



SCHOOL OF
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The Role of Incubators in Facilitating Networks

A Case Study of a Swedish Life-Science Incubator

Bachelor's Programme in International Business

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Abstract

Startups often rely on business networks to access resources, knowledge, and opportunities. While business incubators have been widely recognized as network facilitators, limited attention has been directed to how industry-specific incubators support network access within particular industry contexts. To address this gap, this study aims to enhance the understanding of how industry-specific incubators facilitate network access for startups. To achieve this, an inductive, qualitative case study of a Swedish life science incubator was conducted. The data was collected through semi-structured interviews with incubator personnel, startup representatives, alumni representatives, and external informants, and analyzed using thematic analysis.

The findings suggest that incubators function as network intermediaries by facilitating contact with external actors, through a combination of formal initiatives, informal interactions, and alumni networks. Informal interactions that are made possible through the incubator appeared to be particularly valuable to obtain new knowledge and generate business opportunities. The findings further indicate that the access to international networks is especially important within the life science industry, but that the incubator's effectiveness in facilitating such access varies across startups and sub-industries. Ultimately, the study contributes to the incubator literature by providing additional insights into how industry-specific incubators facilitate network access for startups. In particular, the study highlights that the usefulness of incubator-facilitated network access depends on the relevance of the incubator's network to startups' specific needs and industry niches.

Key Words: business networks, incubators, network theory, network access, global industries, life science industry, startups, internationalization

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1. Introduction

Startups are often associated with the development and commercialization of innovations. However, their ability to develop and scale is often constrained by limited resources, lack of legitimacy, and restricted access to business networks (Bruneel et al. 2012; Kuryan et al. 2018, Schwartz, 2013). In relation to this, incubators have emerged as an instrument within entrepreneurial ecosystems, with the purpose of supporting startups in this process (SISP, n.d.). While incubators have been the subject of extensive prior research, incubator practices have often been treated rather uniformly, providing limited attention to how support mechanisms may vary across different industry contexts (Sohail et al. 2023).

1.1 Background

Firms frequently expand beyond the borders of their own country to gain access to new markets and remain competitive. This is especially relevant in small, open economies, where domestic markets are limited in scale, resulting in pressure on startups to expand abroad early (Coviello & Munro, 1997; Knight & Cavusgil, 2004; Kuryan et al. 2018). For instance, Powell (1996) provides the example of the biotechnology sector, where the process of achieving research breakthroughs is dependent on a variety of actors, as single firms lack the capabilities to bring them to the market alone. As a result, firms operating in such industries often rely on international collaborative networks to access the resources required for development and commercialization.

Building on this, previous literature on network theory explains how firms are embedded in interconnected systems of relationships that affect their access to resources and influence their growth possibilities (Johanson & Mattson, 1988; Johanson & Vahlne, 2009). However, lacking an established position within a certain network creates a liability of outsidership, meaning that it becomes harder to understand market trends and knowledge (Johanson & Vahlne, 2009). The effects of this are partially pronounced for small firms, such as startups, especially when wanting to enter a new market, as they also face a liability of newness, lacking established structures, legitimacy, and relationships needed to attract necessary resources (e.g. Bruneel et al. 2012; Kuryan et al. 2018, Schwartz, 2013).

Within this context, incubators have emerged as important intermediaries that facilitate startups' access to networks. Most literature on incubators acknowledges their role as network enablers (e.g. Bergek & Norrman, 2008; Bruneel et al. 2012; Hackett & Dilts, 2004). In line with this, prior research identifies mechanisms through which incubators facilitate an internal network amongst incubated firms, while also mediating startups' relations to external actors (Van Rijnsoever, 2020). In addition, it is also suggested that incubators enhance startups' legitimacy when interacting with customers, partners, and investors, thus increasing the likelihood of establishing external alliances (Grilli & Marzano, 2023, Kuryan et al. 2018).

In contrast, other scholars argue that incubator-facilitated networks are often generic, potentially limiting their effectiveness in supporting startups' industry-specific needs (Pettersen et al. 2015; Shih & Aaboen, 2019). This is also acknowledged by Sohail et al. (2023) who emphasize the often rather generalized mechanisms incubators employ to support the growth of startups. However, different industries are characterized by distinct conditions and specific needs, which may influence how incubators should support their startups. Therefore, Sohail et al. (2023) advocate for more ad hoc incubation support mechanisms, explaining that this may have several benefits. For example, they describe that this might enable the incubator to facilitate access to a broader network. Therefore, they argue that *"the emergence of specific industry-focused incubators is a new phenomenon ... which requires further attention"* (p.10), and especially highlight the importance of understanding how underlying mechanisms drive the effectiveness of network facilitation across different incubator types and contextual settings. This indicates that existing incubator literature has largely examined incubators from a broad and general perspective, often assuming similar incubation processes across different incubator types. Thus, this points towards a gap in the existing literature regarding how industry-specific incubators facilitate startups' access to and use of business networks.

Swedish Life Science Incubators as a Research Context

Sweden is globally recognized as an innovation world leader, being the most innovative nation in the European Union (European Commission, 2025). Within this context, the country has developed a national incubator system aimed at supporting innovative startups' development and growth (SISP, n.d.). At the same time, Sweden is characterized as a small, open economy, highly dependent on international trade (Kommerskollegium, 2024). As a

result, Swedish firms, including startups, often operate in an environment where international engagement is not only an opportunity, but also a necessity for growth and scalability.

Moreover, life science is an interdisciplinary field focused on organizations, research, and innovations aimed at improving the health of humans and other living organisms (Vinnova, 2025). The life science industry encompasses sub-industries such as pharmaceuticals, biotechnology, medical technology, diagnostics, and digital health (Vinnova, 2025). Furthermore, life science is described as a global industry (Regeringskansliet, 2019), which is characterized by heavy regulations, long lead times for bringing innovations to the market (Regeringskansliet, 2025), and high capital requirements (SwedenBio, 2025). Within this context, Vinnova (2025) especially highlights challenges in attracting investment capital to the industry in Sweden.

Against this backdrop, the life science industry constitutes a relevant research context, as the industry characteristics create challenges for startups' growth when lacking sufficient networks. In combination with Sweden's internationally oriented business environment, this is a relevant setting for examining how industry-specific incubators facilitate startups' access to business networks.

1.2 Research Purpose

The purpose of this study is to address the limited understanding of how industry-specific incubators facilitate startups' access to business networks. While existing literature has examined incubators from a general perspective, less attention has been given to how they facilitate network access within specific industries. Through examining a Swedish life science incubator, this study contributes to the existing literature by providing insights into how incubators facilitate network access within a specific industry context. Based on this purpose, the study seeks to answer the following research question:

How do industry-specific incubators facilitate startups' access to and use of business networks?

1.3 Aims and Objectives

The aim of this study is to explore how incubator, startup and alumni representatives perceive the access to and use of incubator-facilitated networks in supporting startups' growth and development. To achieve this aim, the study will pursue the following objectives:

- Conduct a case study of a Swedish life science incubator to explore how incubators facilitate network access and use within an industry-specific context.
- Investigate the specific mechanisms through which industry-specific incubators facilitate startups' access to and use of business networks.
- Examine how the characteristics of the life science industry influence startups' needs and, consequently, the required incubator support.

1.4 Delimitations

In line with the objectives of the study, there are certain delimitations worth mentioning. Firstly, the study is delimited to one incubator within the Swedish life science industry. It is therefore important to keep in mind the specific features and characteristics of the particular industry and the national context. Thus, startups and incubators within other industries or parts of the world might operate under different circumstances, and thereby their experiences of incubators as network facilitators might differ from the results of this study. Within the case-incubator, the scope was further delimited to the specific mechanisms related to the facilitation of network access. Therefore, the study does not claim to provide insight into other aspects of the incubators operations.

In addition, the focus of the interviews was delimited to incubator personnel, current startup and alumni representatives. Although the interviewees were carefully selected with the aim to provide a holistic view of the case, the findings might not fully reflect all real-world aspects of the incubator, as not all employees, startups or alumni were interviewed. As the research relies on a limited number of semi-structured interviews with relevant parties, the findings might not cover all perspectives, experiences or mechanisms influencing the incubator's network facilitation. Finally, the study was delimited to the experiences and perceptions of incubator network facilitation at a single point in time, rather than capturing its long-term development.

1.5 Outline of the Thesis

The following thesis consists of five chapters. While the first chapter introduces the topic and objectives, chapter two provides an overview of the previous literature and existing theory. Following this, the third chapter presents the methodology used, namely the chosen research design, the data collection method, the data analysis method, and limitations in relation to validity and reliability of the chosen method. Chapter four reports the empirical findings generated from the study. Further, chapter five provides a discussion and conclusion of the findings, as well as the theoretical and empirical contributions of the study. Finally, the last chapter also discusses practical implications of the study and gives recommendations for further research within the field.

2. Theoretical Background

This chapter provides an overview of relevant literature. The purpose is to establish a theoretical background to support the discussion and understanding of the empirical findings. Initially, studies on global industries are presented, followed by an account of research on network theory. Finally, existing literature on incubators is discussed.

2.1 Global Industries

Globalization has transformed the conditions under which firms operate, making international engagement an integral part of business development. Shahabadi and Aliyari (2026) describe that globalization is structurally changing the global economy, a shift which, they explain, becomes visible through the increased trade- and investment flows across borders. According to the authors, operations on a global scale have therefore turned into an essential and unavoidable part of firm development.

However, industries seem to differ in the extent to which they are globally interconnected, creating different conditions and strategic requirements for firms operating within them. According to Yip (1989), firms need to adapt their own strategies to the level of globalization within their industry. This indicates that the impact of globalization on firms and their operations might differ, depending on the industry in which they operate. For example, Powell (1996) describes how the biotechnology industry, among other R&D intensive sectors, is one industry, in which *“research breakthroughs are so broadly distributed that no single firm has all the necessary capabilities”* (p.198). He further explains that this forces firms to utilize collaborative networks, as there are, for instance, limitations to firms’ ability to internalize activities. As this research suggests that some industries are global, it is relevant to understand how firms operate within these contexts.

To better understand new firms operating within a global industry, the concept of born-globals needs to be defined and described. Knight and Cavusgil (2004) introduce the concept of born-globals, referring to firms with a global orientation from the beginning, that often internationalize within the first three years of their founding. They also describe that these young and small firms experience a scarcity of financial, human, and tangible resources. Building on this, Pinto and Rua (2023) characterize born-globals as a form of startup that has

an early global mindset. This perspective suggests that some startups are characterized by adopting an early or immediate global orientation. In a similar way, Oviatt and McDougall (1994) describe International New Ventures (INV) as firms characterized by having highly internationalized operations from the start. According to the authors, INVs leverage resources, like networks and alliances, to access foreign markets. Overall, the globalization of industries has reshaped the conditions for firm development and internationalization, particularly for startups operating in globally interconnected industries where networks and international collaboration becomes essential.

2.2 The Network Perspective

As firms in global industries depend on collaboration and external knowledge, their ability to access and utilize networks becomes relevant for their development. The network perspective offers a view on firm behavior that emphasizes the role of relationships and interactions between market actors rather than solely focusing on individual firms. In this perspective, firms are embedded in networks through which they access resources, knowledge and opportunities. The following section therefore examines how networks influence market structures, how they enable access to external resources, and why these dynamics are particularly relevant in global and startup contexts.

2.2.1 Networks as Market Structures

Markets are increasingly viewed as clusters of interconnected actors rather than individual firms acting in isolation, making business networks a key unit of analysis in understanding firm behavior. Johanson and Mattsson (1988) describe industrial markets as networks of relationships between actors. They state that firms' relationships and position in these networks are key determinants of their success. Johanson and Vahlne (2009) further emphasize the importance of firms' network position, arguing that internationalization takes place within networks. They maintain that firms' network position is central to obtaining knowledge and recognizing opportunities. Together, these perspectives illustrate that firms' growth and expansion are not primarily driven by firm-level decisions but rather shaped by their relationships.

As market structures are made up of relationships, firms must also be positioned somewhere within these structures. To further understand how networks are structured, Johanson and

Mattsson (1988) argue that a firm's position in the network is what characterizes its relation to other firms. They distinguish between micro- and macro-level positions, where micro positions are the relationships with specific partners, and macro positions reflect firms' overall position within the wider network. These positions influence which resources and what knowledge firms can obtain, eventually determining the extent to which they can grow and develop (Johanson & Mattsson, 1988).

The network positions can further be understood through the concept of liability of outsidership, which is introduced by Johanson and Vahlne (2009). The term refers to not having a clear position in a certain network and not understanding how actors are connected to each other, which in turn makes it hard to conduct business in that market. This is especially relevant when entering into a new market, where Johanson and Vahlne (2009) argue that outsidership causes uncertainty. In this context, becoming an insider in a network is crucial to obtain relevant knowledge and opportunities. Building on this, Johanson and Johanson (2021) explain that foreign market networks are dynamic structures, requiring firms to constantly adapt their organization to the changes happening within them, to build strong relationships and identify opportunities. The authors argue that this is particularly important during the process of moving from outsidership to insidership, as there might otherwise be a mismatch between the firm and the market network, slowing down relationship building and market entry.

However, becoming an insider requires active engagement, as it depends on the firm's ability to establish and develop relationships within the network. Granovetter (1973) provides insights into how this occurs by demonstrating how weak interpersonal ties, such as acquaintances, are more effective than strong ties, in spreading information and connecting society. He argues that while strong relationships create dense clusters of people sharing the same information, weak relationships link people to individuals outside of their immediate circle, thereby acting as bridges between different networks. Because of this, Granovetter (1973) argues that weak ties are more effective for spreading ideas, innovations, and opportunities. In a business context, this implies that firms' access to new knowledge and market opportunities is largely dependent on their ability to establish and maintain weak ties beyond their immediate network.

Granovetter (1985) further introduces the concept of embeddedness, arguing that economic action is shaped by social structures and personal relationships. He explains that trust emerges through ongoing interactions within these relationships, and thereby shapes actors' behavior, rather than simply being determined by purely rational, market-based mechanisms. Johanson and Mattsson (1988) further support this as they state that markets consist of interdependent relationships where firms rely on each other for resources, knowledge and opportunities, which in turn require coordination and interaction.

Thus, markets cannot be understood independently of, neither the networks of relationships that they are made up of, nor the changes happening within them. Together, these perspectives highlight that networks not only provide access to external actors and resources, but also shape how firms are able to utilize these relationships through interaction and ongoing exchange.

2.2.2 Networks in Global Industries

In globally integrated markets, networks are a crucial aspect of internationalization, as argued in several papers by Johanson and Vahlne (2009; 2017; 2020). The importance and influence of network relationships in the internationalization of firms is further supported by numerous scholars (e.g. Chetty & Blankenburg Holm, 2000; Coviello, 2006; Coviello & Munro, 1995, 1997; Granovetter, 1985; Johanson & Johanson, 2021; Johanson & Mattsson, 1988; Zain & Ng, 2006). Thus, understanding network dynamics becomes especially relevant in globally interconnected industries.

Given that networks shape the structure of markets, they are also likely to play a central role in influencing drivers behind firms' internationalization. As explained by Johanson and Vahlne (2009; 2017; 2020), firm relationships in foreign markets may create an initial opportunity in that market, which incentivizes the firm to internationalize to exploit said opportunity. They also argue that knowledge of foreign markets largely comes from relationships, making networks a fundamental part of the decision to internationalize.

In the context of small firms, networks have been widely recognized as being an essential contributor for overcoming resource constraints and gaining access to international markets. Several scholars observe that the internationalization of small firms is largely driven by

network relations, as they influence foreign market choice and entry, provide access to otherwise limited resources or knowledge, and enable a level of trust for potential partners (Coviello, 2006; Coviello & Munro, 1995; 1997; Zain & Ng, 2006). Similarly, Chetty and Blankenburg Holm (2000) argue that network relationships can actively stimulate internationalization by revealing international opportunities. This becomes especially important for startups, as they often face a liability of newness, meaning that they lack established structures, legitimacy, and relationships, which can make it difficult to attract the resources needed to exploit entrepreneurial opportunities (e.g. Bruneel et al. 2012; Kuryan et al. 2018, Schwartz, 2013). Thus, networks not only provide the context in which firms operate, but also function as drivers of internationalization by shaping access to the knowledge and opportunities needed for expansion.

As the importance of networks is widely acknowledged, it is relevant to understand how startups gain access to and utilize networks in practice. The incubator context, which will be addressed in the following section, provides insights into one type of structured environment for facilitating access to business networks.

2.3 Incubators as Network Facilitators

Business incubators can serve as supporting actors in the development of startups. Most literature on this subject supports the definition of incubators offered by Hackett and Dilts (2004). They define business incubators as organizations that serve the purpose of accelerating the development of new ventures by creating a support environment that essentially turns new ideas into sustainable businesses. They emphasize the holistic nature of the incubator, where interconnected actors create a supporting ecosystem offering infrastructure such as shared office space, professional business assistance, and network provision. Such a comprehensive view provides a foundation for examining incubators as a network intermediary.

2.3.1 Incubators as Network Hubs

Incubators serve as a central node in a network that connects incubated firms with external actors, such as investors and advisors, with the purpose of supporting startups' growth. The network role of incubators has long been acknowledged within the incubator literature (e.g. Bergek & Norrman, 2008; Bruneel et al. 2012; Hackett & Dilts, 2004). For example, Bergek

and Norrman (2008) emphasize the incubator's role as a bridge between its startups and a wider innovation environment. As startups often lack established entrepreneurial networks, the authors argue that the incubator actively connects its startups with relevant actors, such as potential customers, partners, and investors.

To understand the incubators' role as network mediators, it is necessary to examine the mechanisms through which incubators facilitate network access. Van Rijnsoever (2020) identifies several support mechanisms which have the purpose to aid startups in accessing networks. He distinguishes between mechanisms aimed at internally facilitating a network among incubated startups, and those targeted at connecting startups with external actors. Van Rijnsoever (2020) accounts for internal community-building, where the incubator actively facilitates interaction and knowledge exchange among its startups through, for example, co-working, active introductions, and social events. Building on these insights, Hausberg and Korreck (2020) further argue that interactions among startups in the incubator often are of an informal nature. They highlight that informal interactions between like-minded founders create synergies through knowledge sharing and an internal support network. However, Petterssen et al. (2015) argue that these synergies are limited if the incubator has too diverse startups in its portfolio.

In addition to connecting startups through internal mechanisms, the incubator also facilitates access to external actors. One example of this is field-building, which Van Rijnsoever (2020) describes as activities through which the incubator facilitates meetings between incubated firms and non-incubated firms. He explains that this is for instance done through social events, active introductions, or network meetings, aimed at expanding the general network among startups. Van Rijnsoever (2020) especially illustrates the benefits of field-building in terms of startups' increased chance of acquiring financial support as new actors are brought into the network. In this regard, he further explains how incubators can specifically act as a network broker that connects startups with venture capitalists. This can be done through networking events, introductions, or through referrals from incubator personnel, such as business coaches or the incubator management (Van Rijnsoever, 2020). Together, these types of internal and external activities seem to broaden the network around incubated startups.

Beyond differentiating between facilitating an internal and external form of network, activities aimed at network mediation can further be distinguished into direct and indirect mediation. Shih and Aaboen (2019) describe how direct mediation refers to when an incubator actively initiates interactions, for example through arranging meetings and ensuring that contact takes place. Further, they explain that indirect mediation consists of more supportive activities, such as sharing contact information, organizing forums for meetings, or coaching startups in how to interact with external actors.

Incubators can also facilitate access to external entrepreneurial networks by mediating a network of alumni firms that have been through the incubator. Sohail et al. (2023) identify access to alumni networks as a common mechanism among incubators to connect their startups with successful entrepreneurs. Hausberg and Korreck (2020) similarly argue that incubators should maintain their relationship with their alumni to facilitate knowledge sharing and cooperation between their startups and successful entrepreneurs. This suggests an additional mechanism through which the incubator can further expand the networks of its startups.

Others suggest that incubator-provided networks are not sufficient on their own, arguing that they are of a more generic character. Both Shih and Aaboen (2019) and Pettersen et al. (2015) explain that while incubators indeed provide networks to incubated firms, these are of a generic character. Pettersen et al. (2015) compare incubator-provided networks with startups' own private networks, external to the incubator context, and conclude that the incubator network has a complementary role to the firms' own networks. They further emphasize that startups' private networks are critical for acquiring firm-specific resources needed for innovation.

Similarly, Shih and Aaboen (2019) conclude that the incubator-mediated networks lack specialized industry relationships, making the network horizon limited. The authors distinguish between a micro- and macro-net of incubated firms, where the former refers to the internal incubator-specific network, while the latter consists of the incubated firms' external network. They explain that the micro-net mainly consists of a local innovation support structure, such as technology transfer offices, patent attorneys, and regional grant agencies, whereas the external network is constituted by a broader commercial network. Within the

incubator-specific network, the incubator has often established relationships to local actors, efficiently facilitating network access in the micro-net, the authors continue to explain. However, they argue that within the macro-net, incubators often lack specialized industry relationships, especially if they have a diverse startup portfolio, which may limit their ability to effectively facilitate border commercial connections.

Building on the insights presented by Pettersen et al. (2015) and Shih and Aaboen (2019), a too diverse startup portfolio might reduce the internal synergies among startups and limit incubators' ability to develop industry-specific networks. Thus, Grimaldi and Grandi (2005) argue that incubators should specialize their services. They explain that incubators could leverage core competencies and create synergies among incubated startups if they focus on, for example, a particular niche of an industry. In contrast, they argue that attracting a broad mix of companies requires more heterogeneous competencies to meet diverse startup needs, which can be costly and may weaken internal synergies.

In summary, incubators seem to function as network intermediaries, facilitating startups' access to both internal and external actors through a variety of mechanisms. These mechanisms allow firms to expand their networks to access resources, knowledge, and opportunities. However, there may be certain limitations to the incubator-provided networks, as these appear to be more generic. Therefore, the usefulness of the incubator-facilitated networks might be limited when the scope of the incubator is broad, as this can reduce the availability of industry-specific connections for individual startups.

2.3.2 Incubators as a Source of Legitimacy

As previously discussed, startups often face a liability of newness, where the lack of legitimacy is one factor that constrains their ability to obtain the resources needed to exploit entrepreneurial opportunities (e.g. Bruneel et al. 2012; Kuryan et al. 2018, Schwartz, 2013). Based on a large-scale quantitative analysis of Italian startups, Grilli and Marzano (2023) argue that incubators efficiently help to bridge this gap by expanding startup's networks and enhancing their legitimacy. They explain that this increases the likelihood of incubated companies establishing alliances with third parties, to acquire necessary resources. The authors highlight that acceptance to an incubator with a good reputation enhances a startups' legitimacy. This view is supported by Kuryan et al. (2018) and Pinto and Rua (2023), who

argue that startups that have undergone the incubator's screening process and have been deemed viable, are provided with credibility when interacting with customers, partners, and investors, both on the domestic market and internationally.

Additionally, Bergek and Norrman (2008) argue that incubators help startups navigate institutional environments by supporting them to understand regulations, laws, and industry norms. This in turn might increase the legitimacy of startups among external actors, according to the authors. When combined, these perspectives suggest that incubators indirectly facilitate networks by enhancing startups' legitimacy, thereby improving their ability to engage with external actors.

2.3.3 Incubators and International Networks

The emergence of born-global startups has resulted in a growing attention on the incubator's role in facilitating access to international networks (Pinto & Rua, 2023). The need to expand globally is particularly important for startups competing in niche markets located in small, open economies, as they will struggle finding sufficient scale in their home county (e.g. Coviello & Munro, 1997; Knight & Cavusgil, 2004; Kuryan et al. 2018). However, in the context of incubators, Pinto and Rua (2023) suggest that incubators lack resources specifically dedicated to startups' international expansion, especially the access to international networks.

An alternative perspective is offered by other scholars, who suggest that incubators are increasingly adopting more internationally oriented support mechanisms. Engelman et al. (2015) detect a shift in technology-oriented incubators, suggesting that these increasingly offer more specialized support mechanisms targeting international expansion. For example, the authors point out that the incubator can mediate international networks through contact with for example foreign incubators, international companies, and institutional actors. They continue to explain that the incubator can increase startups' visibility at an international arena, for example through enabling participation in international trade fairs. Kuryan et al. (2018) support this and further highlight that participation in international fairs can facilitate startups' access to foreign customers and help them establish international partnerships.

In summary, incubators seem to play a role as a network facilitator by enabling startups' access to external actors, resources, and opportunities, while also enhancing their legitimacy. However, the networks might be of a more generic and complementary nature, requiring startups to look beyond the incubator-facilitated network. Finally, the literature appears to be divided regarding incubators' ability to facilitate international network access.

2.4 Chapter Summary

This chapter has outlined the theoretical background for the study by reviewing previous literature on global industries, network theory, and incubators. The literature review highlights how firms operating in global industries, particularly startups, are highly dependent on networks to access resources, knowledge, opportunities, and international markets. The network perspective further emphasizes how firms are embedded in dynamic structures of relationships, where network position and interactions influence firm development and expansion abroad. Within this context, incubators emerge as network intermediaries that may facilitate startups' access to internal and external actors through a variety of mechanisms. However, the literature also suggests that incubator-facilitated networks may be of limited usefulness due to their generic nature and lack of industry-specific connections. Overall, the chapter provides a foundation for further exploring how industry-specific incubators facilitate startups' access to networks.

3. Methodology

The following chapter gives an account of the methodology of the study. The first section discusses the research design selected for the study. Furthermore, the method chosen for data collection and data analysis is explained. This is then followed by a discussion of the study's validity and reliability. Finally, ethical considerations are highlighted.

3.1 Research Design

To examine the role of incubators in facilitating startups' access to and use of networks, an inductive case study was chosen. Bell et al. (2022) explain how an inductive approach builds upon observations resulting in theory development. As the study set out to understand the underlying mechanism and create a detailed description of incubators' role in facilitating networks, an inductive approach was deemed appropriate. Given the somewhat unexplored nature of industry-specific incubator-provided support, in terms of network access, the exploratory elements of an inductive approach, as outlined by Bell et al. (2022), allowed for new theoretical insights to emerge from the collected data.

A qualitative, single-case study design was chosen for this study, where the unit of analysis was a single incubator. Yin (2014) describes how a case study design is chosen when the aim is to understand a complex phenomenon within its real-world context. Consistent with Yin's (2014) rationale for choosing a single case study approach, the selected incubator can be regarded as a common case. This provides a suitable context for exploring how industry-specific incubators facilitate startups' access to and use of business networks. Rather than seeking to understand the incubator itself, the case was used to generate insight into the broader phenomenon under investigation.

Considering the time constraints of the study, a cross-sectional approach was adopted, meaning that the data was collected at one point in time. This allowed for a snapshot of the network ecosystem of an incubator at a specific point in time.

3.2 Case Selection

The case incubator was chosen from a list of active Swedish life science incubators within the umbrella organization SISP. Several criteria became relevant in selecting an appropriate case. Considering the often rather small sizes of Swedish incubators, a criterion in the case selection process concerned the size of the incubator, and in particular if it had sufficient personnel to participate in the desired number of interviews. This narrowed down the number of potential incubators to the ones with enough resources to participate in the study.

The potential case incubators were further narrowed down through an investigation of their startup portfolio. To provide a holistic view on the incubator, the aim was to also interview startups at different stages of their development. Therefore, another criterion for the choice of case incubator was the access to startups which had been part of the incubator program for varying periods of time. An additional criterion was the existence of firms that had successfully left the incubator and were now operating on a global scale, enabling interviews with the incubator's alumni firms.

This case selection method aligns with the reasoning of purposive sampling. Bell et al. (2022) describe this as a strategic approach to select cases relevant to the research question. After the initial process of narrowing down potential candidates, incubators of interest were contacted via email to inquire about their possible participation in the study. This resulted in the chosen case being an incubator in the South of Sweden.

3.3 Data Collection Method

The data was collected through semi-structured interviews with the purpose of understanding how networks are accessed and used within the incubator environment to support startups. Bell et al. (2022) argue that the semi-structured interview format provides the researcher with more freedom to explore the participants' experiences in depth, allowing for follow-up questions and exploring new themes depending on the insights provided by the interviewee.

To find participants, a combination of purposive and snowball sampling was used. In line with purposive sampling, participants were selected based on their relevance (Bell et al. 2022), focusing on incubator employees with direct insight into the support provided within

the incubator environment. The same procedure was applied to contact relevant startup representatives. However, for some interviews a process of snowball sampling was used, which meant that initial contact with incubator personnel facilitated access to certain startups, alumni companies, and external informants (Bell et al. 2022).

For the data collection, a total of 13 interviews were conducted (see Table 1). Out of these, four were conducted with personnel from the case-incubator, five interviews with representatives from startups currently incubated at the incubator, and two were conducted with alumni-startups that have left the incubator program. In addition to the 11 case-related interviews, two interviews were conducted with representatives from other incubators within the life-science industry, acting as external informants. The purpose of these interviews was to serve as an addition to the data collected from the case incubator, and to support or nuance the case-related findings.

Table 1: Overview of the professional role, in-text code name for each participant, and interview format.

Interviewee	Description of role	In-text name	Interview format
No. 1	Working in the incubator management	Incubator personnel 1	In person
No. 2	Working with the incubator network	Incubator personnel 2	In person
No. 3	Working with the incubators outreach	Incubator personnel 3	In person
No. 4	Working as an external business advisor	Incubator personnel 4	In person
No. 5	CEO of biotech startup	CEO 1	Online
No. 6	CEO of biotech startup	CEO 2	In person
No. 7	CEO of deeptech startup	CEO 3	Online
No. 8	CEO of pharma startup	CEO 4	In person
No. 9	CBO of biotech startup	CBO 1	Online
No. 10	CEO of incubator alumni	Alumni CEO 1	Online
No. 11	CEO of incubator alumni	Alumni CEO 2	In person
No. 12	Advisor at external life science incubator	Informant 1	Online
No. 13	Manager at external life science incubator	Informant 2	Online

The interviews were conducted following an interview guide (see Appendix A) that was structured around themes related to network access and use, while still allowing for the exploration of new themes as they emerged. When incubator, startup, and alumni representatives were interviewed, the questions in the interview guide followed the same themes, but were adjusted based on the respondent-category to incorporate flexibility and adaptability in each interview. As a result, the order of questions and use of follow-up questions varied depending on the respondents' answers, level of detail, and relevance of emerging topics. Seven of the interviews were held in person, as this format was considered to create a deeper and more natural conversation dynamic. However, due to physical distance and convenience for the participants, the remaining six interviews were conducted online through video calls. The length of the interviews ranged between 35 and 60 minutes, and were conducted during the last week of April and the first two weeks of May in 2026. Each interview was recorded with the consent of the interviewees.

3.4 Data Analysis

Following the interviews, the collected data was analyzed through the process illustrated in the flowchart presented in Appendix B. The interview material was first transcribed using the software, Sunet Scribe. The transcribed interviews were then manually reviewed and revised to ensure accuracy as well as familiarization with the material. The interview data was analyzed using thematic analysis, meaning that similar patterns across the interviews were organized in broader categories and themes (Bell et al. 2022). First, open coding of the material was performed, meaning that key information was identified and labeled (Bell et al. 2022). The open codes were selected based on the occurrence of repetitions, as well as similarities and differences, within the data set (Bell et al. 2022). The transcripts were coded manually in Google Docs. Each researcher initially coded the interviews independently to identify initial codes and patterns in the data. The individual codes were then compared and discussed among the authors, enabling the identification of differences in interpretation and the development of a final set of first order codes.

Following the logic of Bell et al. (2022), open codes capturing the same concept were then brought together in broader categories. As additional codes were identified throughout the interview process, themes gradually emerged and evolved, which resulted in the second order

codes. Out of these categories, overarching themes were developed to create a structured representation of more abstract findings related to theoretical concepts (Bell et al. 2022). The following overarching themes emerged:

- *Networks in the life science context*
- *The incubator as a network intermediary*
- *Mechanisms for accessing networks, and*
- *The incubator as a source of legitimacy.*

(These themes are addressed separately in greater detail in chapter four).

As the majority of the interviews (12 out of 13) were conducted in Swedish, the coding was also performed in Swedish to preserve the original meaning and nuances of the participants' expressions. Following the coding process, the finalized codes were translated to English to facilitate the analysis and presentation of the findings.

3.5 Validity and Reliability

Validity and reliability are concepts used to evaluate the quality of business research, as explained by Bell et al. (2022). They describe how validity refers to the degree to which the chosen research design captures the phenomenon it intends to study. Furthermore, they define reliability as a study's degree of replicability and the consistency of its findings. The following section will discuss the validity and reliability to address the study's methodological limitations.

Regarding validity, the purpose of this study was to understand how industry-specific incubators facilitate startups' access to and use of networks. In line with this, the selected incubator provided a structured environment in which the relevant mechanisms and interactions could be examined. Therefore, the incubator, as the unit of analysis, was considered appropriate for capturing the phenomenon under investigation.

Furthermore, the possibility of making generalizations to a broader context is often considered in terms of the validity of a study. Yin (2014) discusses two types of generalizability, statistical and analytical. Due to the use of a qualitative single case study, any statistical generalizations about the incubators role in facilitating network access were difficult to make. However, in line with the aim of qualitative research, the purpose of this

study was rather to gain an in-depth understanding of the case. Thus, the insights provided by the study might contribute to analytical generalizations to some extent, by offering theoretical insights or understandings that might be transferable to similar contexts.

Another limitation concerning the validity of the study is its retrospective nature, as many participants reflected on events and experiences that have occurred in the past. This may have introduced time bias, as participants' recollections and interpretations of earlier events may have been influenced by time and hindsight. Thus, there is a level of uncertainty regarding whether the data accurately reflects past experiences. Furthermore, some participants may have felt more comfortable sharing detailed and nuanced descriptions of their experience than others, which could have introduced bias into the findings. Thus, despite the use of follow-up questions during the interviews to clarify responses, it is possible that certain participants interpreted certain interview questions differently. Such potential misunderstandings may have influenced how some responses were formulated and understood, which could have impacted the study's validity.

As for reliability, the research design with semi-structured interviews, a format chosen for its inherent flexibility, constrained the replicability of the study (Bell et al. 2022). Although the interviews followed the same interview guide, variations in the order and wording of questions, as well as differences in follow-up questions, were necessary to capture complex and context-specific experiences. Another limitation of qualitative research, which limits its replicability, is its subjective nature (Bell et al. 2022). In this study, the subjectivity stems from the use of data consisting of individual interviewees' experiences and perceptions, as well as the subjective coding performed by the researchers. Therefore, the aforementioned coding process was chosen to increase the inter-rater reliability of the study, meaning that different researchers interpret the data similarly by identifying similar codes and patterns (Bell et al. 2022). This process helped reduce individual biases and increased the consistency of the coding. However, despite the efforts to increase the inter-rater reliability, other researchers might interpret the data in other ways, potentially affecting the reliability of the study.

In conclusion, the aforementioned limitations should be understood in relation to the qualitative and single-case design of the study. Semi-structured interviews aligned with the

aim of generating an in-depth, context-specific understanding of the studied phenomenon. As such, the study did not aim for statistical generalizations or strict replicability, but rather to provide insights that might be relevant in similar contexts.

3.6 Ethical Considerations

This study was conducted in accordance with principles of ethical research, established by the Swedish Research Council (2024). More specifically, the study was guided by the principles of beneficence, non-maleficence, respect for autonomy, and justice (Swedish Research Council, 2024). Following these guidelines, several measures were considered. Firstly, all participation in the study was conducted with informed consent. All participants were informed of the purpose of the study and how the data was going to be used. Secondly, the participants were informed that participation was anonymous, meaning that participants names and companies would be held anonymous. Thirdly, the interviews were recorded with the consent of the participants. The recorded material was used solely for transcription and analysis purposes and was deleted once the study had been completed. Finally, no topics of a sensitive nature were addressed.

3.7 Chapter Summary

This chapter has outlined the methodological approach adopted to examine the role of an industry-specific incubator in facilitating startups' access to and use of networks. An inductive, qualitative, single-case study design was chosen to enable an in-depth understanding of the underlying mechanisms and interactions of the studied case. Data was collected through semi-structured interviews and analyzed by thematic analysis, resulting in the identification of key themes related to network facilitation. Further, limitations in terms of validity and reliability regarding the research process were addressed. Lastly, ethical considerations were discussed. In summary, the chosen methodological approach was considered appropriate for addressing the research aim.

4. Empirical Findings

This chapter presents the empirical findings from the interviews, to build a foundation for answering the research question. The findings are organized into four overarching themes that illustrate perceptions around the incubator-facilitated network access and use. Figure 1 illustrates examples of how open codes from the data set turned into broader categories, which were then organized into the overarching themes.

Firstly, in *Networks in the life science context*, it is illustrated how participants perceived the industry to be regulatory complex and capital intensive, something that increased the need to access relevant networks. Secondly, in *The incubator as a network intermediary*, the findings indicated that the incubator facilitates access to networks by acting as an intermediary between startups and external actors. However, the perceived value of these networks appeared to depend on how well they align with startups' specific needs. Thirdly, in *Mechanisms for facilitating network access*, structured initiatives, informal interactions and alumni contacts were frequently mentioned activities for connecting startups to relevant actors. Some of the most useful connections seemed to emerge from informal interactions. However, these mechanisms were perceived to be limited in their effectiveness of accessing international actors and networks. Finally, in *The incubator as a source of legitimacy*, it is highlighted how incubator affiliation might signal credibility towards external actors.



Figure 1: Coding schedule of codes merging into overarching themes.

4.1 Networks in the Life Science Context

The case-interviews revealed several characteristics of the life science industry that shape the conditions under which startups operate. There was a broad consensus around the industry's capital-intensive nature, strong regulations, long lead times, and global nature. These characteristics create a strong reliance on external actors and highlight the importance of business networks, something the incubator aims to facilitate.

For example, startup CEO 4 mentioned that “*pharmaceuticals are the most expensive and take the longest [to take to the market]*”. They gave an example from their pharma-startup’s current situation, where a decision needs to be made about whether to build a production facility themselves, to sell, or to license their product. The same CEO explained that due to the high costs and long lead times, the startup is looking into selling or licensing their product to a bigger player in the pharmaceutical field that “*has the [monetary] capacity to take over*”. This suggests that startups are often dependent on external actors, such as large pharmaceutical companies, to bring their products to market, highlighting the importance of establishing connections with relevant industry partners.

The experience of the aforementioned startup is something that incubator personnel also recognize as unique about the life science industry. When discussing what they identify as unique or specific for the industry, an employee from the incubator’s management said the following:

It mainly comes down to the fact that it [the process from idea to market] takes a very long time. There are a lot of rules ... But generally, what people tend to say about pharmaceuticals is that the industry is the most regulatory complicated one. You have to conduct numerous studies, it can take up to 20 years and costs billions of SEK. So it is very expensive and takes a long time.

- Incubator personnel 1

Based on these circumstances, one of the major needs of startups entering the incubator seemed to be the access to networks and important industry actors to navigate regulations and financing. Both from an incubator and startup perspective, interviewees mentioned the importance of having access to relevant networks. Several startup CEOs highlighted this as a motivation for joining the incubator, arguing that this is especially important for small firms originating from the university. This indicates that the network of researchers might be of diminishing relevance when the aim is to commercialize an invention, creating a need for new business relations. Furthermore, even founders with previous business experience and industry contacts expressed the desire to access the incubator’s network. These perspectives

were shared by informant 1, who expressed that a relevant network is something startups voice as a key area where they need support.

Another theme that emerged from the interviews was the perception that the life-science industry is inherently global. Thus, international engagement appeared to be embedded within the structure of the industry, highlighting the need to be part of international networks. Unlike industries that are tied to a specific geographical location or local market, firms within the life science industry often cater to global needs. The following quote by an incubator representative illustrated this:

It is inherent in the nature of things. Because we work within a field where you are really independent of location. It has nothing to do with geography. It is not like starting a restaurant. Instead you move within a certain specific field. And then there is no reason why you would not do it for the whole world. ... It is not an end in itself to be international, but it lies in the nature of things.

- Incubator personnel 3

This perception of an inherently global industry was also reflected amongst startup representatives, who explained that they adopted a global mindset early on. For example, CEO 3 described that the startup “*has from day one been a global company*”. In relation to this, several startup representatives reflected upon the limited access to venture capital in Sweden, resulting in the need to look beyond the domestic market for investors. This suggests that a global mindset is not solely needed to access markets, but also a requirement for accessing capital.

Overall, the industry characteristics described by the interviewees not only highlight the need for access to networks, but also specifically emphasize the importance of international networks for startups that need to engage with global stakeholders, such as investors and customers. **ba4.2 The Incubator as a Network Intermediary**

Throughout the interviews, both startup and incubator personnel described the infrastructure of the incubator as an intermediary for accessing a broader scope of benefits. Incubator personnel 1 explained that the overarching purpose of the incubator is to help researchers in the development from idea to something that can help patients. Beyond the access to tangible

resources, such as laboratories, equipment, and business support, a commonly mentioned benefit of the participation in the incubator was the access to networks. When talking about the support that the incubator is providing, incubator personnel 1 mentioned that *“it is about connecting [startups] to the industry and helping the companies with networks”*.

One aspect regarding the access to networks, mentioned by multiple interviewees, was the importance of existing in a relevant environment. For instance, while incubator personnel 3 explained that the life science industry is *“location-independent”*, the employee also recognized that the incubator provides a relevant context which attracts startups. CEO 1, among others, further explained how they perceive that the incubator-context brings relevant industry players into the environment. This suggests that the incubator may function as a meeting point for startups and external parties within the life science industry.

In relation to this, another commonly mentioned function of the incubator is how it establishes a critical mass of companies by clustering both startups and competencies, which results in obtaining a stronger position within the ecosystem. For example, one employee explained that:

There is a critical mass here and [name of incubator] is also quite a large incubator. And there is specific expertise here as well. ... There is the scale advantage, the network and the region, that attracts people to come here. Life science is large, it is a significant business in this region.

- Incubator personnel 4

Furthermore, incubator personnel 1 explained that they use their critical mass to attract external actors such as investors. As the incubator is able to present itself as an actor with a big portfolio, it can be easier for the incubator to book an initial meeting and to later connect startups to those contacts, if relevant. Moreover, incubator personnel 3 highlighted the internal benefits of clustering firms in one location as *“there are synergies and positive effects from being located together”*.

Several interviewees further described how the incubator team establishes and introduces contacts between startups and relevant parties within its network. For example, incubator

personnel 3 stated that incubator organized activities give startups the opportunity to be seen and present themselves, which they described “*opens doors*”. The same employee shared one example where they helped a startup facilitate a contact to a regional organization. This provided an opportunity for the startup to pitch its product and technical challenges, which resulted in a collaboration with a larger firm that helped them develop the needed technology. Thus, it seems like incubator mediated contacts may result in useful connections for startups.

In the process of mediating relationships, the incubator utilized its employees' personal networks. During the interviews, it became clear that many of the incubator's employees and business coaches come from the life science industry and thereby bring connections through their own previous experiences. One of the incubator employees mentioned that:

We have established contacts within the industry, because the majority of our colleagues come from the industry themselves. So we can help the companies gain access to these networks.

- Incubator personnel 3

Incubator personnel 1 highlighted the benefits of having their business coaches employed at the incubator, rather than mainly relying on external consultants. Several startup representatives also explained how the incubator personnel utilize their personal connections to support the startups. For example, CEO 1 described how the business coaches are “*good at introducing their member companies to their [personal] networks*”. CEO 3 further explained how the incubator handles the contact until there is an interest in meeting with representatives from their startup. This seems to result in an incubator-facilitated network that is partially dependent on the people that are employed by the incubator at a specific point in time. However, this person-dependent network also seems to be associated with certain challenges. For example, Informant 1 highlighted the risk of losing a key part of their network if employees with relevant contacts leave the incubator.

Furthermore, CEO 2 described a rather limited usefulness of the incubator's contacts. They explained that since they have a very niche product, the incubator's business coaches lack relevant experience or contacts within their field, at least when it comes to the search for customers. CEO 2 further described the incubator as “*way too broad*” to facilitate relevant

contacts to all of their startups. Incubator personnel 4 presented a similar perspective, highlighting that the incubator's core competence lies within pharmaceuticals and medical technology. They argue that companies outside of these fields might not be able to access relevant contacts and support through the incubator. These perspectives suggest that while the incubator may effectively act as a network intermediary in certain branches of the life science industry, its ability to fulfil this role appears to be more limited in others.

In addition, CBO 1 also described a limited usefulness of the contacts which the incubator introduced them to. While they value the informal network of interacting with other startups, few of the incubator's external network parties have been of relevance to them. They do, however, use the business-related support and guidance from the incubator network, for example, to review investor contracts.

Overall, the participation in the incubator thereby seems to be perceived as a gateway to access the incubators network of relevant actors and contacts, as well as like-minded people who share similar experiences. However, an important requirement for the usefulness of these networks and connections is that they are relevant for the startups' needs and specific fields, otherwise the value seems to be limited.

4.3 Mechanisms for Facilitating Network Access

Most participants in the study described how they, through the incubator, have expanded their professional networks. These relationships were established through both structured initiatives as well as more informal interactions. The incubator's alumni community also emerged as a mechanism for facilitating network access. Finally, mechanisms aimed at connecting startups to international markets were also highlighted. The following section explores how these incubator-facilitated relationships were formed and perceived, while also highlighting areas where the incubator network was considered insufficient.

4.3.1 Structured Initiatives

The interviewees accounted for several forms of structured interactions initiated by the incubator. For example, incubator personnel 2, who works with organizing events, explained how activities, such as breakfasts, seminars, workshops, and lectures are regularly arranged by the incubator. Both incubator personnel and startup representatives highlighted the weekly

breakfast events where startups gather and interact with each other. Additionally, external partners affiliated with the incubator, such as law firms and patent agencies, come to the breakfasts to give presentations and offer guidance within their areas of expertise, something that was appreciated by multiple startup representatives. For example, CEO 4 illustrated this by explaining that *“the contact with [name of law firm] is great because you always have legal questions”*. Furthermore, CEO 1 gave an example of how a company introduced during an arranged breakfast resulted in a collaboration and the development of a *“really good relationship”* where the companies helped each other to solve problems. These findings suggest that the incubator facilitates network access by creating recurring meeting forums where relationships can develop over time.

As previously mentioned, startups can also get access to the personal industry connections of the incubator’s coaches. For instance, the coaches could establish a direct contact between a startup and a relevant player. CEO 4 described that *“[name of coach] has found a lot of contacts for us and got us into different companies”*. Another example which further illustrated the perceived benefits of these direct contacts was provided by startup CEO 3. They described how, when faced with a problem that exceeded the incubator’s internal expertise, one of the coaches was able to connect them with an external expert from their personal network:

But [name of coach] had a friend from 20 years earlier who was an expert in exactly this area. With whom I had a one-hour call. That pretty much sorted the whole thing out. And partly I had never found them myself and partly it would have cost a couple of hundred thousand to get such a consultant. But now it became a goodwill thing because they were friends with [name of coach].

- CEO 3

Other examples of structured initiatives from the interviews, aimed at facilitating access to an extended network, were events where startups are introduced to investors or larger companies. For example, incubator personnel 1 described how multiple life science incubators will jointly organize an investor event in the fall. By aggregating startups from several incubators, they explained how these events create a critical mass of companies, which increase the appeal to potential investors. They further explained how the incubator

also works proactively to build contacts with the industry, for example by meeting actors and attending conferences:

We talk to them [the industry], go to conferences, meet them, contact them. And we sort of do it in different ways, it's like normal sales work. But then we sell ourselves as a player that has a large portfolio with lots of exciting companies that they might want to look at.

- Incubator personnel 1

However, not all startups seemed to benefit from these structured initiatives. For instance, CEO 3 explained that although they have been put in contact with potential partners, these structured interactions had not resulted in any tangible outcomes:

They have tried to help us with investments. We have come into contact with a couple of potential investors. They never materialized but they have continuously positioned us in such conversations.

- CEO 3

Furthermore, CBO 1 expressed that they had not received help from the incubator in expanding their business network. Similarly, CEO 2 explained that although they initially appreciated the direct contacts with the legal and patent firms, they soon needed more specific contacts for their niche of the industry, which was beyond the scope of the incubator network. This indicates that the incubator's structured mechanisms for facilitating network access might only be beneficial to a certain degree.

Overall, structured interactions primarily took the form of organized activities, such as seminars, workshops, and investor-focused events. In addition, recurring meetings, such as weekly community breakfasts, provided regular opportunities for startups to engage with relevant actors. Although most interviewees had mainly positive experiences of the structured initiatives in terms of accessing relevant networks, others highlighted how these initiatives had not provided substantial value, as they did not align with the startups' specific needs.

4.3.2 Informal Interactions

Several interviewees described how being part of the incubator places you in a social context with like-minded individuals, where relationships are also formed through informal, spontaneous interactions. For example, alumni CEO 2, from the incubator's alumni network, stated how they got some of their customers through the incubator's network, but solely through informal interactions. This suggests that valuable business opportunities may also emerge outside of structured networking events.

Furthermore, startup CEO 4 emphasized that they attend the incubator's CEO lunches, where they exchange experiences and advice in an informal setting. They showcased an example of how an informal interaction between the startups could sound like:

'I heard you used that communications agency.' 'How are they?' 'No, do not take that one!' You know, that's what we talk about. All the time.

- CEO 4

In addition, informal interactions also seemed to extend beyond the incubator's internal community and into a broader networking context. For example, startup CEO 3 explained how they got a customer through a more informal interaction a few weeks after they both attended an incubator-organized webinar:

And then they organize webinars where you as a company can also present. And that's actually how we found a first customer of a certain customer-type. They saw it and then we got in touch, and a few weeks later we had closed another one [customer].

- Startup CEO 3

Taken together, these findings suggest that informal interactions constitute a relevant mechanism for network formation within the incubator. While formal activities seem to provide initial access to relevant actors, informal interactions could develop these into tangible outcomes, such as knowledge exchange or customer acquisition.

4.3.3 Post-Incubator Community

In addition to the mechanisms mentioned above, the incubator facilitates an alumni community in which several startup CEOs expressed a desire to remain members after graduating from the incubator. For example, CEO 4, whose company is about to leave the incubator, expressed their intention to stay as an alumni member to “*retain access to the network and community*”. The same company will also keep their office in connection to the incubator, which they stated “*demonstrates the value they place on the incubator*”. Similarly, CEO 3, whose company is also approaching the end of its incubation, expressed the same intent to become an alumni member to remain a member of the network. They highlighted the benefits of remaining in the alumni network as they perceived there to be a large potential customer base among the startups. They further accounted for the benefits of staying in the network to maintain relationships with other founders to exchange experiences and advice:

And for me as a founder, it is also a group of other founders. And you always want to stay friends with them. Partly because you might be able to help out, but also because when you have problems yourself, it is better to be able to call someone who has gone through that process at some point.

- CEO 3

Several participants also described what appears to be an ongoing exchange between incubator startups and alumni. For example, CEO 4 described how they buy laboratory services from one of the incubator’s alumni companies. Furthermore, alumni CEO 2 described that they “*still have customers in the incubator*”, even though they left more than ten years ago. They also described how they continuously look into the incubator portfolio to identify potential new customers. Overall, the fact that several startups intend to remain a part of the incubator community suggests that the value of the incubator network extends beyond the formal incubation, potentially enabling continuous access to business opportunities.

In addition, incubator personnel 1 described an active process where the incubator is continuously trying to identify ways to leverage their alumni companies to support their current startups. Another incubator representative acknowledged this and provided an example of a recent event, where the incubator organized a presentation for its startups with an alumni who has established business operations in the United States. While this was

organized as a more formal interaction between startups and alumni, startups instead mentioned exchanges taking place in more informal settings. For example, CEO 2 described an informal interaction with an alumni company:

I have, for example, also reached out to [name of company], also an alumni. I know they have many customers in the U.S., so I went over there [to their office] and had coffee with their CEO, asking how they approached their sales process, as I am curious about how one can secure more contracts. So you can just go and ask those kinds of things. It does not need to be very formal.

- CEO 2

In general, the findings indicate that the incubator's network extends beyond their incubator programs. While the incubator personnel outlined how they actively try to facilitate collaborations with alumni, startup CEOs primarily highlighted informal interactions. This suggests that the incubator facilitates a network that continues to generate knowledge exchange and access to relevant actors even after firms have left the incubator.

4.3.4 Mechanisms for Accessing International Networks

Participants consistently described the life science industry as inherently global, making access to international networks particularly important to support startups' growth. However, access to international markets emerged as one area where the incubator's mechanisms for facilitating networks appeared to be insufficient in catering to startups' needs. Incubator personnel 1 explained that the incubator has established stronger network connections within certain sub-industries. For example, they pointed out that the incubator has better connections with the pharmaceutical industry, compared to the medical technology industry. This highlights that the incubator's international connections are sometimes inadequate for startups operating within niche areas:

We do have contact with the large pharmaceutical companies, but there are startups here that research very specific diseases that may only affect a very small number of patients in the world ... [in those cases] we have to go out and basically look for who is also working with this and how we can find them.

- Incubator personnel 1

Other incubator representatives had a similar perspective, further explaining that the incubator has to adopt different measures depending on the sub-industry in which the incubator wants to establish contacts. For example, incubator personnel 2 explained that while there are large conferences within biotechnology and pharmaceuticals, this is not as common within medical technology, where they actively have to seek out relevant actors. This indicates that the process of facilitating international networks for some sub-industries becomes more complex, as relevant international contacts might not necessarily be part of the incubator's existing network. These difficulties were acknowledged by the CEO of a startup operating within a niche sub-industry:

This whole aspect of international contacts, you do not get much help with that. ... It would have been better if they maybe had some collaborating partners in the U.S. and some in Japan, for example, so that you could get more of the specific kind of help.

- CEO 2

Although the general access to international markets appeared to be limited, the interviewees' experiences revealed some mechanisms through which the incubator aims to facilitate access to international networks. Firstly, incubator personnel 2 described how they participate in cross-border collaborative projects, for example in Scandinavia, enabling their startups to access additional support and leverage international synergies. They further highlighted how they can leverage relationships derived from previous cross-border collaborations when supporting startups that are targeting a specific market. Building on this, incubator personnel 3 highlighted that engaging in such cross-border projects also allows their startups to be visible in a wider arena. These findings indicate that the incubator has a certain level of international relationships which it tries to utilize when helping startups to access international networks. However, it also became apparent that these efforts are mostly found in regions close to the incubator's home market.

Another mechanism that emerged from the interviews, that the incubator uses to specifically connect its startups with large industry players, were industry-sponsored startup programs.

These programs were described as an incubator-initiative in which startups compete for support from established pharmaceutical companies. Incubator personnel 1 described that:

I also think we are very good at working with international networks ... There we have worked with these types of [industry-sponsored startup programs]. Not many incubators in Sweden or the Nordics have managed to achieve that, which is something I think we should be proud of. Ultimately, it is about connecting with the industry and helping the startups with networks.

- Incubator personnel 1

CEO 4 described that although their company did not win the competition, they perceived the participation alone as valuable as they gained personal contacts within two large industry firms, which have since been involved in the startup's development process. This indicates that the competition in itself might facilitate relationship building with international industry actors. However, CEO 2 pointed out that "*it does not really help all companies*", arguing that it only benefits the winner of the competition. Thus, while these forms of activities seem to have broader benefits than solely for the winner, it might not be enough to facilitate relationship building with large industry partners for the entire incubator portfolio. Therefore, it appears that such a mechanism by itself does not constitute a general access to international industry connections.

Participation in international conferences emerged as an additional mechanism employed by the incubator to facilitate access to international markets. For example, incubator personnel 2 described that "*we travel to many conferences, both investor conferences and industry conferences, and we build contacts through that.*" This mechanism appears to broaden the incubators network. However, as startups generally perceive the international network facilitation to be insufficient, it is unclear how valuable these contacts are in practice.

Incubator personnel 3 further highlighted how they receive funding that they also can distribute to their startups to facilitate participation in international activities, such as conferences and trade fairs. This was perceived as a more valuable mechanism among startups. CEO 2 described such opportunities as beneficial, especially since it is costly to attend for example international conferences, as "*a trip like that easily ends up costing*

100.000 SEK”. This mechanism comes across as a more indirect way of facilitating access to international networks, especially since the startups may otherwise lack the financial resources to participate in such networking activities independently.

Building on this, in the search for international investors, the incubator also appeared to play a somewhat facilitating role. For instance, alumni CEO 1 described how the incubator introduced them to international investors during their time in the incubator. This was done both through “*direct contact*” and incubator-organized presentations with potential investors. The same participant also gave an example of how the incubator introduced them to an international venture capital firm, which, years later, resulted in a collaboration. In contrast, CBO 1 explained that they had not received any help to access foreign investors.

Overall, the incubator’s activities, aimed at facilitating international network access, appeared to have limited usefulness as they seemed to be unable to sufficiently support a diverse startup portfolio. While the incubator employs several mechanisms intended to facilitate international network access, the findings suggest that the results of these efforts are both too focused on single firms and largely dependent on the startup’s specific industry. As a result, the incubators international network facilitation therefore appears to benefit some of their portfolio-firms more than others.

4.4 The Incubator as a Source of Legitimacy

A recurring theme throughout the interviews was the perception that being part of the incubator program enhanced the startups’ legitimacy. Several respondents described how being part of the incubator functions as a seal of quality, signaling to external stakeholders that the startup has undergone a certain level of screening. For example, startup CEO 3 explained how a key motivation for joining the incubator was to obtain a form of quality signal that would facilitate access to funding, as the incubator signals that the startups meet a “*baseline level of quality*”. Another startup CEO argued that the membership functions as a certification of quality by facilitating contact with people:

When you send an email, your affiliation is visible in the signature. People can see that you are part of the community, which has a good stamp. So I think it makes it easier to get in touch with people, as they may be more willing to

respond or agree to a meeting. ... It goes like this: 'okay, they can be worth talking to, they are members there [of the incubator] after all'.

- CEO 4

Supporting the view expressed by several startup CEOs, multiple incubator employees were also of the perception that the incubator increases the startups' credibility, since it indicates that the company has undergone a selection process and meets certain standards. For example, incubator personnel 4 noted that external investors, primarily in Sweden, may perceive it as a sort of quality signal if a company has been through the incubator. Building on this, incubator personnel 2 also argued that the quality that the incubator brand signals is something that attracts attention, for example at conferences. Taken together, the findings suggest that legitimacy functions as an indirect mechanism for network access. By signaling quality toward external stakeholders, such as investors and customers, incubator affiliation appears to increase startups' ability to initiate contact with relevant external actors.

The notion that incubators, to some extent increase the credibility of startups was highlighted by both of the external informants. They also described the incubator as a form of quality signal, indicating that the startup has undergone a selection process and is supported by relevant actors. For instance, informant 1, explained that being associated with the incubator's brand signals that *"you have relevant actors supporting you"*, while informant 2 argued that admission to the incubator demonstrated that the startup has been *"recognized and selected based on certain criteria"*. Together, these accounts suggest that incubator association may reduce uncertainty among external stakeholders by signaling both credibility and growth potential.

Startup representatives' perceptions of the incubator as a source of legitimacy outside of Sweden was somewhat divided. For example, CEO 1 argued that the incubator is *"well known internationally"*, something they mean increases its startup's credibility and *"attracts relevant contacts into the network"*. However, other participants expressed limitations of the extent to which the incubator serves as a seal of quality in international contexts. Both startup and alumni representatives argued that the potential credibility associated with the incubator is largely confined to the context in which the incubator is recognized. For example, CEO 3 explained how the incubator *"has definitely acted as a seal of quality"*, but primarily in

Sweden and Denmark where people know of it. Alumni CEO 2 also described that the incubator might be known and relevant within Sweden and Scandinavia, but that it is not of relevance when traveling outside of this region.

Additionally, some interviewees even expressed that being part of the incubator does not necessarily provide any tangible credibility. For example, startup CEO 2 argued that the incubator is not known internationally and, since all their customers are international, they stated that *“I do not think it gives us any cred to be in the incubator”*. However, they noted that the affiliation with the incubator could potentially increase credibility towards investors, but as they company is not seeking external funding, it does not provide any direct benefits for them.

Overall, some of the findings suggest that association with the incubator may strengthen the brand of the startups by signaling legitimacy towards external actors. However, the findings also indicate that potential credibility among external actors provided by the incubator is context-dependent. More specifically, its perceived value appears to vary depending on the type of stakeholder targeted, and the geographical region in which these stakeholders operate. Since respondents expressed different views regarding the incubator’s recognition outside Sweden, it may suggest that the benefits associated with its reputation may not be equally transferable across borders. Given the global nature of the industry, participation in a small, national incubator, may not generate any tangible benefits in terms of credibility, if the startups’ potential customers, investors, and collaborative partners are unfamiliar with the incubator.

4.5 Chapter Summary

This chapter has presented the empirical findings from the interviews, structured around the four key themes that emerged from the analysis. The findings showcase that the global, highly regulated, and capital intensive nature of the life science industry creates a need for external networks. Within this context, the incubator seems to function as a network intermediary by facilitating access to relevant actors through structured initiatives, informal interactions and alumni connections. Further, the findings indicate that incubator-facilitated networks can support startups’ internationalization by helping them access industry partners and capital. However, the value of these networks seems to vary depending on the startups’

needs, sector, and targeted market. Ultimately, the incubator was also perceived as a potential source of legitimacy and credibility, although this effect appeared to be context-dependent, and likely stronger in settings and locations where the incubator is recognized.

5. Discussion

The purpose of this study was to contribute to the incubator literature. Specifically, to enhance the understanding of how industry-specific incubators facilitate startups' access to and use of business networks. In this last chapter, the findings of the study are discussed in relation to previous literature. Following that, the main theoretical and empirical contributions of the study are addressed. Further, the practical implications of the study are discussed. The chapter is concluded with suggestions for future research and final reflections.

5.1 Discussion of the Findings

Initially, the findings of the study are discussed in relation to the research question and the theoretical background. The four overarching themes that emerged from the interviews are reorganized into three broader themes in the discussion. More specifically, theme one and two from Chapter 4 are discussed together to better address the research question.

5.1.1 Incubators as Network Intermediaries in a Global Industry Context

The study's findings highlight that the life science industry is characterized as being capital-intensive, highly regulated and having long lead times. In line with the liability of newness, which was identified by several scholars (e.g. Bruneel et al. 2012; Kuryan et al. 2018; Schwartz, 2013), our findings suggest that it becomes difficult for life science startups to navigate regulations and financing on their own. For startups within the life science industry, these industry characteristics might therefore have a constraining effect on their development, increasing the need to be part of relevant networks. This may incentivize them to enter incubators to get access to, and support from, networks and industry actors.

In line with previous literature on global industries, there was also a consensus among the interviewees that firms operating within life science are part of a fundamentally global industry, requiring them to adopt a global orientation from the start. These findings support previous research by Shahabadi and Aliyari (2026), who argue that the changing structure of markets has made cross-border operations an unavoidable aspect of firms' operations and development. Based on our findings, it appears that the firms and environment within the life science industry have adjusted to its global nature. In addition, these findings also seem to support the research by Knight and Cavusgil (2004) and Oviatt and McDougall (1994) on

born-global firms and INVs, by further highlighting the importance of utilizing networks and relationships to access necessary resources. Considering the findings of our study and previous literature, it appears that startups operating within the life-science industry rely on networks and contacts to develop.

Furthermore, the findings suggest that incubators' operations have the effect of clustering different actors, such as startups, investors, and expertise within their network. This view aligns with Johanson and Mattsson's (1988) description of markets as clusters of interconnected actors, suggesting that the incubator provides one type of cluster where startups can establish relationships and get access to a broader industry network. Both the findings of our study and Johanson and Vahlne (2009), highlight the importance of having a position within a network, as necessary processes happen within them. Through the support functions and networks provided by the incubators, startups seem to overcome certain difficulties associated with being small and young firms. This indicates that incubators might have the ability to help startups overcome their liability of outsidership, which Johanson and Vahlne (2009) describe as essential for accessing relevant information and opportunities.

Within this context, the findings indicate that the incubator can function as a network intermediary, helping startups to gain access to relevant opportunities and relationships that otherwise might have been difficult to access as a single startup. This aligns with what Bergek and Norrman (2008) establish as the incubators' role as a network mediator. While our findings seem to support this view, they also highlight that too person-dependent relationships may create instability within the network. As a majority of the incubator-facilitated connections appear to originate from personal relationships of incubator personnel, the existence of the incubators network relies on these individuals to a certain extent.

Building on this, the insights of Johanson and Johanson (2021) highlight the importance of adjusting operations to the changes in the networks one is part of or want to enter, to ensure relationship building and access to opportunities. In the context of incubators, this indicates that both startups and incubators need to continuously synchronize with the changes happening within their networks, to avoid mismatches between startups and the market networks they aim to enter. As many of the incubator's relationships appear to depend on the

personal networks of incubator personnel, it may be important to ensure that these relationships are maintained and shared across multiple members of the organization. This could help preserve access to external networks even if key individuals leave the incubator. This strategy would align with Granovetter (1973) idea of weak relationship ties as crucial for network access.

5.1.2 Mechanisms for Network Access

The findings suggest that the incubator facilitates startups' access to networks through several mechanisms, including structured initiatives, informal interactions, direct contacts, and alumni connections. The overall positive experience of the structured activities, such as breakfasts and investor events, confirms Van Rijnsoever (2020) perception that field-building activities arranged by the incubator may benefit the startups in expanding their network. Further, direct connections mediated through the incubator were often mentioned positively, suggesting that the direct mediation described by Shih and Aaboen (2019) may constitute an effective mechanism for accessing networks.

The findings also suggest that informal interactions, such as spontaneous encounters, CEO lunches, and alumni contacts, play an important role in exchanging knowledge, customer acquisition, and peer support. These findings align with Granovetter's (1973) argument that weak ties can function as bridges to new information and opportunities. In the incubator context, informal interactions seem to function as weak ties that connect the startups to actors and opportunities beyond their immediate network. The notion that informal interactions through the incubator allows for knowledge and experience exchanges also supports Hausberg and Korreck's (2020) findings that informal interactions between founders create synergies through knowledge sharing.

Further, the findings imply that the incubator's network extends beyond the formal incubator period through alumni relations. This is supported by Sohail et al. (2023) and Hausberg and Korreck (2020), who argue that alumni networks constitute an important mechanism for facilitating entrepreneurial networks and continuous knowledge exchange. The alumni community illustrates how startups not only gain access to networks through the incubator, but actively utilize these relationships for practical purposes, such as customer acquisition or strategic advice. As the alumni network is mainly mentioned in positive terms by the study's

participants, further leveraging those relations may enhance the startups' ability to utilize the incubators network, a perspective also supported by Hausberg and Korreck (2020).

However, the findings also nuance the existing literature by suggesting that the usefulness of the incubator-facilitated networks depends on the relevance of the incubator's connections to the startups' specific fields and needs. Our findings highlighted that the incubator effectively facilitates access to actors providing general support, such as legal advisors and patent firms, which aligns with what Shih and Aaboen (2019) identify as the micro-net. However, as startups develop, their need for more industry-specific contacts seemed to increase, something the incubator appeared to find challenging to facilitate. This aligns with Shih and Aaboen's (2019) notion that incubators lack industry specific relationships. Furthermore, both startup representatives and incubator personnel perceived the incubator's scope to be too broad, specifically for startups operating in niche industries. This perception is also supported by Pettersen et. al (2015) who argue that incubator-provided networks are often complementary rather than sufficient on their own. Considering this, incubators within the life science industry might be able to facilitate more relevant network access for its startups if specializing in a particular niche of the industry, rather than targeting the industry as a whole. This suggestion is also supported by Grimaldi and Grandi (2005), who argue that incubators should specialize their services.

The findings from the interviews also seem to support the network perspective on internationalization, which emphasizes that firms internationalize through relationships rather than independently entering foreign markets (Coviello & Munro, 1995; Johanson & Vahlne, 2009; 2017; 2020). The incubator aims to facilitate these processes by exposing the startups to international actors, for example, through international conferences and collaborative cross-border projects. This aligns with the mechanisms for international expansion identified by Engelman et al (2015), who argue that such mechanisms can contribute to increasing visibility and network building in an international arena. By facilitating introductions to foreign actors, the incubator may help to reduce the liability of outsidership, as described by Johanson and Vahlne (2009). Through these mechanisms, startups could gain exposure to international networks, supporting their expansion.

The findings partly challenge Pinto and Rua's (2023) argument that incubators lack resources dedicated to international expansion. In the studied case, the incubator seems to facilitate international exposure through international initiatives. However, the findings simultaneously seem to support Pinto and Rua's (2023) argument by suggesting that these international networks are somewhat limited, and often insufficient, for startups operating within niche segments. The findings further indicated that the incubator's ability to facilitate international networks differs across sub-industries within life science. For instance, while stronger international ties appeared to exist within pharmaceuticals, startups operating in more niche sectors experienced greater difficulties in accessing relevant international contacts through the incubator. This suggests that the incubator specializing in a certain industry may not guarantee relevant network access, as for example, the life science industry consists of diverse sub-industries with distinct networking needs. Thus, the effectiveness of incubator-facilitated networks may depend on how well the core competencies of the incubator align with the sub-industries the startups operate within.

5.1.3 The Incubator as a Source of Legitimacy

Legitimacy emerged, from the interviews, as one mechanism that facilitates startups' initial network access. Several startup representatives highlighted the incubator's good reputation and described participation as a quality indicator, suggesting that incubator affiliation signals credibility to external actors. This suggests that incubator-provided legitimacy may enable initial network contact, where external actors are more willing to engage despite the lack of previous ties. These findings align with the insights presented by Grilli and Marzano (2023), who argue that incubator affiliation increases the likelihood of startups establishing alliances with third parties.

Beyond affiliation, the initial screening process to be accepted to the incubator, also emerged as a mechanism through which legitimacy seems to facilitate network access. Participants highlighted how the selection process signals that the startup meets certain standards and that their business concept has been deemed viable. Kuryan et al. (2018) and Pinto and Rua (2023) similarly identify incubator screening processes as a source of legitimacy that enhances credibility when interacting with customers, partners, and investors, both domestically and internationally. Overall, the highlighted literature (Grilli & Marzano, 2023; Kuryan et al. 2018; Pinto & Rua, 2023) combined with our findings suggest that incubators

may indirectly facilitate access to business networks by positioning startups as credible actors through both affiliation with a reputable incubator and screening processes that signal quality and viability. The high need for capital might make this perceived credibility towards investors and industry partners especially relevant within the life science industry.

When considering incubator-provided legitimacy in the global context, the respondents had different views as to whether it serves as a quality indicator internationally, specifically beyond the Nordic region. Thus, our findings partly contradict Kuryan et al. (2018), who positions the incubator as an enhancer of credibility in international interactions. However, this discrepancy may potentially be explained through the network literature, which highlights the concept of liability of outsidership (Johanson & Vahlne, 2009). The case-incubator might not have established a sufficient insider position within relevant networks beyond the Nordic context, which could limit the extent to which its reputation functions as a credible signal abroad. Thus, incubator-provided legitimacy seems to facilitate network access primarily within contexts where the incubator is recognized and embedded.

5.2 Theoretical Contribution

Previous incubator literature mainly focuses on mechanisms through which incubators aim to facilitate network access in general. This study extends existing literature by examining how incubators facilitate network access within a specific sector, namely the life science industry. While previous literature has emphasized incubators' role in facilitating network access, the findings of this study strengthen the perspective that the value of such support is context-dependent. In particular, the study suggests that access alone may not be sufficient, but rather that the usefulness of incubator-facilitated networks appears to depend on their relevance to startups' specific industry branches and needs. These insights contribute to the incubator literature by highlighting the context-dependent nature of incubator support, even within incubators that are focused on startups within a single sector.

5.3 Empirical Contribution

This study provides empirical insights into how network access is facilitated and perceived within the context of a Swedish life science incubator. The study incorporates perspectives of multiple stakeholder groups associated with the incubator ecosystem, thereby providing a comprehensive understanding of incubator-facilitated network access within the context of

the Swedish life science industry. The study further contributes by providing insights into the challenges associated with facilitating access to international networks, within the Swedish life science context. One empirical insight within the study's specific context is the challenge of facilitating access to relevant actors for startups operating within specific sub-sectors, something that appeared to be a result of the broad scope of the incubator.

5.4 Practical Implications

Practical implications that emerged from the findings may be relevant for future incubator practices. Firstly, specialized incubators may strengthen the ability of incubators to facilitate access to relevant networks for startups. Thus, niche incubators with focused core competencies around a specific sub-industry, such as medical technology, biological technology, or pharmaceuticals, could improve the relevance and quality of network support provided to startups.

Secondly, the findings highlight the potential value of utilizing alumni networks more strategically. Firms that have graduated from the incubator may constitute an important source of industry knowledge, contacts, and mentorship. Thus, incubators could more actively leverage this competence to support startups. They could do this, for instance, through more collaborative projects or initiatives with the alumni community and the incubated startups.

Lastly, incubator-provided legitimacy appears to be more effective in regions where the incubator is recognized. Thus, increasing incubators' international visibility and network embeddedness through an expanded focus on initiatives such as international partnerships and collaborations might enhance incubators' ability to facilitate startups' access to international business networks. This becomes especially relevant within the life science context, as the industry is inherently global and startups often are required to expand beyond the national context.

5.5 Limitations and Future Research

Although the findings of this study may provide some insights to the incubator literature, several limitations should be acknowledged and may serve as a direction for further research. Firstly, the qualitative, single-case study design limits the possible replicability of the study.

For example, incubator practices may change, the networks will evolve, and new startups with different needs and perceptions may emerge, which could lead to different results if the study was conducted again. In addition, the study is limited to a specific industry-focused incubator within the Swedish incubator system, making it difficult to generalize findings to other incubator contexts, industries, or national settings. Thus, future research could explore how other life science incubators facilitate network access, as well as compare incubators across different industries and countries.

Furthermore, the findings of this study suggest that the usefulness of incubator-facilitated networks may depend on factors such as industry specialization. Therefore, future research could compare broad incubators with more niche ones to examine how the degree of specialization influences startups' access to and use of industry-specific networks.

In addition, a quantitative study could complement the qualitative insights of this study and thereby strengthen the foundation for broader generalizations. For example, quantifying mechanisms for facilitating startups' network access and measuring them across a larger sample of incubators, could allow for statistical testing to see whether the identified patterns hold beyond the context of this case study.

Lastly, as this study adopted a cross-sectional design, future research could apply a longitudinal approach to investigate how incubator-facilitated networks evolve over time and how these relationships influence startups' long-term development and international expansion.

5.6 Conclusion

This study set out to examine how industry-specific incubators facilitate startups' access to and use of business networks. The study's findings suggest that incubators play the role of network intermediaries by connecting startups with investors, industry actors, and advisors, through a combination of structured initiatives, informal interactions, direct mediation, and alumni relations. The findings reflect several mechanisms for network facilitation that have been highlighted in earlier incubator research. However, the findings also illustrate how, within the life science context, a broad incubator scope may limit incubators' ability to provide industry-specific support and facilitate relevant network access. Furthermore, within

an inherently global industry, incubators that mainly facilitate network access within a national context might not sufficiently meet startups' needs for international relationships and market access. Thus, the findings suggest that the effectiveness of incubator-facilitated networks depends not only on the access itself, but also on the relevance, specialization, and international embeddedness of the incubator's network.

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Appendix A

Interview Guide

The following interview guide presents the main themes discussed during the interviews. Below the main themes are examples of questions that were asked. Some questions include two versions to highlight how the questions were adapted for interviews with incubator and startup/alumni representatives, respectively.

1. Introduction

- Could you describe your company and your role within the company/Could you describe your role at the incubator?
- Do you have any operations outside of Sweden?
- How long have you been part of the incubator program/How long have you worked at the incubator?
- Which of the incubator service offerings are you using/What services is the incubator offering?

2. Life Science Industry

- How would you describe the life science industry?
- What do you perceive as the main challenges for startups in the life science industry?
- Is international engagement important for startups within the industry?

3. Incubator

- How would you describe your overall experience of being part of the incubator/How would you describe the incubator's overall purpose and objectives?
- Why did you want to be part of the incubator?
- What were your expectations beforehand?
- What kind of support have you received from the incubator?/What kind of support do the incubators provide startups with?

4. Access to networks

- In what ways, if any, has the incubator facilitated introductions to new contacts?/How does the incubator facilitate introductions to new contacts?
- How would you describe the specific activities where the incubator connected you with new contacts?/How would you describe the specific activities where the incubator connects startups with new contacts?
- Is there a network between startups?
- Is there a network between startups and alumni firms?
- Which actors within the incubator's network have been the most relevant to you/Which actors tend to be most central in the incubator's network?

5. Use of networks

- Do you/the startups use the contacts or relationships facilitated through the incubator?
- Does the incubator play any role after the initial introduction?

6. Perceived value

- How would you describe the usefulness of the connections facilitated by the incubator?
- Would you say that the incubator plays a role in startups' access to networks?
- Are there any challenges or limitations in how the incubator supports network access?
- Are there situations where your networks are not sufficient for your or your startup's needs?/Are there situations where you (incubator personnel) think that the incubators' network is insufficient for the incubator startup?

7. Internationalization

- Does being part of an incubator influence your opportunities to engage with international markets?
- Do you actively work to connect startups with international contacts?
- Could you provide an example of how you received support from the incubator in your process of expanding abroad?/Could you give an example of a startup that received support from the incubator when expanding abroad?

8. Closing reflections

- Is there anything about the topics of today's interview which we have not talked about, but that you would like to mention?

Appendix B

Flowchart of Coding Process

The figure illustrates the coding process performed as part of the thematic analysis. The first step constitutes the data collection through interviews. In the second step, the transcribed material was interpreted by the authors, which was done through individual familiarization with the material. In the third step the initial “first order codes” were identified. These codes were then grouped together into “second order themes” in the first stage of categorization. In the second stage of categorization, these themes were further grouped together into the final “overarching themes”, which provided the basis for the analysis.

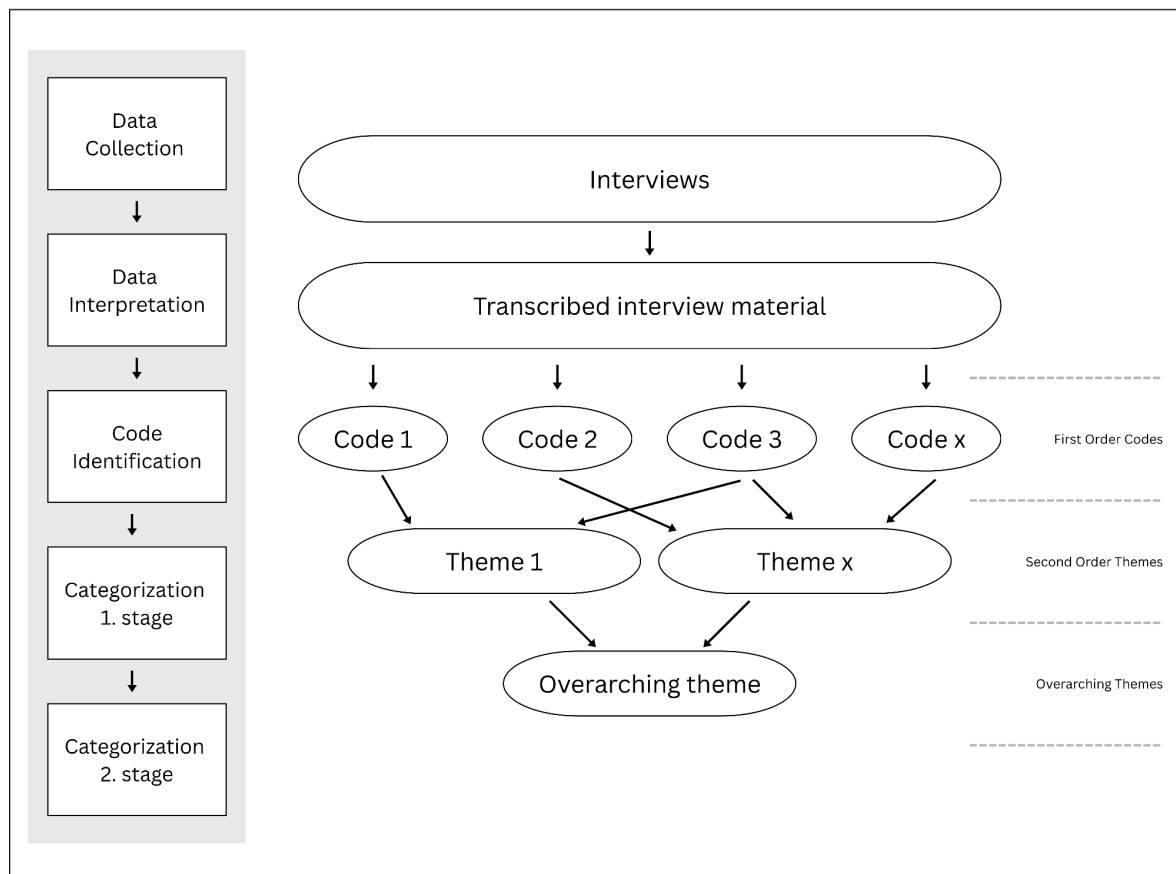


Figure A1: Flowchart of coding process from data collection to final categorization of the overarching themes.

Appendix C

Authorship Statement

The authorship of this thesis adheres to the European Code of Conduct for Research Integrity (2017) and the Vancouver rules (2018). All authors have contributed equally to the design of the research, the data collection and analysis, as well as writing the thesis and interpreting the results. Thereby, the authors share the responsibility of both the contents and accuracy of the thesis.

Appendix D

AI Statement

In accordance with the AI guidelines, AI tools were not used as a co-author but rather as supporting tools for certain parts of the thesis process.

- Sunet Scribe was used to transcribe the recorded interviews.
- Notebook LM was used to clarify and support understanding of difficult concepts.
- ChatGPT was used for grammar refinement and to improve the flow of sentences, in cases of uncertainty.

To illustrate how the tools were used in practice, the following table consists of generalized examples which represent the types of prompts that have been used.

Table A1: Examples of AI usage.

Purpose	Aim	Example prompt
Clarification and explanation	• Clarifying the main points of difficult literature • Improving the authors understanding of complex concepts	[Name of author(s)] discuss [name of theory], can you explain what this theory is about in a simple way? Is our understanding of this concept correct, according to [name of author(s) and specific literature]? Can you clarify what is meant by [name of concept] in [X] context?
Grammar checking	• The correct use of different tenses • Grammatically correct sentences • The appropriate use of academic language for evaluating	Is [X] the correct tense form for this sentence [insert sentence]? Is [X] wording grammatically correct in this sentence [insert sentence]? If we want to express hesitation towards an idea, is [X] an appropriate use of academic language?
Flow of sentences	• Improving repetitive, long or complex sentences	Can you give bullet point suggestions for how to make this sentence less repetitive? Can you give bullet point suggestions for how to clarify our point [X] in this sentence, it currently feels difficult to read. Can you give bullet point suggestions for how to shorten this sentence without losing the main point [X].