# Theoretical Background

This chapter will delve into the concepts of Open Innovation (OI) and Corporate Entrepreneurship (CE). It will define both concepts and discuss dimensions relevant to the impact of OI on CE. This will serve as a starting point for understanding these concepts and their relation or synergy.

## Concept of Open Innovation

To understand OI, it is important to understand the difference between closed and open innovation. Panagopoulos (2016, p. 1) describes closed innovation as when a company develops all its new ideas and technologies internally, using only its resources and team. On the other hand, OI is when a company looks outside its walls and collaborates with external partners, like academic schools, startups, or other organizations, to create new technologies and ideas (Panagopoulos, 2016, p.1).

The term "open innovation" was first introduced by Henry Chesbrough in his book, "Open Innovation: The New Imperative for Creating and Profiting from Technology" in 2003. Chesbrough argued that the traditional closed innovation model, where research and development (R&D) activities were confined within the boundaries of a single organization, was becoming obsolete (Enkel et al., 2009, p. 312). Instead, he proposed a new model where companies could and should use external and internal ideas and take both to market.

Chessbrough’s framework was built on the concept that “[n]ot all the smart people work for us. We need to work with smart people inside and outside our company”(Chessbrough, 2003, as quoted in Enkel et al., 2009, p. 311). This market is a shift from the closed innovation model that dominated in the 20th century and was primarily used by large corporations then (Enkel et al., 2009, p. 312). Following his initial work, in collaboration with Enkel and Glassman, he expanded the concept to include three different types of OI: Inbound, Outbound, and Coupled Processes (Enkel et al., 2009, p. 312).

The first type is the Outside-in Process (Inbound), which involves enhancing the company’s internal knowledge by integrating information and insights from suppliers, customers, and external sources (Enkel et al., 2009, p. 312). A prime example of this process is LEGO's strategy of involving customers in innovation through platforms like LUGNET, where fans submit and vote on new product ideas, and the most voted ideas are brought into the market (Rusu & Avasilcăi, 2015). This engagement brings fresh, creative concepts into the company and builds a strong community around the brand, driving innovation and customer loyalty (Rusu & Avasilcăi, 2015).

Secondly, the inside-out process (Outbound) consists of generating profits by commercializing ideas externally, selling intellectual property(IP), and spreading technology by transferring ideas externally (Enkel et al., 2009, p. 312). Companies prioritizing the inside-out process focus on externalizing their knowledge and innovations to bring ideas to market faster than they could through internal development alone (Enkel et al., 2009, p. 312). **Example Philips**

The last core process type discussed by Enkel et al. in 2009 is the Coupled process, which combines the inbound and outbound processes, where companies work together to co-create and co-commercialize innovations. This approach leverages the strengths of both internal and external sources to maximize innovation and the value created. (Enkel et al., 2009, p. 312). Example Tesla and Panasonic batteries

In conclusion, the evolution from a closed to open innovation represents a paradigm shift in how organizations approach their R&D and market innovation strategies (Enkel et al., 2009, p. 311). Organizations can leverage external ideas and resources by accepting OI to enhance their innovative capabilities (Enkel et al., 2009, p. 311). This transition seems crucial for fostering a culture of CE, where innovation is incorporated into the organization's strategy and operations.

# 1.1 Concept of Corporate Entrepreneurship

The idea of corporate entrepreneurship (CE) has emerged in academic literature within the last forty years. There is no universally accepted definition for CE, and its interpretations have changed over time (Kuratko & Covin, 2016, p.1). Initially, CE was used to describe the pursuit of new business opportunities within established firms, often used interchangeably with corporate venturing (Kuratko & Covin, 2016, p.1). However, in the years after, the conceptualizations of CE suggest that entrepreneurship can also take other forms within established firms (Barringer & Bluedorn, 1999, p. 422). For instance, some scholars argue that CE may manifest as strategic renewal, involving significant changes to a firm's strategy and/or structure in pursuit of greater organizational efficiency or effectiveness (Zahra, 1999, p.1713).

CE encompasses various dimensions of firm-level entrepreneurial orientation, such as innovation, risk-taking, and proactiveness (Covin & Slevin, 1991; Miller, 1983, as cited in Zahra, 1999, p. 1714). Covin and Miles (1999, p.47) argue that innovation, broadly defined, is the single common theme underlying all forms of CE. However, they also note that the presence of innovation alone is insufficient to label a firm as entrepreneurial. Rather, firms must use innovation as a mechanism to redefine or rejuvenate themselves, their market positions, or the competitive arenas in which they compete (Covin & Miles, 1999, p. 47).

Zahra and Covin, 1995, as cited in Zahra, 1999, p. 1713 identify two main dimensions of CE: innovation aimed at business creation and venturing and strategic renewal. Business creation and venturing involve entering new businesses by expanding operations into existing or new markets (Zahra, 1996, p. 1714). Strategic renewal refers to revitalizing the company's operations by changing its business scope, competitive approach, or both (Zahra, 1996, p. 1715). This renewal also includes building or acquiring new capabilities and creatively leveraging them to add shareholder value (Zahra, 1999, p 1715).

The significance of CE, however, extends beyond mere innovation, as argued by Covin and Miles (1999, p.47). It involves a deliberate effort to rejuvenate and redefine the organization to maintain competitive superiority (Covin & Miles, 1999, p. 50). This can take various forms, including sustained regeneration, organizational rejuvenation, strategic renewal, and domain redefinition (Covin & Miles, 1999, p. 50-53). Sustained regeneration involves continuously introducing new products and services or entering new markets (Covin & Miles, 1999, p. 51). Organizational rejuvenation focuses on improving internal processes, structures, and capabilities (Covin & Miles, 1999, p. 52). Strategic renewal involves fundamentally altering the firm's strategy to better compete in its environment (Covin & Miles, 1999, p. 52). Domain redefinition entails creating a new product-market arena that others have not recognized or actively sought to exploit (Covin & Miles, 1999, p. 53).

xxx

Despite its potential to enhance organizational performance, CE faces several challenges. The literature on challenges and barriers to CE highlights various impediments faced by companies across different industries and regions. Kuratko et al. (2021, p. 4) discuss the entrepreneurial mindset within corporations, detailing numerous impediments such as cultural and organizational barriers. Kantsepolsky (2019, p. 2) explores barriers and enablers for entrepreneurship in subsidiaries of multinational corporations, highlighting organizational, cultural, and business environment challenges. Lastly, Nyanga (2020, p.1) investigates impediments to CE in developing economies, identifying factors such as corporate culture, resource unavailability, and lack of support from management. These studies collectively underscore the multifaceted nature of barriers to CE.

# The impact of OI on Corporate Entrepreneurship

In the preceding chapter, the concepts of OI and CE were examined. Towards the conclusion of the chapter, the challenges faced by CE, including corporate culture, resource unavailability, and scarcity, were discussed. This chapter will explore how the implementation of OI can help address these challenges and provide additional benefits.

Implementing Open Innovation (OI) significantly enhances a firm's innovation capacity. Open Innovation encourages the utilization of external knowledge, which can boost the innovation capabilities of a firm. By integrating diverse perspectives and technologies from external sources, companies might enhance their innovation processes, potentially leading to the development of groundbreaking products and services (Blázquez Puerta et al., 2022, p. 149). Furthermore, Chesbrough and Bogers (2014) suggest that OI allows firms to access and leverage external ideas and technologies, which can lead to more efficient and effective innovation outcomes. The integration of external knowledge through OI not only expands the innovation horizon of firms but also enables them to tap into new and diverse technological advancements. This approach is particularly beneficial in industries characterized by rapid technological changes, where staying ahead of the curve is essential for maintaining competitiveness. Therefore, OI serves as a critical mechanism for firms seeking to enhance their innovation capacity and remain competitive in dynamic markets.

Open Innovation has been shown to potentially improve firm performance by mediating the relationship between entrepreneurial orientation and firm outcomes. This mediation effect implies that companies with a strong entrepreneurial orientation could achieve better performance outcomes through the effective implementation of OI practices. This is particularly significant for SMEs, where resource constraints make external collaboration crucial for innovation and competitiveness (Tariq et al., 2022, p. 50). Additionally, Lichtenthaler (2009) found that firms practicing OI reported higher financial performance and innovation success rates compared to those that rely solely on internal R&D. By facilitating access to external knowledge and resources, OI enables firms to overcome internal limitations and drive superior performance. This is especially important for SMEs that may lack the extensive R&D infrastructure of larger corporations. Hence, the implementation of OI is vital for improving performance, particularly in resource-constrained environments like SMEs.

One of the key impacts of OI is the facilitation of knowledge creation and sharing across organizational boundaries. This not only enhances the firm's internal knowledge base but also fosters a culture of continuous learning and adaptation. The ability to leverage external knowledge sources effectively is a critical factor in sustaining long-term competitive advantage (Majali et al., 2022, p. 28). Additionally, West and Gallagher (2006) argue that OI practices promote collaborative innovation networks, which are essential for continuous knowledge flow and innovation. The collaborative nature of OI promotes an open exchange of ideas and expertise, leading to the creation of new knowledge that can drive innovation. This continuous learning process helps firms adapt to changes more swiftly and maintain a competitive edge. Consequently, knowledge creation and sharing through OI are pivotal for sustaining innovation and competitive advantage.

The adoption of OI practices provides firms with strategic flexibility, allowing them to adapt more rapidly to market changes and technological advancements. This flexibility is vital for corporate entrepreneurship as it enables firms to pivot and explore new business opportunities more efficiently (Liao et al., 2019, p. 46). Moreover, Bogers, Chesbrough, and Moedas (2018) highlight that OI enhances a firm's ability to experiment with different business models and strategies, thereby increasing its agility and responsiveness to market demands. Strategic flexibility gained through OI allows firms to be more responsive to external changes, thus better positioning them to seize emerging opportunities and mitigate risks. Therefore, OI is essential for fostering the strategic agility needed to navigate today’s fast-paced business environment.

Open Innovation fosters closer collaboration between firms and external entities such as universities, research institutions, and other companies. This network of collaborations can lead to the co-creation of value and the development of innovative solutions that would be difficult to achieve independently (Leckel et al., 2020, p. 47). Additionally, Laursen and Salter (2006) found that firms engaging in OI often develop more robust innovation networks, which are crucial for sustaining long-term innovation efforts. By building strong collaborative networks, firms can access a broader range of expertise and resources, leading to more innovative and effective solutions. These networks also provide a platform for continuous learning and improvement. Hence, fostering enhanced collaboration through OI is crucial for driving sustained innovation and value creation.

By spreading the innovation process across multiple partners, firms can mitigate the risks associated with research and development. This collaborative approach reduces the financial and operational risks of innovation projects, making it easier for firms to undertake ambitious and potentially disruptive initiatives (Asad et al., 2021, p. 25). Additionally, Enkel, Gassmann, and Chesbrough (2009) argue that sharing the risks and rewards of innovation with external partners helps firms manage uncertainty more effectively. Risk mitigation through OI enables firms to pursue more innovative projects with lower levels of uncertainty, thereby fostering a more entrepreneurial and risk-taking culture. Therefore, OI is a valuable strategy for mitigating the inherent risks of innovation and encouraging more ambitious entrepreneurial endeavors.

Implementing OI will enhance the Entrepreneurial Culture

The AstraZeneca staff that was actively involved with the AZ BioVentureHub as experts for the hosted companies got opportunities not only to see new knowledge perspectives but also to gain concrete entrepreneurial experiences themselves when interacting with the companies. Wikhamn, B. R., & Styhre, A. (2017, p.12)

"An open organizational culture stems from an open mind, and refers to the innovation culture of non-invented-here and non-sold-here. Organizations with OC can reach out to a more diverse external culture, which facilitates individuals to gain novel ideas and knowledge, enhance the creativity of individuals to accomplish tasks" (Li, Li, & Wu, 2024, p. 5131).

Implementing OI wil Resource Utilization

Wikhamn, B. R., & Styhre, A. (2017)

References

Donald, F., Kuratko., Jeffrey, S., Hornsby., Alexander, McKelvie. (2021). Entrepreneurial mindset in corporate entrepreneurship: Forms, impediments, and actions for research. Journal of Small Business Management, doi: 10.1080/00472778.2021.1907585

Boris, Kantsepolsky. (2019). Exploration of Barriers to and Enablers for Entrepreneurship at Subsidiaries of Multinational Corporations: Analytic Autoethnography.

Takupiwa, Nyanga. (2020). Impediments to Corporate Entrepreneurship: Evidence from Employees of Emerging Organisations in Construction and Manufacturing Industries in Gwanda Town, Zimbabwe. Journal of business management, 19(1):1-14. doi: 10.12725/UJBM.50.1

Barringer, B.R. & Bluedorn, A.C. (1999). The relationship between corporate entrepreneurship and strategic management. *Strategic Management Journal, 20*, 421-444.

Covin, J.G. & Miles, M.P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship, Theory & Practice, 23(*3), 47-63.

Enkel, E., Gassmann, O., & Chesbrough, H. (2009). Open R&D and open innovation: exploring the phenomenon. *R & D Management*, *39*(4), 311–316. https://doi.org/10.1111/j.1467-9310.2009.00570.x

Floyd, S.W. & Lane, P.J. (2000). Strategizing throughout the organization. Managing role conflict in strategic renewal. *Academy of Management Review, 25*(1), 154-177.

Zahra, S.A. (1996). Governance, ownership, and corporate entrepreneurship. The moderating impact of industry technological opportunities. *Academy of Management Journal, 39*(6), 1713-1735.