with varied stakeholders who have varying interests and motivations in their inter-organisational engagements (Ozdemir et al., 2023). Connecting various levels of stakeholders is required for information (or knowledge), resources and for ecosystem interaction. Our study suggests that there are three levels of stakeholders (Figure 5) that support the CVC unit and enable the collaboration process. Individual and group-level stakeholders, primarily consisting of individuals or small groups, like the technology scouting unit (Napp & Minshall, 2011), who effectively gather market and technical intelligence (Brinkmann & Kanbach, 2023). Corporate appoints R&D/CVC managers to the board to maintain control over the venture and facilitate the exchange and integration of knowledge (Belderbos et al., 2018; Wadhwa et al., 2015). Having good corporate governance and structures, like a board and a Top management team possessing characteristics like entrepreneurial culture and orientation, participate more in CVC investments (Dokko & Gaba, 2012; Anokhin et al., 2016; Sahaym et al., 2015; Brinette et al., 2023; Benkraiem et al., 2021; Ademi et al., 2022; Phan et al., 2009; Dushnitsky & Lenox, 2006; Wadhwa & Kotha, 2006; Titus et al., 2019). Further, TMR, Board, and CVC managers having industry or venture experience and specific scientific or CVC-related expertise (Phan et al., 2009; Yang et al., 2008; Maula, Keil, and Zahra, 2012; Ceccagnoli et al., 2018; Uzuegbunam et al., 2017) help in the selection of a better portfolio and facilitate remote search for better collaboration of resources and knowledge.

Firm level enablers are the organizational units or external entities like CVC units, Venture Arms (Hill & Birkinshaw, 2012b), Business units (Seran & Bez, 2020), corporate innovation hubs (CIH) (Amann et al., 2022), New Business Initiatives (NBI) (Chesbrough, 2019) and Structured corporate-startup collaboration programs arms (Möllmann, 2022) support CVC investment for engagement with startups and help in better knowledge acquisition. These programs or arms open doors to new markets, develop new avenues for expansion, help in exploration and exploitation (Hill & Birkinshaw, 2012b), and help in knowledge sharing (Chesbrough, 2019). Parent organisation offers various funds and grants them access to supplementary expertise and resources, helping in CVC investments (Park & Steensma, 2013) and providing job security and CVC incentives for engaging people more in CVC investments (Dushnitsky & Shapira, 2010; Cabral et al., 2020). Moreover, corporate incubators and accelerator programs support CVC as a component of a comprehensive collaborative innovation strategy (Chesbrough, 2003). While market-level stakeholders are

the external entities and broader network who enables better knowledge and resource flows such as having better innovation network connections, regulatory support specially government backing (Acs et al., 2004) like (financial, technical, and management assistance from central and local governments) and enforceability (government transparency), though indirectly but leads to more CVC investments and lead to collaboration and relationship development. These regulatory interventions lead to better economic openness, entrepreneurial culture, cultural diversity, and entrepreneurial ecosystems, which can exert an influence on entrepreneurial activities. Firms under weak intellectual property (IP) regimes, CVC grants exclusive access to venture-specific knowledge and enables enhanced possibilities for learning from such knowledge (Dushnitsky & Lenox, 2005). Further, collaborations with universities and research centres may result in the exploitation of novel and non-redundant information (Kim et al., 2012). All these stakeholders thus enhance corporate capacity for knowledge recombination and innovation by providing access to a diverse array of novel ideas, insights, and practices.

4.3.2 Stakeholders as Barriers: Impeding Collaborative Innovation Process:

Corporate firms collaborate with startups (Demir et al., 2024; Dizdarevic et al., 2024); nevertheless, despite the growing significance of corporate collaboration, achieving success remains challenging (World Economic Forum, 2018; BCG, 2019) because of the barriers from various stakeholders. Our study highlights that firms face three different levels of stakeholder barriers: individual and group level barriers are from corporate gatekeepers like business internal division stakeholders (Martin & Eisenhardt, 2010; Seran & Bez, 2021), where internal cooperation is difficult and restrictions from ineffective board, internal R&D teams which access to these resources is complicated by distributed authority, complex and delayed organizational processes, and internal conflicts. Studies further suggested that individuals and groups put barriers to the collaboration process, such as silos (Chesbrough, 2024), where information that is valuable moves easily within silos but not easily across them. governance friction like ineffective board (Sahaym et al., 2015) and CEO overconfidence (Wan et al., 2022), cultural tension (Vrande et al., 2008; Weiblen & Chesbrough, 2015), managerial and organizational barriers (Oumlil & Juiz, 2016; Igartua et al., 2010), lack of transparency, aversion to risk, and organizational inertia impede CVC investments. Ineffective boards safeguarding investors' interests and a venture's limited absorptive capacity will result in a reduction in entrepreneurial activity and a threshold firm's inability to grow or produce value (Zahra et al., 2007). Thus, firms fail to transfer information through a CVC unit (Schuh et al., 2017), hindering the external commercialisation of internal information and impacting the CVC outcomes. distinct syndromes (Longo & Giaccone, 2017; Fecher et al., 2018), along with the "not invented here" (NIH) and "not sold here" (NSH) mentalities (Chesbrough, 2002; Burcharth et al., 2014; Aquilani et al., 2017), act as the two pathogens that elicit an allergic response when knowledge is exchanged between institutions (Amann et al., 2022). Moreover, insufficient management of these challenges may lead to ambivalence, confusion, collapse, conflict, and organizational deterioration (Lewis & Smith, 2014; Schad et al., 2016).

In the collaboration process, the firm-level barriers faced by corporates like weak IPP, forming an entrepreneurial-CVC investment link, are less probable when the entrepreneurial innovation pertains to the same industry (Dushnitsky & Shaver, 2009b). Multiple stakeholders trying to attain divergent agendas between strategic and financial objectives can bring conflict (Dokko & Gaba, 2012; Dushnitsky & Lenox, 2005; Weber & Weber, 2005; Dushnitsky, 2006; Zhang, 2021; Colombo & Murtinu, 2017). Similarly, the market-level barriers are from Ecosystem Orchestrators, and restrictions from startups (Dushnitsky & Lenox, 2006; Anokhin et al., 2011; Jeon & Maula, 2022), lack of openness (Maula et al., 2009), which impact the CVC investment process and reduce the CVC outcomes. Where

startups think that corporations steal their ideas or take excessive time to make crucial decisions, which limits a firm's ability to cross boundaries and share knowledge, creating hindrances in innovation, though orchestrators create various opportunities (Lingens et al., 2021), orchestrating startups may become superfluous when the corporate and startups encounter similar obstacles in orchestrating ecosystems, particularly the challenge of limited resources (Lingens et al., 2021).

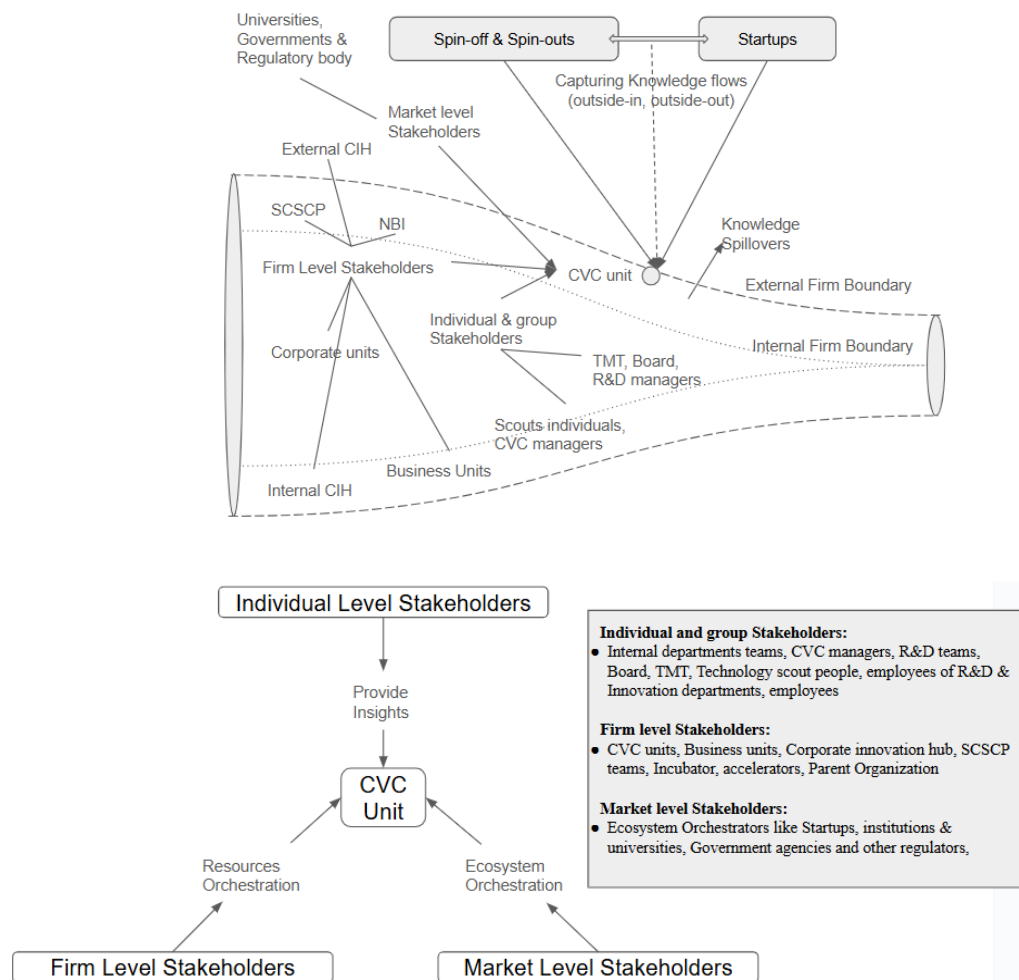


Figure 5: Various Levels of stakeholders impacting collaboration via CVC mode.

Note: --- denotes porous external firm boundary, ... denotes Internal firm boundary, CVC = Corporate venture capital, SCSCP = Structured corporate-startup collaboration program, CIH = Collaborative Innovation Hub and NBI = New Business Initiatives.

4.5 Collaborative Innovation Outcomes:

Studies suggest that CVC investments facilitate both explorative and exploitative learning and help in technology sourcing and acquiring external knowledge and influence co-patent development. CVC acts as a cross-silo knowledge broker which utilize underused ideas and assets through collaboration, aiding idea exploitation and resulting in CI (Schildt et al., 2005; Maula et al., 2009; Yang et al., 2008; Napp & Minshall, 2011; Titus et al., 2014; Lee et al., 2018; Enkel & Sagmeister, 2020; Anokhin et al., 2011; Flor et al., 2019; Balachandran & Eklund, 2023; Gutmann et al., 2023). CVC impacts technological productivity by promoting external R&D contributions, leads to New Product Development and improve product, process, and organizational innovation performance outcomes (Benson & Ziedonis, 2009;

Anokhin et al., 2016; Dushnitsky & Lenox, 2005; Flor et al., 2019; Shuwaikh & Dubocage, 2022; Wan et al., 2022; Wang et al., 2023; Schdilt et al., 2005; Dushnitsky & Lavie, 2010; Anokhin et al., 2016; Kim et al., 2016; Titus et al., 2014). CVC programs, in conjunction with other Entrepreneurial Corporate Venture (ECV) modalities (Vrande et al., 2011), enhance the rate of innovation (Dushnitsky & Lenox, 2005) and influence innovation performance (Dushnitsky & Leonex, 2005a, 2005b). Stakeholders with non-market interests are effective in developing green innovations that have an environmental impact. Thus, when a CVC invests in a green startup, the corporate files more green patents because of the green knowledge transfer (Bendig et al., 2022). Moreover, studies found that CVC investments increase patenting rates (Dushnitsky & Lenox, 2005) and impact IP outcomes (positively on patents and copyrights and unfavorably on trademarks) (Dushnitsky & Lenox, 2005) since the new firm possesses access to enhanced marketing resources and capabilities. Further, CVC investment negatively impacts new enterprises' ability to build market-centric IP (Uzuegbunam et al., 2019). Apart from corporate outcomes, due to collaboration activity, the venture firms can generate innovation, co-patent products, help in their new product development through organisational learning and help them to grow and survive (Hallen, 2008; Veer et al., 2022; Huang & Madhavan, 2021) (Figure 6).

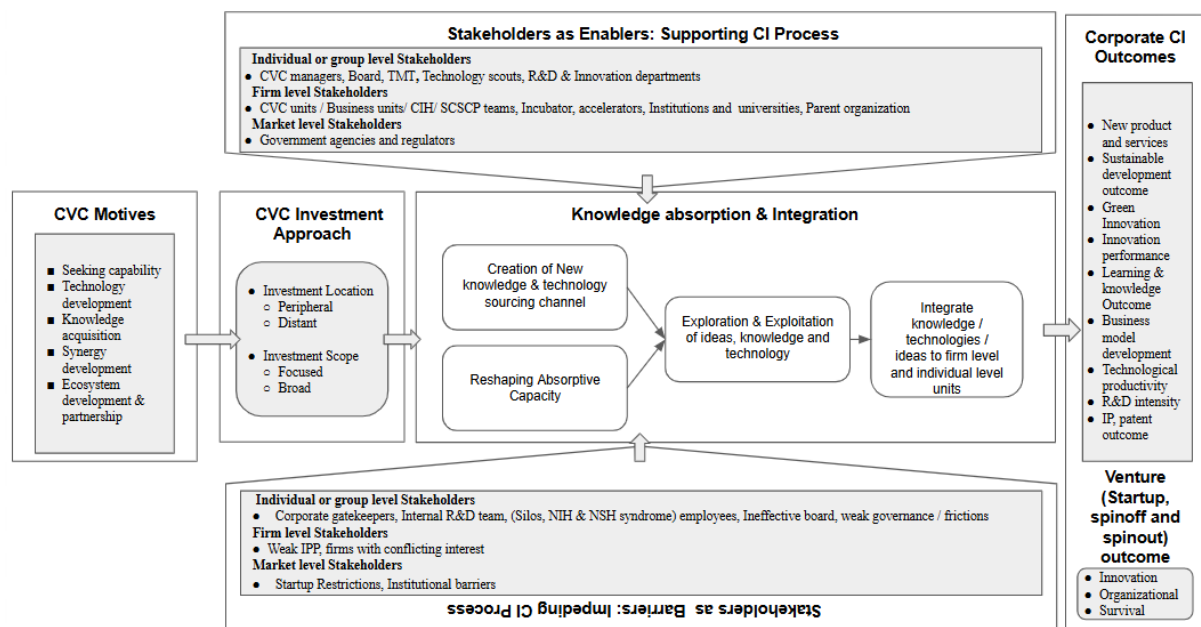


Figure 6: Process Model Framework

5. DISCUSSION:

Our study addresses the researchers' request to emphasize the CVC strategic motives leading to collaborative innovation (Chesbrough, 2002; Dushnitsky, 2005b; Belderbos et al., 2018; Guttman et al., 2023; Chesbrough et al., 2024) and extend the theories of KBV and RBV by adding stakeholder theory to explain the roles of stakeholders in enabling and impeding the CVC process for CI. CVC's strategic motives can be achieved through equity investments in venture firms like startups, spinoffs, and spinouts (Benson & Ziedonis, 2009; Anokhin et al., 2011; Weber & Weber, 2011; Weiblen & Chesbrough, 2015). The various CVC approaches set by the CVC motives lead to a collaboration process where various collaboration happens with the external partners, which facilitate, help in exploration or exploitation, in enhancing absorptive capability to derive information, knowledge, ideas, technology and other resources required for corporate-level knowledge and learning creation, leading to various CI outcomes. Further, various levels of stakeholders like individual and group level like top

management, CVC teams, scouts, firm level like innovation intermediaries (Amann, 2021; Seran & Bez, 2021) and market-level stakeholders like its external network stakeholder members, governments facilitate the process and leads to better accumulation of knowledge and ideas from its venture firms. While the same set of stakeholders impede the process when there is friction exists and teams or groups act as gatekeepers and conflicting interests further get restricted by startups, ecosystem orchestrators and institutions, which restrict the flow of information.

5.1 Future Research Directions:

Our study clarifies the key elements of CVC investment related to collaborative innovation outcomes; however, the literature review reveals several gaps that suggest various future research directions concerning motives, investment strategies, outcomes, facilitators, and obstacles.

5.1.1 Future Directions: Corporate CVC Motive with Approaches

The literature has delved briefly into the genesis of CVC investment motives, investigating the choice between financial, strategic, and the mix of the two (Chesbrough, 2002; Weber & Weber, 2005; Dushnitsky & Lenox, 2005). CVC invests in spinoffs and spinouts to foster an entrepreneurial culture, develop technology, or generate innovation (Weiblen & Chesbrough, 2015). Future studies should explore the circumstances in which investing in spinoffs or spinouts leads to improved collaborative innovation outcomes for corporate investors and can further investigate MNE-startup partnerships. The literature remains silent on the impact of sequential investment on collaboration outcomes. Thus, future studies should understand the sequential CVC investment (Series A, B, and so on) and its impact on the knowledge acquisition by the firm and various outcomes. Studies can further compare the vertical linkages in CVC and the distant CVC investments in various collaborative innovation outcomes.

5.1.2 Future Directions: Enabling Stakeholders Supporting Collaborative Innovation -

As we further reconcile the investment approaches leading to collaboration, multiple questions arise regarding the enablers at the CVC investment and collaboration process stages. While previous studies looked into individual and firm-level stakeholders attributes like experiences, characteristics, social capital and liabilities, network ties and partner compatibility (Benson & Ziedonis, 2009; Weber & Weber, 2011; Wal et al., 2016; Uzuegbunam et al., 2019; Ghazinoory & Aghaei, 2023b; Wang et al., 2023; Keil et al., 2008; Tong & Li, 2010). Future studies can look for other firm-level attributes, like the level of board involvement, which enable the creation of new venture portfolios. Further, it investigates the impact of network structure (self-centred and holistic network) and network ties on improving social capital, leading to location-specific knowledge and reducing social liabilities for enhancing learning and innovation performance. Moreover, future studies may explore the influence of industry-specific knowledge or competence in finance and accounting on the correlation between CVC funding and IP portfolios, as well as the moderating effect of absorptive capacity across diverse business sectors. Studies can further explore how different governance structures (market-based, network-based, and hierarchy-based structures) and institutional arrangements (laws, regulations, cultural norms, and social networks) influence and shape the technology sourcing and assessment motives for CVC investments. Future research could examine the distinctions between various governance types and how competitive tensions in technological knowledge and product markets influence governance decisions and their impact on CVC investment.

Studies further discussed funding (Belderbos et al., 2017; Braune et al., 2019) and CG characteristics (Dokko & Gaba, 2012; Anokhin et al., 2016; Sahaym et al., 2015; Brinette et al., 2023; Benkraiem et al., 2020; Ademi et al., 2022) as an enabler of CVC investment.

Studies can discuss the paradox of funding decisions (industry preference, venture quality, corporate size, geographical proximity). Future research could investigate if the paradox is influenced by certain traits of the corporate or entrepreneurial board members (e.g., background in science, business, industry knowledge, previous entrepreneurial experience, and financial limitations). How do compatibility and projected partner synergy facilitate CVC for managing knowledge exchange?

Moreover, existing research discussed the SCSCP and CIH as enablers for the CI process (Shankar & Shepherd, 2018; Mollmann, 2023). Recent studies found that Spin-offs can stimulate collaboration networks and knowledge transfer. Thus, CVC can be characterized as a structured effort for collaboration, SCSCP, and spinoffs, which can stimulate these networks and act as moderators helping in CVC investments, which can be further discussed. Further, there have been few investigations on stability in Asymmetric technology collaboration (ATCs) (Ghazinoory & Aghaei, 2023b). Thus, future studies can consider the evolution of networks as a sequence from their early formation to their maturation and how the CVC network can enable ATC in firms. To study the variations in relationships across different networks and determine the impact of diverse network settings on CVC. Future studies can look into how stakeholders in various innovation networks or ecosystems indirectly affect the corporation's CI process.

5.1.3 Future research directions: Stakeholders Impeding Collaborative Innovation –

The literature examines various impediments in the CI process, including individual factors like NIH and NSH syndromes, challenges from firm-level units, Internal R&D, BU, CIH (Amann et al., 2021; Hill & Birkinshaw, 2012b; Lewis & Smith, 2014; Schad et al., 2016; Lichtenthaler et al., 2011; Smith & Lewis, 2011; Dizdarevic et al., 2024; Kurpuweit & Wagner, 2020; Seran & Bez, 2021; Amann et al., 2022; Gutmann et al., 2023). It is not well understood through empirical testing how NIH and NSH can decrease CI outcomes, and a more in-depth understanding is needed. Specific personality traits contribute to a greater willingness to accept paradoxes at an individual level; dynamic capabilities (the procedures, routines, and abilities that allow leaders of organizations to effectively adapt to constantly changing environments) can do so at an organizational level; it is necessary to examine how this discussion applies to the collaboration between corporations and startups? Subsequent research may explore human characteristics and organizational cultures, including AI and blockchain (Wan et al., 2022; Dizdarevic et al., 2024), influencing the conflicts inherent in collaboration via CVC investments. How much performance paradoxes, which are strategic priorities that reflect opposing needs, either strengthen or lessen organising paradoxes, which are practices that balance control and flexibility, driven by their execution and can address this significant matter that is particularly pertinent to the partnership between corporations and startups due to its inter-organisational nature. Studies can be done to understand the impact of inter-departmental conflicts between various departments involved in CVC investments and the adjunct effect of BU, SCSCP, and CIH to help mitigate NIS and NSH problems. Further, understanding when and why numerous CVC initiatives removed themselves from the parent firm could be improved by examining paradoxical conflicts. What is the effect of the costs related to exploring, retaining, and exploiting knowledge on the tension between exploration and exploitation, and how does CVC use it as a strategic and financial instrument, and the paradoxical dynamics between internal R&D teams and CVC managers? Fernandez et al. (2023) investigated a few stakeholder types, including suppliers, customers, universities, and research institutions. Future research can look into how various other types of secondary stakeholders, other than R&D personnel, such as the media, governments, and regulatory bodies, can affect a focal organisation's innovation development process. Future research might examine the decision-making processes and internal pressures that arise during CI engagement. The dynamics of internal and external stakeholders at the

individual, organizational, and inter-organizational levels of analysis should be thoroughly investigated.

5.1.4 Future directions: CI Outcomes -

Existing discussion on various corporate outcomes utilizing outside sources of innovation (Chesbrough, 2002; Benson & Ziedonis, 2008). Exploration-driven CVC may affect company performance. Moreover, studies have looked into the social impact of the collaboration process through various CE modes. Future studies can explore the impact of exploration and exploitation on firms' engagement in CVC relative to their technological innovation, sustainable innovation, or performance. Moreover, a significant area for future research is to examine the influence of CVC on the acquirer's knowledge base, particularly how it enhances, revitalizes, and expands internal resources and skills and affects various CI performance outcomes. Furthermore, portfolio firms—characterised by stakeholders' experience intensity, experience diversity, and acquisitive experience—enhance capability development and influence innovation performance (Yang et al., 2008). Consequently, research can investigate the combined impact of exploring and exploiting creative prospects alongside experiential learning from portfolio enterprises on other CI performance outcomes. Furthermore, fewer studies have looked into the outcomes of the venture firm with which the corporations invested in for collaborative innovation. Future studies can look into their value creation, legitimacy, innovation and learning related outcomes.

5.2 Theoretical Contributions:

Working together with various stakeholders depends on the requirement of information and knowledge (Ozdemir et al., 2023) that the firm wants to derive from them. How much knowledge a corporation has and how much knowledge it can get from its ties with other firms (Wadhwa et al., 2015) is facilitated by the stakeholders. Stakeholder Theory needs to be fully integrated into the RBV and KBV through research that looks at how different stakeholders, each with a different level of importance, authority, and urgency, might affect an organization's innovation development process.

According to Stakeholder Theory, stakeholders' understanding of the individual, group, firm and market level orientation is important for collaborative innovation. Thus, the study expands the RBV and KBV by incorporating Stakeholder Theory by analysing the motives of multiple stakeholders like startups, spinoffs and spinouts in which the corporation invested and how they affect the corporation's CI outcomes. Our study addresses the theoretical constraints of earlier studies by highlighting how the interests and motives of many stakeholders might impact collaborative innovation creation in the context of CVC. Accessing a variety of external information sources through CVC can enhance the efficiency of resource utilisation in managing diverse stakeholder collaborators. Further, we highlighted the knowledge, ideas and technology transfer process from the venture firms to the corporations. We present our findings' differences from the prior studies and expand our contributions (Appendix Table 2).

This review studies reduce the inconsistency in combining the CVC literature with collaborative innovation literature by integrating the process flow to gain various collaboration outcomes, we highlight the investment approach to be followed while pursuing a particular motive for CVC investment. Further, we expand the scope by developing interlinkages and bringing a new CVC investment approach, such as the degree of operational capabilities, investment location and scope, and the strategic motive of sourcing, assessing, acquiring, seeking, developing, and investigating.

Furthermore, informed by theoretical ideas, we have constructed a conceptual framework based on themes extracted from the Gioia framework by understanding the roles of stakeholders as enablers and barriers in the CI process through CVC investments. Further, we

acknowledge the contribution of Fels, Kronberger, and Gutmann (2021) in understanding the driving elements, which we further studied and found the potential supporting elements in the process. Similarly, we acknowledge Jeon and Maula (2022) in conceptualising the various barriers during CVC investment. We extend the contribution by further levelling the barriers from the stakeholders' perspective, i.e., during CVC investment for the collaboration process at individual, group, firm and market levels.

6. IMPLICATIONS

Implications for Researchers: Our research significantly enhances the understanding of corporate entrepreneurship in multiple aspects. We present a current and thorough analysis of CVC literature, highlighting corporations' motives for CVC investments that result in collaborative innovation and financial, strategic, and venture outcomes. Furthermore, our research contributes to the ongoing discourse initiated by Chesbrough (2024) by emphasizing the linkages between CVC and CI. We established a framework connecting various CVC motives and program investment approaches to outcomes, demonstrating that it improves innovation and financial and strategic outcomes within the enterprise. This paradigm identifies many research gaps, suggesting prospective directions for future investigation. CVC, as a program investment approach, may serve as an intermediary variable and facilitate information flow within the organization. Moreover, this review provides insights into the CVC literature (Gutmann et al., 2023; Huang & Madhavan, 2021; Uzuegbunam et al., 2019; Dushnitsky & Lenox, 2005).

Implications for practice: This review primarily concentrated on practitioner-related factors, highlighting several pertinent topics with consequences. The review offers practitioners essential reasons to embrace CVC investment to facilitate CI within the organization. CVC-related investments stimulate ecosystem enrichment, foster partnership and synergy growth, and enhance organizational flexibility, accelerating information transfers inside the enterprise. Moreover, it is advantageous for companies to implement CVC procedures, leading to excellent organizational performance. The choice of CVC mode over alternative ECV choices may vary according to the required level of integration and the firm's particular needs. Using CVC, the firm does not lose its IP and other important information to outsiders. Further, the startup firm will benefit through this activity by reducing various costs related to knowledge and technology search. It does not end with solving the motives for doing CVC by the corporate firms; the mid-level or the SMEs can also benefit from this activity, as it improves both their innovation, financial, and strategic outcomes. This paper aims to inform practitioners of the significance of CVC investments in potential startups, spinoffs, and spinouts and to consider the enablers and outcomes of the process.

6. IMPLICATIONS FOR RESEARCHERS AND PRACTITIONERS:

Our research significantly enhances the understanding of corporate entrepreneurship in multiple aspects by highlighting corporations' strategic motives for CVC investments that result in collaborative innovation outcomes. Furthermore, our research contributes to the ongoing discourse initiated by Chesbrough (2024) by emphasizing the linkages between CVC and CI. We established a framework connecting various CVC motives and program investment approaches to outcomes, demonstrating the role of various levels of stakeholders. This paradigm identifies many research gaps, suggesting prospective directions for future investigation. Moreover, this review primarily concentrated on practitioner-related factors, highlighting several pertinent topics with consequences. The review offers practitioners essential reasons to embrace CVC investment to facilitate CI within the organization. CVC-related investments stimulate ecosystem enrichment, foster partnership and synergy growth, and enhance organizational flexibility, accelerating information transfers inside the

enterprise. Moreover, it is advantageous for companies to implement CVC procedures, leading to excellent organizational performance. The choice of CVC mode over alternative ECV choices may vary according to the required level of integration and the firm's particular needs. Using CVC, the firm does not lose its IP and other important information to outsiders. Further, the startup firm will benefit through this activity by reducing various costs related to knowledge and technology search. It does not end with solving the motives for doing CVC by the corporate firms; the mid-level or the SMEs can also benefit from this activity, as it improves both their innovation, financial, and strategic outcomes. This paper aims to inform practitioners of the significance of CVC investments in potential startups, spinoffs, and spinouts and to consider the enablers and outcomes of the process.

7. LIMITATIONS

A limitation may arise from selection bias. To mitigate selection bias, we examined papers from two distinct databases and established thresholds based on journal quality. There has been increasing research on CVC in recent years. Thus, we ensured that this literature evaluation included a comprehensive array of studies by integrating all relevant research published in peer-reviewed journals. Nonetheless, it is crucial to acknowledge that this review possesses specific limitations. While this review utilized Scopus and Web of Science, some publications may have been overlooked due to the different data extraction methods and restrictions to the English language. It is worth noting that other search engines are available, and including additional papers may yield further relevant results for future studies to explore. We endeavoured to address the deficiencies by incorporating papers using snowballing and manual searches to present a thorough overview of the current research landscape on CVC. Although our analysis has investigated the motives, enablers, barriers, and outcomes, other research may evaluate further factors of the studies.

8. CONCLUSION

Extant research documents that CVC has gained significant traction over the years (Ogink et al., 2023; Demir & Lukes, 2024), but only a few studies have looked into an integrated model representing the in-depth strategic motives, investment approaches, collaboration process and outcomes of CVC investments which must be comprehended within one framework (Ogink et al., 2023). Moreover, none of the review papers have looked at the angle of stakeholders' role in improving or impeding the collaboration process. Thus, the paper depicts the need for corporate firms to adopt the CVC mode over other CE modes for the CI process. The study integrates fragmented findings by developing a process framework through a novel integration of CVC and CI. Moreover, it extends the RBV and KBV theory by including stakeholder theory in the context of CVC for CI. Thus, our study contributes to gaining insights into how the strategic motives design the investment approaches for collaboration, leading to knowledge or learning creation. Further, various individual, group, firm and market level stakeholders enable better knowledge exchange or sourcing process, which is highlighted in the study. Enhancing enabling factors and reducing the barriers leads to an enhancement in knowledge and learning creation required for CI. This study will stimulate future research to create hypotheses and broaden the understanding within the CVC literature domain.

REFERENCES:

Ademi, P., Schuhmacher, M. C., & Zacharakis, A. L. (2022). Evaluating Affordance-Based Opportunities: a conjoint experiment of corporate venture capital managers' Decision-

Making. *Entrepreneurship Theory and Practice*, 47(6), 2293–2322. <https://doi.org/10.1177/10422587221134788>

Agarwal, R., Audretsch, D., & Sarkar, M. B. (2007). The process of creative construction: knowledge spillovers, entrepreneurship, and economic growth. *Strategic Entrepreneurship Journal*, 1(3–4), 263–286. <https://doi.org/10.1002/sej.36>

Albats, E., Alexander, A., Mahdad, M., Miller, K., & Post, G. (2019). Stakeholder management in SME open innovation: interdependences and strategic actions. *Journal of Business Research*, 119, 291–301. <https://doi.org/10.1016/j.jbusres.2019.07.038>

Amann, M., Granström, G., Frishammar, J., & Elfsberg, J. (2021). Mitigating not-invented-here and not-sold-here problems: The role of corporate innovation hubs. *Technovation*, 111, 102377. <https://doi.org/10.1016/j.technovation.2021.102377>

Anokhin, S. A., Hess, M., & Wincent, J. (2024). Technology sourcing ambidexterity in corporate venture capital: limitations of learning from open innovation. *Small Business Economics*. <https://doi.org/10.1007/s11187-024-00900-8>

Anokhin, S., Örtqvist, D., Thorgren, S., & Wincent, J. (2011). Corporate Venturing Deal Syndication and Innovation: the Information Exchange Paradox. *Long Range Planning*, 44(2), 134–151. <https://doi.org/10.1016/j.lrp.2010.12.005>

Anokhin, S., Peck, S., & Wincent, J. (2016). Corporate venture capital: The role of governance factors. *Journal of Business Research*, 69(11), 4744–4749. <https://doi.org/10.1016/j.jbusres.2016.04.024>

Aquilani, B., Abbate, T., & Codini, A. (2017). Overcoming cultural barriers in open innovation processes through intermediaries: a theoretical framework. *Knowledge Management Research & Practice*, 15(3), 447–459. <https://doi.org/10.1057/s41275-017-0067-5>

Balachandran, S., & Eklund, J. (2023). The impact of partner organizational structure on innovation. *Administrative Science Quarterly*, 69(1), 80–130. <https://doi.org/10.1177/00018392231212680>

Becker, B., & Gassmann, O. (2006). Gaining leverage effects from knowledge modes within corporate incubators. *R and D Management*, 36(1), 1–16. <https://doi.org/10.1111/j.1467-9310.2005.00411.x>

Belderbos, R., Jacob, J., & Lokshin, B. (2017). Corporate venture capital (CVC) investments and technological performance: Geographic diversity and the interplay with technology alliances. *Journal of Business Venturing*, 33(1), 20–34. <https://doi.org/10.1016/j.jbusvent.2017.10.003>

Bendig, D., Kleine-Stegemann, L., Schulz, C., & Eckardt, D. (2022). The effect of green startup investments on incumbents' green innovation output. *Journal of Cleaner Production*, 376, 134316. <https://doi.org/10.1016/j.jclepro.2022.134316>

Benkraiem, R., Boubaker, S., Brinette, S., & Khemiri, S. (2020). Board feminization and innovation through corporate venture capital investments: The moderating effects of independence and management skills. *Technological Forecasting and Social Change*, 163, 120467. <https://doi.org/10.1016/j.techfore.2020.120467>

- Benson, D., & Ziedonis, R. H. (2008). Corporate Venture capital as a window on new technologies: Implications for the performance of corporate investors when acquiring startups. *Organization Science*, 20(2), 329–351. <https://doi.org/10.1287/orsc.1080.0386>
- Braune, E., Lantz, J., Sahut, J., & Teulon, F. (2019). Corporate venture capital in the IT sector and relationships in VC syndication networks. *Small Business Economics*, 56(3), 1221–1233. <https://doi.org/10.1007/s11187-019-00264-4>
- Brinette, S., Benkraiem, R., & Khemiri, S. (2023). Does directors' educational background influence financing innovation through corporate venture capital investments? Evidence from France. *Finance Research Letters*, 60, 104905. <https://doi.org/10.1016/j.frl.2023.104905>
- Brinkmann, F., & Kanbach, D. K. (2023). Lifespans of corporate and independent venture capitalists: a systematic review. *Venture Capital*, 25(4), 351–383.
- Bugl, B., & Kanbach, D. K. (2022). Non-financial value creation in corporate venture capital: a systematic review of empirical studies. *International journal of entrepreneurial venturing*, 14(2), 230–276.
- Cabral, J. J., Francis, B. B., & Kumar, M. V. S. (2020). The impact of managerial job security on corporate entrepreneurship: Evidence from corporate venture capital programs. *Strategic Entrepreneurship Journal*, 15(1), 28–48. <https://doi.org/10.1002/sej.1357>
- Cassiman, B., & Veugelers, R. (2006). In Search of Complementarity in Innovation Strategy: Internal R&D and External Knowledge Acquisition. *Management Science*, 52(1), 68–82. <https://doi.org/10.1287/mnsc.1050.0470>
- CB Insights (2024) State of CVC 2024 report (accessed as on January, 2025) <https://www.cbinsights.com/research/report/corporate-venture-capital-trends-2024/>
- Ceccagnoli, M., Higgins, M. J., & Kang, H. D. (2018). Corporate venture capital as a real option in the markets for technology. *Strategic Management Journal*, 39(13), 3355–3381. <https://doi.org/10.1002/smj.2950>
- Chesbrough, H. W. (2002). Making sense of corporate venture capital. *PubMed*, 80(3), 90–99, 133. <https://pubmed.ncbi.nlm.nih.gov/11894386>
- Chesbrough, H. (2019). *Open innovation results: going beyond the hype and getting down to business*. <https://dx.doi.org/10.1093/oso/9780198841906.001.0001>
- Chesbrough, H. (2024). Twenty years of open innovation. *MIT Sloan Management Review*, 65(2), 1–3.
- Colombo, M. G., & Murtinu, S. (2016). Venture capital investments in Europe and portfolio firms' economic performance: independent versus corporate investors. *Journal of Economics & Management Strategy*, 26(1), 35–66. <https://doi.org/10.1111/jems.12170>
- Corsino, M., Mariani, M., & Torrisi, S. (2019). Firm strategic behavior and the measurement of knowledge flows with patent citations. *Strategic Management Journal*, 40(7), 1040–1069. <https://doi.org/10.1002/smj.3016>
- De Clercq, D., Fried, V. H., Lehtonen, O., & Sapienza, H. J. (2006). An Entrepreneur's Guide to the Venture Capital Galaxy. *Academy of Management Perspectives*, 20(3), 90–112. <https://doi.org/10.5465/amp.2006.21903483>

Demir, F., & Lukes, M. (2024). Corporate-startup collaboration: a managerial decision-making framework based on a systematic literature review. *Review of Managerial Science*. <https://doi.org/10.1007/s11846-024-00818-1>

Di Lorenzo, F., & Van De Vrande, V. (2018). Tapping into the knowledge of incumbents: The role of corporate venture capital investments and inventor mobility. *Strategic Entrepreneurship Journal*, 13(1), 24–46. <https://doi.org/10.1002/sej.1304>

Dizdarevic, A., van de Vrande, V., & Jansen, J. (2024). When opposites attract: a review and synthesis of corporate-startup collaboration. *Industry and Innovation*, 31(5), 544–578.

Dokko, G., & Gaba, V. (2012). Venturing into new territory: Career experiences of corporate venture capital managers and practice variation. *Academy of Management Journal*, 55(3), 563–583. <https://doi.org/10.5465/amj.2009.0909>

Dushnitsky, G., & Shaver, J. M. (2009). Limitations to interorganizational knowledge acquisition: the paradox of corporate venture capital. *Strategic Management Journal*, 30(10), 1045–1064. <https://doi.org/10.1002/smj.781>

Dushnitsky, G., & Lenox, M. J. (2005). When does corporate venture capital investment create firm value? *Journal of Business Venturing*, 21(6), 753–772. <https://doi.org/10.1016/j.jbusvent.2005.04.012>

Dushnitsky, G., & Shapira, Z. (2010). Entrepreneurial finance meets organizational reality: comparing investment practices and performance of corporate and independent venture capitalists. *Strategic Management Journal*, 31(9), 990–1017. <https://doi.org/10.1002/smj.851>

Enkel, E., & Sagmeister, V. (2020). External corporate venturing modes as new way to develop dynamic capabilities. *Technovation*, 96–97, 102128. <https://doi.org/10.1016/j.technovation.2020.102128>

Fecher, F., Winding, J., Hutter, K., & Füller, J. (2018). Innovation labs from a participants' perspective. *Journal of Business Research*, 110, 567–576. <https://doi.org/10.1016/j.jbusres.2018.05.039>

Fels G., Kronberger M., Gutmann T. (2021). Revealing the underlying drivers of CVC performance—A literature review and research agenda. *Venture Capital*, 23(1), 67–109. <https://doi.org/10.1080/13691066.2021>

Flor, M. L., Oltra-Mestre, M. J., & Sanjurjo, E. L. (2019). An analysis of open innovation strategies in firms in low and medium technology industries. *IEEE Transactions on Engineering Management*, 68(3), 853–867. <https://doi.org/10.1109/tem.2019.2911253>

Frey, P., & Kanbach, D. K. (2023). Design dimensions of corporate venture capital programs—a systematic literature review. *Management Review Quarterly*. <https://doi.org/10.1007/s11301-023-00372-2>

Ghazinoory, S., & Aghaei, P. (2023b). Key success factors for stability of asymmetric technological collaborations: a bionic engineering approach. *Journal of Business and Industrial Marketing*, 39(6), 1209–1225. <https://doi.org/10.1108/jbim-06-2023-0362>

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Seeking qualitative rigor in inductive research. *Organizational Research Methods*, 16(1), 15–31. <https://doi.org/10.1177/1094428112452151>

- Gomes-Casseres, B., Hagedoorn, J., & Jaffe, A. B. (2006). Do alliances promote knowledge flows? *Journal of Financial Economics*, 80(1), 5–33.
- Gutmann, T., Chochoiek, C., & Chesbrough, H. (2023). Extending Open Innovation: Orchestrating Knowledge Flows from Corporate Venture Capital Investments. *California Management Review*, 65(2), 45–70. <https://doi.org/10.1177/00081256221147342>
- Hallen, B. L., Katila, R., & Rosenberger, J. D. (2013). How do social defenses work? A Resource-Dependence lens on technology ventures, venture capital investors, and corporate relationships. *Academy of Management Journal*, 57(4), 1078–1101. <https://doi.org/10.5465/amj.2012.0003>
- Hill, S. A., & Birkinshaw, J. (2012b). Ambidexterity and survival in corporate venture units. *Journal of Management*, 40(7), 1899–1931. <https://doi.org/10.1177/0149206312445925>
- Huang, P., & Madhavan, R. (2020). Dumb money or smart money? Meta-analytically unpacking corporate venture capital. *Strategic Entrepreneurship Journal*, 15(3), 403–429. <https://doi.org/10.1002/sej.1369>
- Huggins, R., & Thompson, P. (2015). Local entrepreneurial resilience and culture: the role of social values in fostering economic recovery. *Cambridge Journal of Regions Economy and Society*, 8(2), 313–330. <https://doi.org/10.1093/cjres/rsu035>
- Igartua, J. I., Garrigós, J. A., & Hervas-Oliver, J. L. (2010). How innovation management techniques support an open innovation Strategy. *Research-Technology Management*, 53(3), 41–52. <https://doi.org/10.1080/08956308.2010.11657630>
- Jeon, E., & Maula, M. (2022). Progress toward understanding tensions in corporate venture capital: A systematic review. *Journal of Business Venturing*, 37(4), 106226.
- Keil, T. (2004). Building external corporate venturing capability*. *Journal of Management Studies*, 41(5), 799–825. <https://doi.org/10.1111/j.1467-6486.2004.00454.x>
- Keil, T., Maula, M., Schildt, H., & Zahra, S. A. (2008). The effect of governance modes and relatedness of external business development activities on innovative performance. *Strategic Management Journal*, 29(8), 895–907. <https://doi.org/10.1002/smj.672>
- Kerr, J., & Coviello, N. (2019). Formation and constitution of effectual networks: A systematic review and synthesis. *International journal of management reviews*, 21(3), 370–397.
- Ketchen, D. J., Ireland, R. D., & Snow, C. C. (2007). Strategic entrepreneurship, collaborative innovation, and wealth creation. *Strategic Entrepreneurship Journal*, 1(3–4), 371–385. <https://doi.org/10.1002/sej.20>
- Kim, K., Gopal, A., & Hoberg, G. (2016). Does Product Market Competition Drive CVC Investment? Evidence from the U.S. IT Industry. *Information Systems Research*, 27(2), 259–281. <https://doi.org/10.1287/isre.2016.0620>
- Kolte, A., Festa, G., Ciampi, F., Meissner, D., & Rossi, M. (2023). Exploring corporate venture capital investments in clean energy—a focus on the Asia-Pacific region. *Applied Energy*, 334, 120677. <https://doi.org/10.1016/j.apenergy.2023.120677>

- Kurpjuweit, S., & Wagner, S. M. (2020). Startup Supplier Programs: A new model for managing Corporate-Startup partnerships. *California Management Review*, 62(3), 64–85. <https://doi.org/10.1177/0008125620914995>
- Lee, S. U., Park, G., & Kang, J. (2018). The double-edged effects of the corporate venture capital unit's structural autonomy on corporate investors' explorative and exploitative innovation. *Journal of Business Research*, 88, 141–149. <https://doi.org/10.1016/j.jbusres.2018.01.049>
- Lewis, M. W., & Smith, W. K. (2014). Paradox as a metatheoretical perspective. *The Journal of Applied Behavioral Science*, 50(2), 127–149. <https://doi.org/10.1177/0021886314522322>
- Lichtenthaler, U. (2011). Open Innovation: past research, current debates, and future directions. *Academy of Management Perspectives*, 25(1), 75–93. <https://doi.org/10.5465/amp.2011.59198451>
- Limaj, E., & Bernroider, E. W. (2017). The roles of absorptive capacity and cultural balance for exploratory and exploitative innovation in SMEs. *Journal of Business Research*, 94, 137–153. <https://doi.org/10.1016/j.jbusres.2017.10.052>
- Lingens, B., Böger, M., & Gassmann, O. (2021). Even a small conductor can lead a large orchestra: How Startups Orchestrate ecosystems. *California Management Review*, 63(3), 118–143. <https://doi.org/10.1177/00081256211005497>
- Longo, M. C., & Giaccone, S. C. (2017). Struggling with agency problems in open innovation ecosystem: corporate policies in innovation hub. *The TQM Journal*, 29(6), 881–898. <https://doi.org/10.1108/tqm-02-2017-0020>
- Lu, J., & Li, Y. (2023). How does corporate venture capital enhance incumbents' innovation? Evidence from China. *Pacific-Basin Finance Journal*, 83, 102243. <https://doi.org/10.1016/j.pacfin.2023.102243>
- Ma, S. (2019). The life cycle of corporate venture capital. *Review of Financial Studies*, 33(1), 358–394. <https://doi.org/10.1093/rfs/hhz042>
- Maula, M. V., Autio, E., & Murray, G. C. (2009). Corporate venture capital and the balance of risks and rewards for portfolio companies. *Journal of Business Venturing*, 24(3), 274–286. <https://doi.org/10.1016/j.jbusvent.2008.10.012>
- Maula, M. V. J., Keil, T., & Zahra, S. A. (2012). Top management's attention to discontinuous technological change: corporate venture capital as an alert mechanism. *Organization Science*, 24(3), 926–947. <https://doi.org/10.1287/orsc.1120.0775>
- Möllmann, J. (2022). More than a handshake – knowledge transfer in structured corporate–startup collaboration programs. *Journal of Knowledge Management*, 27(10), 2604–2624. <https://doi.org/10.1108/jkm-03-2022-0222>
- Moore, C., & Gino, F. (2015). Approach, ability, aftermath: A psychological process framework of unethical behavior at work. *Academy of Management Annals*, 9(1), 235–289. <https://doi.org/10.5465/19416520.2015.1011522>
- Oumlil, R., & Juiz, C. (2016). An up-to-date survey in Barriers to Open Innovation. *Journal of Technology Management & Innovation*, 11(3), 137–152. <https://doi.org/10.4067/s0718-27242016000300016>

- Ozorhon, B., Arditi, D., Dikmen, I., & Birgonul, M. T. (2007). Effect of partner fit in international construction joint ventures. *Journal of Management in Engineering*, 24(1), 12–20. [https://doi.org/10.1061/\(asce\)0742-597x\(2008\)24:1\(12](https://doi.org/10.1061/(asce)0742-597x(2008)24:1(12)
- Napp, J. J., & Minshall, T. (2011). Corporate Venture Capital Investments for Enhancing Innovation: Challenges and Solutions. *Research-Technology Management*, 54(2), 27–36. <https://doi.org/10.5437/08953608x5402004>
- Narayanan, V. K., Yang, Y., & Zahra, S. A. (2009). Corporate venturing and value creation: A review and proposed framework. *Research policy*, 38(1), 58-76.
- Ogink, R. H., Goossen, M. C., Romme, A. G. L., & Akkermans, H. (2023). Mechanisms in open innovation: A review and synthesis of the literature. *Technovation*, 119, 102621.
- Ozdemir, S., De Arroyabe, J. C. F., Sena, V., & Gupta, S. (2023). Stakeholder diversity and collaborative innovation: Integrating the resource-based view with stakeholder theory. *Journal of Business Research*, 164, 113955. <https://doi.org/10.1016/j.jbusres.2023.113955>
- Phan, P. H., Wright, M., Ucbasaran, D., & Tan, W. (2009). Corporate entrepreneurship: Current research and future directions. *Journal of Business Venturing*, 24(3), 197–205. <https://doi.org/10.1016/j.jbusvent.2009.01.007>
- Runge, S., Schwens, C., & Schulz, M. (2021). The invention performance implications of coopetition: How technological, geographical, and product market overlaps shape learning and competitive tension in R&D alliances. *Strategic Management Journal*, 43(2), 266–294. <https://doi.org/10.1002/smj.3334>
- Sahaym, A., Cho, S. Y., Kim, S. K., & Mousa, F. (2015). Mixed blessings: How top management team heterogeneity and governance structure influence the use of corporate venture capital by post-IPO firms. *Journal of Business Research*, 69(3), 1208–1218. <https://doi.org/10.1016/j.jbusres.2015.09.012>
- Schad, J., Lewis, M. W., Raisch, S., & Smith, W. K. (2016). Paradox Research in management Science: Looking back to move forward. *Academy of Management Annals*, 10(1), 5–64. <https://doi.org/10.5465/19416520.2016.1162422>
- Schildt, H. A., Maula, M. V., & Keil, T. (2005). Explorative and Exploitative Learning from External Corporate Ventures. *Entrepreneurship Theory and Practice*, 29(4), 493–515. <https://doi.org/10.1111/j.1540-6520.2005.00095.x>
- Schuh, G., Lau, F., Zimmermann, R., & Vogt, F. (2017). Configuration options for corporate incubators: Development of a description model using the morphological analysis method. *2022 Portland International Conference on Management of Engineering and Technology (PICMET)*, 1–10. <https://doi.org/10.23919/picmet.2017.8125319>
- Seran, T., & Bez, S. M. (2020). Open Innovation's "Multiunit Back-End Problem": How corporations can overcome business unit rivalry. *California Management Review*, 63(2), 135–157. <https://doi.org/10.1177/0008125620968609>
- Shankar, R. K., & Shepherd, D. A. (2018). Accelerating strategic fit or venture emergence: Different paths adopted by corporate accelerators. *Journal of Business Venturing*, 34(5), 105886. <https://doi.org/10.1016/j.jbusvent.2018.06.004>

Shuwaikh, F., & Dubocage, E. (2022). Access to the corporate investors' complementary resources: A leverage for innovation in biotech venture capital-backed companies. *Technological Forecasting and Social Change*, 175, 121374.

Smith, W. K., & Lewis, M. W. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of management Review*, 36(2), 381-403.

Thorgren, S., Wincent, J., & Örtqvist, D. (2011). Unleashing synergies in strategic networks of SMEs: The influence of partner fit on corporate entrepreneurship. *International Small Business Journal Researching Entrepreneurship*, 30(5), 453–471. <https://doi.org/10.1177/0266242610375292>

Titus, V., House, J. M., & Covin, J. G. (2014). The influence of exploration on external corporate venturing activity. *Journal of Management*, 43(5), 1609–1630. <https://doi.org/10.1177/0149206314562426>

Titus, V., Parker, O., & Covin, J. (2019). Organizational aspirations and external venturing: the contingency of entrepreneurial orientation. *Entrepreneurship Theory and Practice*, 44(4), 645–670. <https://doi.org/10.1177/1042258719838473>

Tong, T. W., & Li, Y. (2010). Real Options and Investment Mode: Evidence from Corporate Venture Capital and Acquisition. *Organization Science*, 22(3), 659–674. <https://doi.org/10.1287/orsc.1100.0551>

Uzuegbunam, I., Ofem, B., & Nambisan, S. (2017). Do corporate investors affect entrepreneurs' IP portfolio? Entrepreneurial finance and intellectual property in new firms. *Entrepreneurship Theory and Practice*, 43(4), 673–696. <https://doi.org/10.1177/1042258717738247>

Van De Vrande, V., De Jong, J. P., Vanhaverbeke, W., & De Rochemont, M. (2008). Open innovation in SMEs: Trends, motives and management challenges. *Technovation*, 29(6–7), 423–437. <https://doi.org/10.1016/j.technovation.2008.10.001>

Van De Vrande, V., Vanhaverbeke, W., & Duysters, G. (2011). Additivity and complementarity in external technology sourcing: The added value of corporate venture capital investments. *IEEE Transactions on Engineering Management*, 58(3), 483–496. <https://doi.org/10.1109/tem.2010.2091134>

Veer, T., Yang, P., & Riepe, J. (2022b). Ventures' conscious knowledge transfer to close partners, and beyond: A framework of performance, complementarity, knowledge disclosure, and knowledge broadcasting. *Journal of Business Venturing*, 37(3), 106191. <https://doi.org/10.1016/j.jbusvent.2022.106191>

Wadhwa, A., & Kotha, S. (2006). Knowledge Creation Through External Venturing: Evidence from the Telecommunications Equipment Manufacturing Industry. *Academy of Management Journal*, 49(4), 819–835. <https://doi.org/10.5465/amj.2006.22083132>

Wadhwa, A., Phelps, C., & Kotha, S. (2015). Corporate venture capital portfolios and firm innovation. *Journal of Business Venturing*, 31(1), 95–112. <https://doi.org/10.1016/j.jbusvent.2015.04.006>

Wan, L., Li, R., & Chen, Y. (2021). Negative performance feedback and corporate venture capital: The moderating effect of CEO overconfidence. *Applied Economics*, 54(16), 1829–1843. <https://doi.org/10.1080/00036846.2021.1982133>

- Wang, C., & Hu, Q. (2017). Knowledge sharing in supply chain networks: Effects of collaborative innovation activities and capability on innovation performance. *Technovation*, 94–95, 102010. <https://doi.org/10.1016/j.technovation.2017.12.002>
- Wang, T. (2023). The ownership structure of corporate venture capital financing and innovation. *Technovation*, 123, 102736. <https://doi.org/10.1016/j.technovation.2023.102736>
- Weber, C., & Weber, B. (2005). Corporate venture capital organizations in Germany. *Venture Capital*, 7(1), 51–73. <https://doi.org/10.1080/1369106042000316350>
- Weiblen, T., & Chesbrough, H. W. (2015). Engaging with Startups to Enhance Corporate Innovation. *California Management Review*, 57(2), 66–90. <https://doi.org/10.1525/cmr.2015.57.2.66>
- World Economic Forum, (2018) assessed as on 2nd January 2025, <https://www.weforum.org/meetings/world-economic-forum-annual-meeting-2018/>
- Yang, Y., Narayanan, V., & Zahra, S. (2008). Developing the selection and valuation capabilities through learning: The case of corporate venture capital. *Journal of Business Venturing*, 24(3), 261–273. <https://doi.org/10.1016/j.jbusvent.2008.05.001>
- Zahra, S. A., & Hayton, J. C. (2007). The effect of international venturing on firm performance: The moderating influence of absorptive capacity. *Journal of Business Venturing*, 23(2), 195–220. <https://doi.org/10.1016/j.jbusvent.2007.01.001>
- Zhang, Y. (2021). Corporate venture capital and firm scope. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3862627>
- Z. J. Acs, D. B. Audretsch, P. Braunerhjelm, and B. Carlsson, “The missing link: The knowledge filter and entrepreneurship in endogenous growth,” in Proc. Centre Econ. Policy Res., London, U.K., 2004, pp. 1–37.

FIGURES:

Methodology Framework

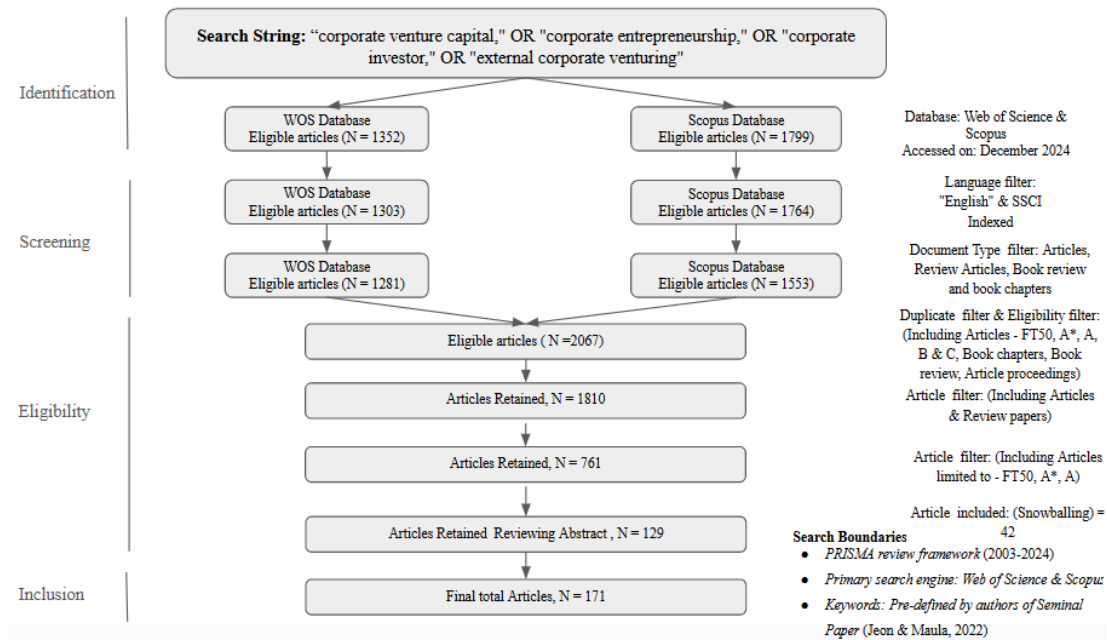


Figure 1 shows the PRISMA methodology framework of the search articles from Scopus and Web of Science (2003- 2024) comprising 129 articles after filtering language and document type and after matching eligibility criteria, further adding 42 articles through forward and backwards snowballing articulating 171 articles.

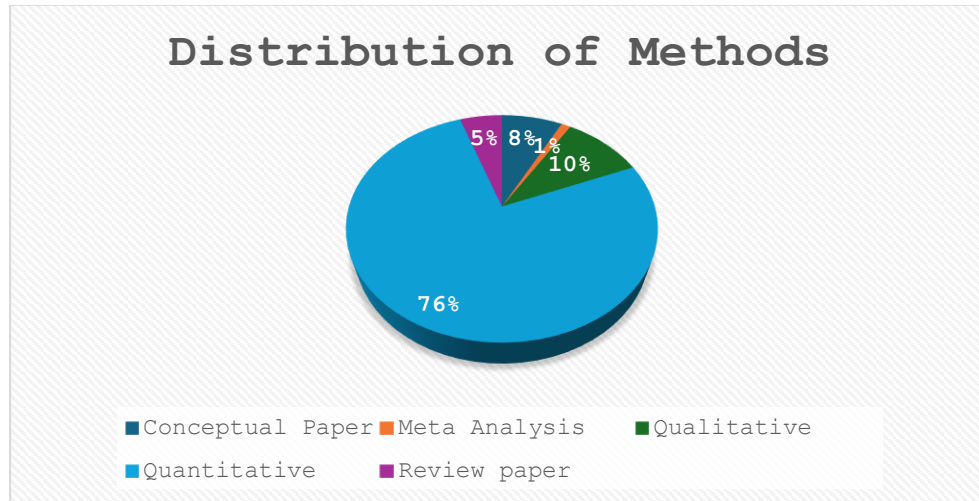


Figure 2: Distribution of methods used in our 171 reviewed articles, comprising quantitative, qualitative, review paper, conceptual paper, and meta-analysis papers.

TABLES:

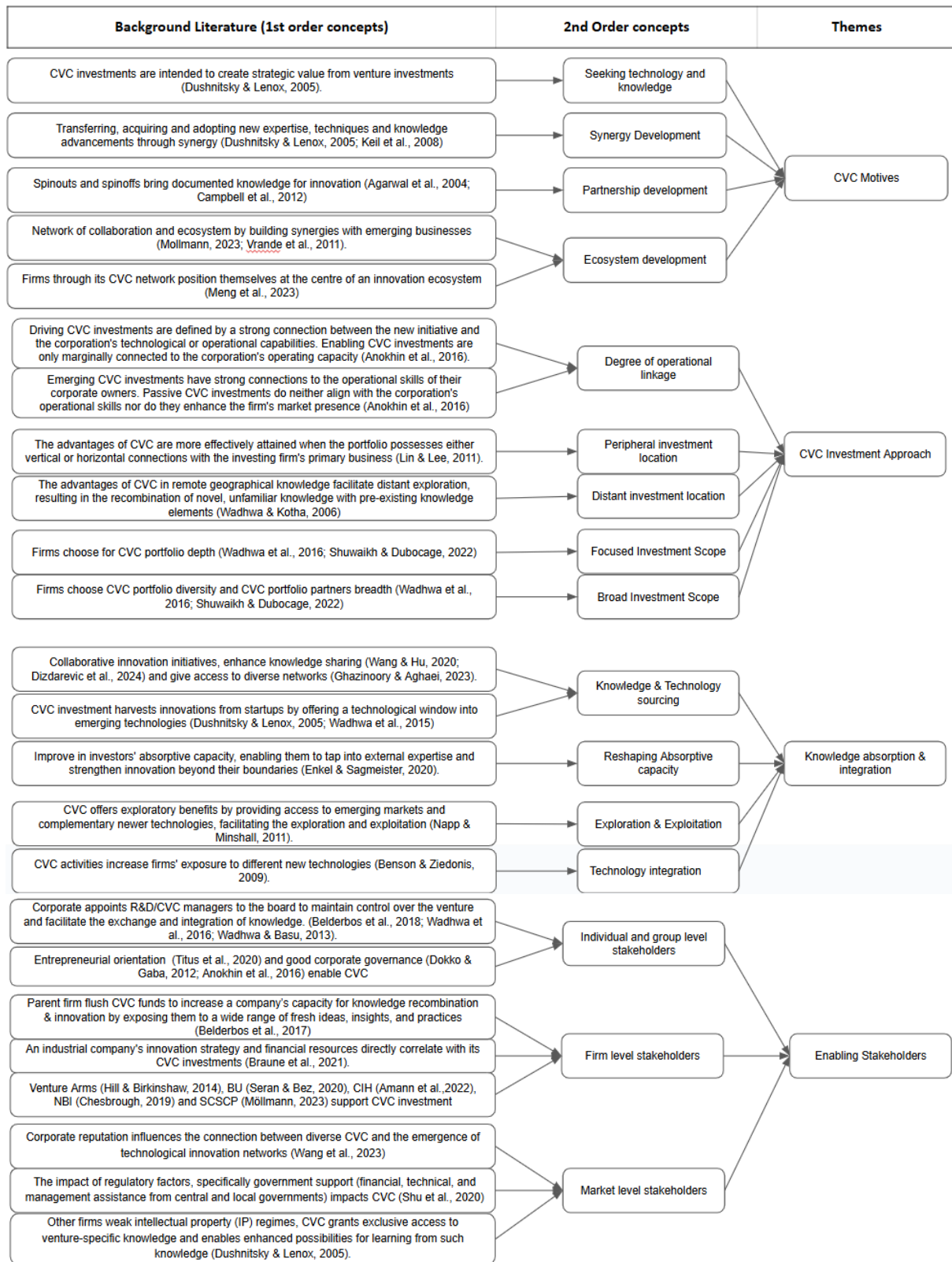
Journals Names	2003-2005	2006-2008	2009-2011	2012-2014	2015-2017	2018-2020	2021-2024	Total Count
Journal of Business Venturing	1	5	5		4		5	20
Strategic Entrepreneurship Journal			2	2	1	4	3	12

Strategic Management Journal	1	3	2	1	3		1	11
Journal of Business Research					4	1	5	10
Entrepreneurship Theory and Practice	2			1	1	3	3	10
Academy of Management Journal		1	2			2	1	6
Organization Science		2	1	1	1	1		6
Journal of Management				1	3	1		5
Journal of Product Innovation Management			1	2			2	5
Journal of Small Business Management				1	1	2	1	5
Research Policy	2			1			2	5
Technological Forecasting and Social Change	1				1	1	2	5
Technovation						3	2	5
Administrative Science Quarterly				1	1		2	4
California Management Review				1		2	1	4
Finance Research Letters						1	3	4
Small Business Economics				1		1	2	4
IEEE Transactions on Engineering Management			1			1	1	3
Journal of Management Studies	1	2						3
Research-Technology Management			2			1		3
Information Systems Research					2			2
Journal of Banking & Finance							2	2
Journal of Business Venturing Insights					1		1	2
Long Range Planning			1				1	2
Other Journals						1		33
Grand Total	8	15	18	13	28	32	57	171

Table 1: 171 List of Peer-reviewed journal articles taken in the systematic literature review study from 2003-2024.

APPENDIX:

FIGURES:



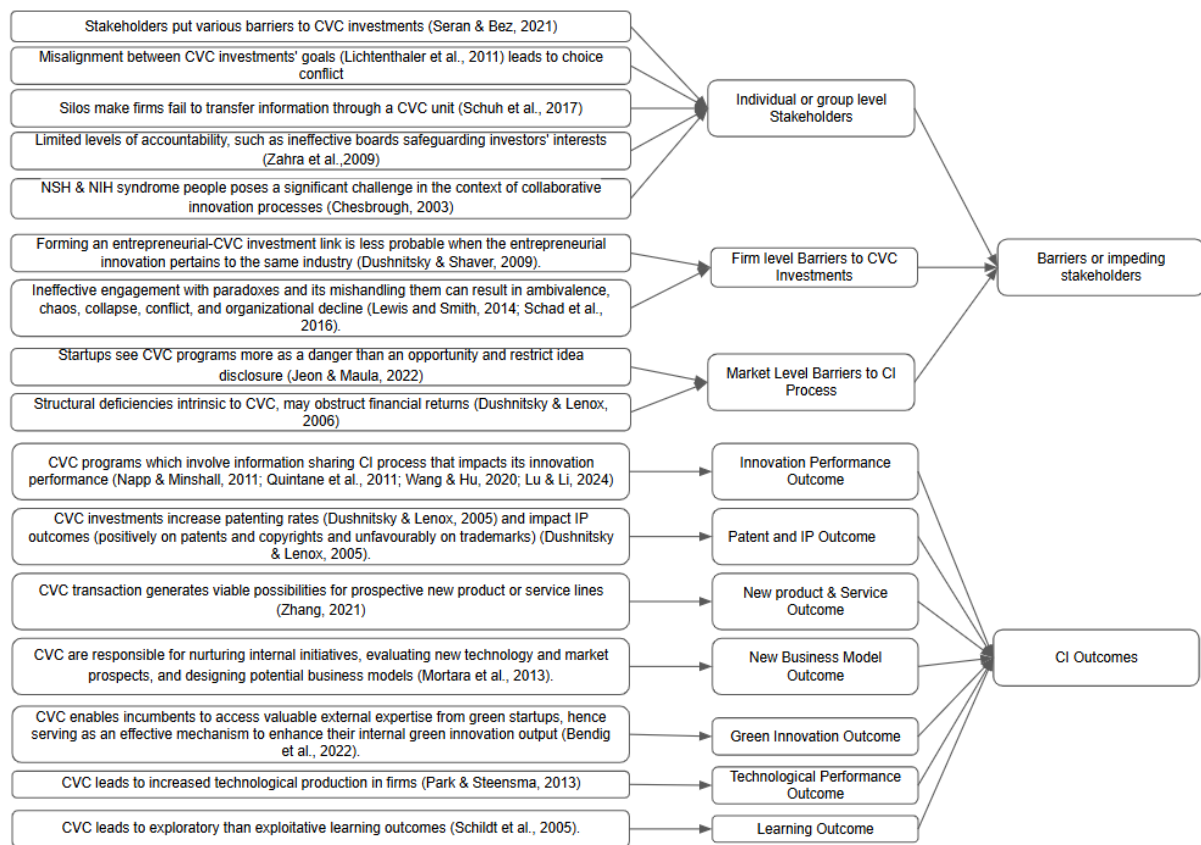


Figure 1: Thematic analysis using the Gioia method, various themes generated using background literature

Table 2: Theoretical contribution and the previous review studies.

Topic explored	Prior Literature Review Studies	Existing Literature Contributions	Gaps in Existing Reviews	Contribution of Our Review Study
CVC Objectives and dimensions for collaborative outcomes	(Dushnitsky, 2008; Narayanan, Yang & Zahra, 2009; Phan, Wright, Ucbasaran & Tan, 2009; Pinkow & Iversen, 2020; Urbano, Turro, Wright & Zahra, 2022; Frey & Kanbach, 2023; Brinkmann & Kanbach, 2023; Dall, Terzidis & Krooß, 2024)	Research examines the strategic function of Corporate Venture Capital (CVC) in general, the configuration of CVC units based on their aims, the enhancement, supplementation, and expansion of these objectives, and the significance of organizational structures—literature review on the dimensions of Time Horizon,	Insufficient comprehension of the whole strategy rationale and advantages, such as resource allocation, consultation, technology dissemination, knowledge commercialization, outcome improvement, and the significance of geographic	The study argues the strategic motive of CVC investment in depth, connecting it with the new dimension of the CVC investment approach in terms of operational linkage, investment location, and approach.

		Relatedness, and Development Stage. Furthermore, it is categorized into CV strategy, organizational profile, and venture focus.	proximity to portfolio companies on diverse success rates.	
Intrinsic and extrinsic CVC enabling for collaborative innovation	(Dushnitsky, 2008; Narayanan, Yang & Zahra, 2009; Rohm, 2018; Fels, Kronberger & Gutmann, 2021; Brinkmann & Kanbach, 2023)	Studies centred around the national and organizational contexts, technological ferment and active financial markets, Size, culture, portfolio composition, corporate knowledge, organizational relationship, management roles and characteristics, technological capabilities, legal regimes, capital markets, and competition levels at firm-level and industry-level enablers for developing and stimulating CVC.	A limited understanding of the various investment behaviours helps to originate CVC, neglecting the role of corporate governance (board) influence on investment decisions, their composition and outside directors, human capital, compensation, and risk-bearing on new ventures and spinoffs. Further creation of evergreen funds, portfolio diversity and corporate/startup-relatedness leading to CVC investment and collaboration.	Extending the previous literature by discussing enablers like intellectual capital (experience, knowledge, and networks). Delving with a clear picture of portfolio diversity and relatedness and how management and investment decision impacts CVC investments.

Barriers in the CVC investment and collaboration stages	(Wright Robbie, 1998; Jeon & Maula, 2022)	Challenges categorized as industry/market and firm-level issues, using paradox lens to examine the exploration vs exploitation tensions, managing or coping with the paradoxical tensions, categorizing into interdependent, simultaneous and persistent tensions.	Comprehension of industry and firm-specific elements is significantly constrained about their influence on a firm's decision to forgo investment activities. Warrant comprehends the conflicting tensions vying for a common pool of organizational resources, alongside the internal and external stakeholders, including their cognitions, motivations, and perceptions, across several stages. The engagement of the CVC program with BU and stakeholders, including legal, marketing, and supply chain departments, is neglected.	Systematizing existing literature by arguing for the distinct roles of actors and BU and other units as a knowledge enhancer and how mismanagement can create challenges. Further in-depth understanding the industry and firm-level factors influencing CVC and collaboration outcomes.
Knowledge integration and absorption processes and outcomes	(Rohm, 2018; Pinkow & Iversen, 2020; Urbano, Turro, Wright & Zahra, 2022; Bugl & Kanbach, 2022; Dall, Terzidis & Krooß, 2024)	Examining exploration and exploitation simultaneously, the scope of the CE concept (CVC) to understand the consequences, corporate outcomes in terms of the	Insufficient information regarding how organizations ultimately translate this knowledge into outcomes. The intersection between	Disclosing the technology diffusion process in the collaboration process by structuring the process flow leads to various collaborative

		venture's innovation and financial performance, Strategic learning, economic effect, and value creation outcomes.	entrepreneurship (CVC) and innovation activities aligns with the definitions of both terms.	outcomes.
--	--	---	---	-----------

ABBREVIATIONS:

ABDC = Australian Business Deans Council

BU = Business Unit

CE = Corporate Entrepreneurship

CI = Collaborative Innovation

CIH = Collaborative Innovation Hub

CVC = Corporate venture capital

ECE = External Corporate Entrepreneurship

ICE = Internal Corporate Entrepreneurship

IP = Intellectual Property

JV = Joint Venture

KBV = Knowledge-Based View

M&A = Mergers and acquisitions

NBI = New Business Initiatives

NIS = Not Invented Here

NSH = Not Sold Here

RBV = Resource-Based View

R&D = Research and development

SCSCP = Structured Corporate-Startup Collaboration Program

WOS = Web of Science