

**THE INCUBATION ADVANTAGE: LEVERAGING
BUSINESS MODEL INNOVATION AND
ENTREPRENEURIAL ECOSYSTEMS FOR START-UP
GROWTH**

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ABSTRACT

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Abstract <p>Guided by the pursuit of advancing economic growth, this study explores how incubators can assist growth-oriented start-ups with business model innovation and foster entrepreneurial ecosystems. By addressing these previously neglected catalysts of start-up growth, this research contributes to enhancing the effectiveness of incubator programs. The study, employing a qualitative research methodology, draws on semi-structured interviews with start-ups enrolled in an industry-agnostic incubator from central Finland and industry experts from Finland and Spain. The research explores key drivers of business model innovation, examines the associated characteristics and challenges, and identifies mechanisms that incubators can employ to foster such innovation. Additionally, the study sheds light on pertinent actors within entrepreneurial ecosystems, potential partners for start-ups, the learning opportunities entrepreneurs derive from these ecosystems, and the collaborations that incubators should establish to facilitate start-up growth. The findings underscore the instrumental role of incubators in facilitating business model innovation activity among start-ups and emphasize the position of incubators as vital linkages within entrepreneurial ecosystems. In addition, the study shows how entrepreneurial ecosystems can equip start-ups with the expertise and resources needed to internationalize to promote start-up growth further. The investigation offers implications for policymakers and practitioners seeking to encourage entrepreneurship and drive economic growth. The study's insights can serve as guiding principles for designing and implementing more effective incubation programs.</p>	
Key words Incubation, Business Model Innovation, Entrepreneurial Ecosystem, Internationalization	
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CONTENTS

1 INTRODUCTION.....	8
1.1 Background.....	8
1.2 Research Questions.....	9
1.3 Contribution.....	10
2 THEORETICAL FRAMEWORK.....	12
2.1 Incubation.....	12
2.1.1 Venture Development Programs.....	12
2.1.2 Purpose of Incubation.....	15
2.1.3 Incubation Services.....	16
2.1.4 Incubator Types.....	17
2.1.5 Effectiveness of Incubators.....	18
2.1.6 Networking.....	22
2.1.7 Internationalization.....	23
2.2 Entrepreneurial Ecosystems.....	24
2.2.1 Definition of Entrepreneurial Ecosystems.....	25
2.2.2 Emergence of Entrepreneurial Ecosystems.....	26
2.2.3 Actors in Entrepreneurial Ecosystems.....	27
2.2.4 Connectivity of Entrepreneurial Ecosystems.....	27
2.3 Business Model Innovation.....	28
2.3.1 Conceptualization of Business Models and Business Model Innovation.....	29
2.3.2 Sources of Business Model Innovation.....	31
2.3.3 Stages of Business Model Innovation.....	32
2.3.4 Purpose of Business Model Innovation.....	32
2.3.5 Performance Implications of Business Model Innovation.....	33
2.3.6 Business Model Innovation and Internationalization.....	35
2.4 Summary of Theory.....	36
3 DATA AND METHODOLOGY.....	39
3.1 Research Methodology.....	39
3.2 Research Strategy.....	40
3.2.1 Case Study Method.....	40
3.2.2 Rigor.....	41
3.3 Data Collection.....	42
3.3.1 Case Selection.....	42
3.3.2 Interviews.....	50
3.4 Data Analysis.....	52
4 FINDINGS.....	56
4.1 Nature of Business Model Innovation.....	56
4.1.1 Drivers of Business Model Innovation.....	56
4.1.2 Characteristics of Business Model Innovation.....	58
4.2 Business Model Innovation Support.....	59

4.2.1	Innovated Components of Business Models.....	59
4.2.2	Entrepreneur’s responsibility.....	62
4.2.3	Direct Business Model Innovation Support.....	63
4.2.4	Indirect Business Model Innovation Support.....	67
4.3	Networks.....	68
4.3.1	Support Systems and Players in Entrepreneurial Ecosystems.....	68
4.3.2	Potential Partners for Start-ups.....	71
4.3.3	Learning Opportunities.....	73
4.4	Entrepreneurial Activity.....	76
4.4.1	Collaborations.....	76
4.4.2	Role of the Incubator.....	79
4.5	Emergent Models.....	85
5	DISCUSSION.....	88
5.1	Business Model Innovation Support from Incubators.....	88
5.1.1	Drivers of Business Model Innovation.....	88
5.1.2	Characteristics and Challenges of Business Model Innovation... ..	89
5.1.3	Innovated Business Model Elements.....	89
5.1.4	Direct Incubator Support.....	90
5.1.5	Indirect Incubator Support.....	91
5.2	Incubators and the Entrepreneurial Ecosystem.....	92
5.2.1	Networks.....	92
5.2.2	Entrepreneurial Activity.....	94
5.3	Entrepreneurial Ecosystems and the Internationalization of Incubated Start-ups.....	95
5.4	Practical Implications.....	96
5.5	Limitations and Suggestions for Future Research.....	97
6	CONCLUSIONS.....	100

LIST OF TABLES AND FIGURES

Table 1: Overview of Incubator Definitions.....	13
Table 2: Overview of Accelerator Definitions.....	14
Table 3: List of Incubation Services.....	16
Table 4: Overview of Case Start-Ups.....	43
Table 5: Overview of Case Experts.....	45
Table 6: Overview of Venture Development Programs.....	45
Figure 1: Business Model Canvas.....	30
Figure 2: Support Mechanisms for Incubated Start-Ups.....	38
Figure 3: Business Model Innovation Code Structure.....	54
Figure 4: Entrepreneurial Ecosystems Code Structure.....	55
Figure 5: Incubators and Business Model Innovation.....	85
Figure 6: Incubators and Entrepreneurial Ecosystems.....	87

LIST OF ABBREVIATIONS

EE	Entrepreneurial Ecosystem
BMI	Business Model Innovation

1 INTRODUCTION

Entrepreneurship is a seed that has the potential to grow into a thriving business, and incubators are the fertile soil, nourishing sunlight, and protective shelter that can help the seed blossom into a successful enterprise. By providing entrepreneurs with the resources, mentorship, and support they need, incubators can help cultivate business ideas and bring them to fruition, benefiting the local and global economies.

While incubators have emerged as a vital means of supporting start-ups' growth, innovation, and internationalization, there are still unresolved questions about how incubators can best achieve these goals. Therefore, this research contributes to understanding how incubators can be more effective, providing insights into neglected mechanisms to support start-up growth: business model innovation (BMI) assistance and the promotion of an entrepreneurial ecosystem (EE). From a practical perspective, this research informs policymakers and incubator managers on how to design and implement more effective programs that can facilitate the growth and internationalization of incubated start-ups, contributing to the development of thriving businesses.

1.1 Background

Business incubators are organizations providing support, resources, and guidance to entrepreneurs and start-ups, helping them grow and succeed (Aernoudt, 2004; Bøllingtoft & Ulhøi, 2005). This support typically includes office space, access to funding, mentorship, training, and networking opportunities. By providing such support, incubators help entrepreneurs overcome the challenges inherent in the initial stages of starting a business, increasing their chances of success, and nurturing them to create self-sustaining and profitable start-ups.

Accelerators are distinct from incubators but share a common goal of accelerating the growth and development of start-ups. Unlike incubators with longer-term engagements, accelerators are short-term centered, prioritizing rapid growth for start-ups. They also offer support such as mentorship, networking opportunities, and educational resources. However, unlike incubators with a broader focus on venture development, accelerator programs specialize in refining and validating business models.

Incubators are critical in promoting innovation and entrepreneurship (Aernoudt, 2004). Governments and investors have recognized their significance in driving regional, economic, and technological development (Bergek & Norrman, 2008; Wang et al., 2020). Research on incubator effectiveness suggests that incubators can best meet their objectives when they carefully select tenants who are a good fit for the incubator (Hackett & Dilts, 2004b) and when they of-

fer convenient and sufficient access to relevant resources (Hackett & Dilts, 2004a).

The faith and money invested in incubators by governments, municipal agencies, and universities highlight the anticipated benefits they are expected to bring to society (Bergek & Norrman, 2008). This investment and support for incubators can be linked to the role of incubators in promoting high-growth entrepreneurship, which drives economic growth. While high-growth entrepreneurship represents only a small minority of all entrepreneurial endeavors, it generates a disproportionate economic output relative to its number (Autio, 2007; Henrekson & Johansson, 2010). Due to the phenomenon's disproportionate impact, the rare occurrence of high-growth entrepreneurship merits a policy design that enables and leverages high-growth entrepreneurship as a growth facilitator in a country's national innovation strategy (Autio, 2009).

Given the impact of high-growth entrepreneurship on economic growth and the recognized role of incubators in fostering such ventures, this study aims to explore strategies and mechanisms for incubators to promote start-up growth. Despite being a critical growth driver for start-ups (Abrahamsson et al., 2019), BMI support has been largely neglected in the incubation literature. Additionally, participation in an EE has been shown to contribute to start-up growth (Brown & Mason, 2017). However, not much attention has been devoted to the role of incubators in cultivating such ecosystems. Therefore, this study examines how incubators can leverage the potential of BMI assistance and EEs to foster start-up growth.

1.2 Research Questions

Insufficient emphasis on BMI support and EE promotion of incubators has resulted in an incomplete understanding of their impact on start-up growth and the strategies incubators should employ. This gap may explain divergent notions of incubator effectiveness, as BMI assistance and the promotion of EEs, two crucial promoters of start-up growth, have been neglected.

Often, start-ups do not have a clear or solid business model when they launch. Instead, they iterate and refine their approach over time to achieve success (Ries, 2011). The business model experimentation and adaptation process can be complex and challenging, and incubators can provide crucial resources and support to facilitate this process. Notably, BMI support can help to mitigate the dangers of path dependency for incubated start-ups, as entrepreneurs may use sub-optimal business models due to a lack of knowledge or experience, unaware of potential modifications that could improve their business. This unawareness can lead to self-reinforcing cycles in which start-ups continue to use an inferior business model that limits growth potential and competitiveness. By supporting BMI, incubators can help break this cycle, enabling start-ups to explore new approaches and adopt more effective business models.

RQ 1: How can incubators support business model innovations of growth-oriented start-ups?

Furthermore, the role of EEs is critical to the success of start-ups. They provide resources, networks, and support structures that help start-ups thrive. Additionally, EEs can provide funding, mentorship, and talent, which are essential for the growth of start-ups. Incubators can be critical in cultivating and strengthening EEs by fostering collaboration among start-ups, investors, government agencies, and other stakeholders. By creating a supportive environment that encourages knowledge-sharing and collaboration, incubators can help to build stronger networks and more robust support structures for start-ups. Besides, promoting EEs can also benefit incubators themselves. Incubators within vibrant EEs are more likely to attract high-potential start-ups, investors, and other key stakeholders. This position can enhance the reputation and visibility of the incubator and increase the likelihood of securing funding and other resources.

RQ 2: How can incubators contribute to entrepreneurial ecosystems?

1.3 Contribution

The central contribution of this inquiry is advancing our understanding of the mechanisms through which incubators can support start-up growth through BMI and the broader environmental conditions of EEs in which incubated start-ups are embedded. This research has implications for policymakers and practitioners seeking to foster entrepreneurship and promote economic growth. By identifying best practices for supporting BMI and cultivating robust EEs, policymakers and practitioners can use these findings to develop strategies that encourage the emergence and growth of start-ups. Additionally, this research contributes to the broader entrepreneurship literature by providing new insights into the dynamics of start-up innovation and entrepreneurship.

The study identifies key drivers that motivate start-ups to innovate their business model, characteristics of BMI for the innovating start-ups, and the challenges thereof. In addition, the study illuminates what business model components are fruitful for innovation, what innovating entrepreneurs should consider, and how incubators can support BMI directly and indirectly. Further, the study provides insights into EE players that incubated start-ups perceive useful, how they interact, how start-ups can benefit from it, and the role that incubators can play in developing and promoting EEs.

The following chapter provides the theoretical background and framework of the study. It explores the concept of incubation, including the purpose of incubation, types of incubators, provided services, and the effectiveness of incubators. In addition, the chapter dives into the relationship between incubators and the EE. Next, the chapter explores BMI, beginning with defining the con-

cepts of business models and BMI and revealing the sources and stages of BMI. The purpose of BMI and its performance implications are also discussed.

I describe this study's research methodology and strategy in the third chapter. The chapter also includes the choice of research design, data collection methods, and data analysis techniques.

The fourth chapter presents the study's findings. The first section describes the nature of BMI, as observed in the study. The second section focuses on BMI support by incubators. The third section portrays the role of networks in supporting BMI, and the fourth section sheds light on the role of incubators in promoting entrepreneurial activity within EEs. Finally, the fifth section describes the BMI and EE models that emerged from the findings.

Lastly, the fifth chapter provides a discussion of the study's findings. The chapter first discusses incubators' BMI support and then incubators' role in the EE. Next, the chapter examines how EEs can support start-up internationalization. The chapter also provides practical implications of the study's findings. Finally, the limitations of the study are outlined, as are suggested avenues for future research.

I employed generative AI to enhance the presentation of the findings section. I interacted with ChatGPT, based on the GPT-3.5 architecture, by presenting it with selected quotes of a code segment and providing input on the desired focus of the generated text. Any identifying information was removed from interview quotes to keep the privacy and confidentiality of the interviewees. I initiated a dialogue with the generative AI model for each code segment, instructing it to report how the provided quotes represent and exemplify the underlying code. The output was then manually adjusted to ensure coherence and accuracy. This approach enabled me to produce detailed and well-structured reports that effectively communicated the insights derived from the code analysis. While generative AI was a valuable tool for generating text based on code excerpts, the theoretical framework, methodology, and discussion were entirely my own. Thus, generative AI aided in synthesizing and refining findings but did not contribute to the original research process.

2 THEORETICAL FRAMEWORK

This chapter presents a review of the literature on start-up incubation and BMI concerning start-up growth. It also introduces the concept of EEs and how start-ups can internationalize through incubation.

Incubators provide the context of this study and are explored first. The concept is defined and contrasted to accelerators, a similar venture development program, setting the stage and limits of this research. The effectiveness of incubator programs is then investigated to determine what incubators should consider and whether start-ups benefit from participating in such programs. The missing link between BMI and incubation effectiveness is demonstrated. The following section shows how incubators contribute to start-up internationalization, pointing to the gap in internationalization through the EEs, addressed in this thesis.

The second part of this chapter presents a review of the literature on BMI, exploring why it is crucial for incubated start-ups and how it may explain conflicting findings in the incubation literature. The concept of BMI is defined, along with an explanation of why start-ups should engage in BMI. Lastly, performance implications for start-ups innovating their business model are examined to highlight the potential of BMI in improving start-up growth.

2.1 Incubation

2.1.1 Venture Development Programs

The business incubator has become an umbrella word comprising diverse notions, describing institutions with different purposes (Aernoudt, 2004). This observation aligns with Hackett & Dilts (2004b), who reported that the incubator concept is heterogeneous, complicating its definition and delimitation. Hausberg & Korreck (2020) also noted that the concept has no shortage of diverging and overlapping definitions. Besides the vagueness of the incubator concept, the differentiation between incubators and accelerators is also inconsistent. Some scholars have used the terms incubator and accelerator interchangeably without recognizing their conceptual differences (e.g., Hausberg & Korreck, 2020; Woolley & MacGregor, 2021). Therefore, Tables 1 and 2 provide an overview of respective definitions to separate the distinct programs.

Incubators are conceptually linked to institutions to encompass both private and public incubators, actively and passively managed (Hausberg & Korreck, 2020). They provide a nurturing environment for nascent firms (Aernoudt, 2004; Bøllingtoft & Ulhøi, 2005; Mian, 1996; Pena, 2004) to help them grow and survive their most susceptible period (Aernoudt, 2004; Deyanova et al., 2022). Incubators aim to create financially viable, freestanding companies within the

incubation period (Aernoudt, 2004), usually lasting two to three years (Hackett & Dilts, 2004a). During this time, the incubator provides “a strategic, value-adding intervention system [...] of monitoring and business assistance” in a shared office space (Hackett & Dilts, 2004b, p. 57), offering resources, services, and assistance otherwise not available to new firms (Bøllingtoft & Ulhøi, 2005). As shown in Table 1, incubator definitions share the common elements: the incubator provides office space, support services to help with venture development, networks, and resources. Thereby, the incubator mitigates the risk of start-up failure.

Accelerators are conceptually close to incubators (Canovas-Saiz et al., 2021; Pauwels et al., 2015). They offer short-term, cohort-based programs (Chan et al., 2020) that expedite early venture development through formal education and mentorship connections in a relatively short time (Hallen et al., 2014; Pauwels et al., 2015). Accelerators help validate business ideas (Drori & Wright, 2018). Thus, determining whether a business idea is feasible in as short a time as possible is a crucial activity of accelerators, supporting entrepreneurs in reaching decisions faster and increasing learning (Blair et al., 2020).

While incubators primarily assist early-stage start-ups in the ideation and development phase, providing them with resources and support to establish a solid foundation, accelerators work with more established start-ups already in operation and help them scale up their businesses quickly. Accelerator programs are shorter than incubator programs, and, unlike incubators, accelerators invest in portfolio companies, and operate more like private equity or venture capital funds, deriving profits only when their portfolio succeeds ((Chan et al., 2020).

Table 1

Overview of Incubator Definitions

Allen & Mc-Cluskey (1991, p. 61)	“A business incubator is a facility that provides affordable space, shared office services, and business development assistance in an environment conducive to new venture creation, survival, and early-stage growth.”
Hackett & Dilts (2004a, p. 41)	“[A business incubator is] an entrepreneurial firm that sources and macro-manages the innovation process within emerging organizations, infusing these organizations with resources at various developmental stage-gates while containing the cost of their potential failure.”
Hackett & Dilts (2004b, p. 57)	“A business incubator is a shared office-space facility that seeks to provide its incubatees (i.e. “portfolio-” or “client-” or “tenant-companies” with a strategic, value-adding intervention system (i.e. business incubation) of monitoring and business assistance. This system controls and links resources with the objective of facilitating the successful new venture development of the incubatees

	while simultaneously containing the cost of their potential failure.”
Bøllingtoft & Ulhøi (2005, p. 267)	“[Business incubators] are generally perceived as a kind of infrastructure geared to support and nurture the establishment and development of small and medium-sized enterprises.”
Phan et al. (2005, p. 166)	“Business incubators are property-based organizations with identifiable administrative centers focused on the mission of business acceleration through knowledge agglomeration and resource sharing.”
Albort-Morant & Oghazi (2016, p. 2)	“[An incubator] offers advisory services for entrepreneurs. Support services for new firms include providing business training, giving advice on how to develop business and marketing plans, building management teams, and offering general business services such as accounting, advertising, and legal and financial assistance.”
(Deyanova et al., 2022, p. 2083)	“Business incubators hatch start-ups, helping them to survive their early stage and to create a solid foundation for sustainable growth by providing services and access to knowledge.”

Table 2*Overview of Accelerator Definitions*

Hallen et al. (2014, p. 1)	“Accelerators are organizations that aim to accelerate early venture gestation by providing cohorts of ventures with formal education and mentorship connections during intensive, temporally compressed programs - usually lasting three months.”
Pauwels et al. (2015, p. 1)	“Accelerators are organizations that aim to accelerate successful venture creation by providing specific incubation services, focussed on education and mentoring, during an intensive program of limited duration.”
Drori & Wright (2018, p. 2)	“An accelerator is a generic organizational form that aims to stimulate entrepreneurship. It is structured to provide an intensive, limited-period educational program, including mentoring and networking for the cohort of start-up participants selected for each program, to improve their ability to attract investment following the demo day at the end of the program. Accelerators are organizations that serve as gatekeepers and validators of promising business innovations through their embeddedness in their respec-

	tive ecosystems and, thus, take an active and salient role in socio-economic and technological advancement.”
Chan et al. (2020, p. 226)	“Accelerators offer cohort-based, short-term programs that provide entrepreneurs with access to seed investment, connections, design, and sales support, education, and mentorship in a fast-paced environment.”

2.1.2 Purpose of Incubation

Incubators operate to mitigate market imperfections hindering start-ups from seizing business opportunities, such as information asymmetries, externalities, public goods, and monopoly power (Hackett & Dilts, 2004a; Patton et al., 2009). Incubators can lessen these market imperfections by providing resources and information, thus reducing costs for promising but vulnerable start-ups. This way, incubatees succeed or fail at an earlier stage and with lower costs (Hackett & Dilts, 2004a). Incubators equip entrepreneurs with support complementary to the start-up teams’ resources and talents to help the venture capitalize on its potential (Bøllingtoft & Ulhøi, 2005). Thereby, incubatees benefit from resource, skill, and service synergies created by the incubator facility (Bøllingtoft & Ulhøi, 2005). Incubators also shorten the entrepreneurial learning curve for incubatees (Smilor, 1987) and encourage entrepreneurship where it would otherwise be too risky or costly (Hackett & Dilts, 2004b). Thus, incubation is a policy-driven response to start-ups’ liability of newness, which pertains to the significant risk of failure that young or recently established ventures encounter in their initial years after entering the market, as they often lack the resources crucial for survival (Schwartz, 2013). Thereby, incubators lower the risks faced by early-stage ventures that may not yet have sufficient resources to survive their infancy (Schwartz, 2013). Because of their role in facilitating entrepreneurial endeavors, incubators are seen as creators of new firms (Hackett & Dilts, 2004a; Phan et al., 2005).

The primary purpose of incubators is to create successful ventures that graduate from the incubator self-sustaining within a reasonable time (Aernoudt, 2004; Mas-Verdu et al., 2015). However, purposes may differ depending on the type of incubator. For example, public incubators often aim to create jobs, private ones target profit, and corporate incubators seek strategic gains for the parent enterprise (Hausberg & Korreck, 2020). Goals of incubators can be economic development, local job creation, technology transfer (Peters et al., 2004), innovation, and regional development (Mas-Verdu et al., 2015). Seeing the divergent goals, it emerges that incubator performance is not universal but depends on how well an incubator reaches its goals (Bergek & Norrman, 2008).

2.1.3 Incubation Services

Incubators provide start-ups with shared office space under favorable terms (Aernoudt, 2004; Allen & McCluskey, 1991; Hackett & Dilts, 2004a, 2004b; Lukes et al., 2018; Mian, 1996). There, start-ups benefit from the incubator's intervention system of business assistance and monitoring (Hackett & Dilts, 2004a, 2004b; Mian, 1996) in a sheltered environment (Lukes et al., 2018). This environment fosters venture creation, survival, and growth (Allen & McCluskey, 1991). Therein, incubators complement the incubatees' skills and knowledge, creating synergistic effects from the vicinity between tenants and the incubator (Allen & McCluskey, 1991).

Incubator business support services have gained presence and relevancy (Hausberg & Korreck, 2020). They help start-ups discern what is needed for their development (Hackett & Dilts, 2004b). Services include tangible and intangible factors (Patton et al., 2009). Table 3 summarizes these services. Tangible services are office space, related services, financial services, and infrastructure. Office space and meeting rooms are among the most common services incubators provide (van Weele et al., 2020). Some incubators also provide specialized equipment unique to the incubated venture (van Weele et al., 2020). In addition, incubators may provide the financial resources and basic infrastructure needed when launching a new venture (Mas-Verdu et al., 2015).

Intangible incubator services are mainly business support services. These entail business training, advice on business development, team building, marketing, and general business administration advice such as accounting and legal (Albort-Morant & Oghazi, 2016). Identifying business needs, planning support, and mentoring are also intangible services (Patton et al., 2009). Incubators provide hands-on management and access to new markets (Aernoudt, 2004), assisting incubatees in getting their business off the ground, thus acting as a catalyst for entrepreneurship (Mas-Verdu et al., 2015). Network access is another intangible service that incubators provide (Mian, 1996; Patton et al., 2009). Prominent network connections are to business and technical advisors (Peters et al., 2004), the incubator management and staff, the incubator advisory board, industry contacts, professional service providers, and companies and universities related to the incubator (Hackett & Dilts, 2004b). Lastly, incubators may assist start-ups with their internationalization efforts (Franco et al., 2020). Incubator-initiated internationalization of incubatees is often connected to establishing cooperation networks in foreign markets on which incubators can exert influence (Franco et al., 2020).

Table 3

List of Incubation Services

Tangible Services	Intangible Services
<ul style="list-style-type: none"> ○ Office space ○ Office services 	<ul style="list-style-type: none"> ○ Business support services <ul style="list-style-type: none"> ▪ Business training

<ul style="list-style-type: none"> ○ Financial support ○ Infrastructure 	<ul style="list-style-type: none"> ▪ Business development ▪ Team building ▪ Marketing ▪ Legal ▪ General business administration ▪ Identifying business needs ▪ Planning ▪ Hands-on management ○ Network access ○ Internationalization support
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The availability of incubator services can influence an incubator's effectiveness. For instance, technology transfer, R&D, and legal advice promote the incubator's success chances (Lee & Osteryoung, 2004). Entrepreneurial education programs, financial support, and consulting are also success-contributing services (Lee & Osteryoung, 2004; Wiggins & Gibson, 2003). Further, the intensity of business assistance and monitoring efforts positively influence incubation performance (Hackett & Dilts, 2004a). The assistance by incubators should be proactive, focusing on business planning and control systems (Hackett & Dilts, 2004b).

2.1.4 Incubator Types

Incubators diverge in mission and goal (Aernoudt, 2004; Bergek & Norrman, 2008; Hackett & Dilts, 2004b), quality (Aernoudt, 2004; Lukes et al., 2018), specialization (Barbero et al., 2014), and provided services (Lasrado et al., 2015). Aernoudt's (2004) seminal article laid the foundation for the typology of incubators, classifying them into mixed, economic development, technology, social, and basic research incubators. Another popular categorization is business innovation centers, corporate private, independent private, and university business incubators (Grimaldi & Grandi, 2005). Similarly, Barbero et al. (2014) classified incubators into private, economic development, university, and basic research incubators, noting that different types yield varying kinds of innovation. Peters et al. (2004) distinguished for-profit, non-profit, and university-based incubators. A distinction of incubator types by objective has been suggested by Allen & McCluskey (1991), classifying them into for-profit property development, for-profit seed capital, non-profit development corporation, and academic incubators.

Services and resources provided by incubators are not uniform but depend on the type of incubator, with university incubators offering greater connectivity to important stakeholders and enhanced legitimacy compared to other types of incubators (Lasrado et al., 2015). Furthermore, incubators can be positioned on a spectrum between those offering services related to market commodities and tangible assets and those providing finance and more intangible assets (Grimaldi & Grandi, 2005). Incubators on the left side of the spectrum are usually (regional) public business incubators and business innovation centers,

and those on the right end of the spectrum are mostly private incubators, corporate or independent (Grimaldi & Grandi, 2005).

The degree of innovation fostered by the incubator is also subject to the type of incubator. Private ones are the most innovative, along with research and university incubators (Barbero et al., 2014). Private incubators score highest regarding organizational and technological innovation, and research incubators regarding product innovation (Barbero et al., 2014). These differences are connected with innovative incubator types adopting a focus strategy and less innovative incubator types employing a specialization strategy (Barbero et al., 2014).

Given the heterogeneous landscape of incubator types, evaluations should consider dissimilarities as incubators differ in their missions (Aernoudt, 2004). Comparisons between incubators should only be drawn among those sharing the same goals due to variations among types, and metrics should align with the incubator's objectives (Aernoudt, 2004; Bergek & Norrman, 2008).

2.1.5 Effectiveness of Incubators

This sub-chapter presents the factors influencing the effectiveness of an incubator program in reaching its goals and promoting start-up growth. Understanding these factors is essential to this study as they highlight areas that prior research has not yet considered. Notably, the literature on incubation has not examined the impact of BMI support, and the relationship between BMI support and incubator effectiveness has yet to be explored.

Incubatee Factors

Overconfidence and prior experience of incubated entrepreneurs influence their performance in incubator programs (Tang et al., 2022). Specifically, overconfident judgment can negatively influence the entrepreneur's resource assessment, leading to a performance decline for the incubated firm. Prior experience, measured as start-up age and at least one previous founding experience, can improve incubation effectiveness (Tang et al., 2022). Amezcua et al. (2013) supported this, demonstrating that prior experience of entrepreneurs can lower exit rates in university business incubators. Also, incubated entrepreneurs' relevant education and theoretical experience help them perform better in incubator programs because they have a more profound understanding of their field and are better equipped to launch a new venture (Albort-Morant & Oghazi, 2016). Furthermore, professional experience and a family background in entrepreneurship can enhance the utility entrepreneurs derive from incubation (Albort-Morant & Oghazi, 2016). Demographically, the age of an incubated entrepreneur positively correlates with incubation effectiveness, while gender appears to have no impact on incubator effectiveness (Albort-Morant & Oghazi, 2016).

Selection of Incubated Start-Ups

Incubators usually establish specific criteria to filter out unsuitable candidates for incubation, as selecting suitable tenants is crucial for incubator effectiveness (Hausberg & Korreck, 2020; Wiggins & Gibson, 2003). Incubators should select weak but promising start-ups with intermediate potential, supporting those

more likely to fail proportionally to their potential to succeed (Hackett & Dilts, 2004a).

Incubation performance, measured as tenants' growth and financial performance at graduation, correlates with selection performance, the degree to which an incubator corresponds to a venture capitalist in the admission process of enrolling new firms into the program (Hackett & Dilts, 2004a). Tenant selection further enhances incubator effectiveness by reducing the cost and magnitude of failure for incubatees while increasing the success chances of selected firms (Hackett & Dilts, 2004a). However, incubators should also be mindful of the environmental dynamics the incubatee portfolio creates. Specialized incubators may create an atmosphere of fear of competition, leading tenants to hesitate to share information and network contacts (Hausberg & Korreck, 2020).

Therefore, ensuring fit between the incubator and incubatee during the selection process is fundamental for incubation success (Wiggins & Gibson, 2003). The selection process should be rational, transparent, and aligned with the incubator's mission and context, yet sufficiently flexible to make exceptions when needed (Wiggins & Gibson, 2003).

Incubator Resources

The effectiveness of an incubator is also determined by the resources at its disposal. Start-ups often lack the necessary resources to be viable (Schwartz, 2013) and succeed (Peters et al., 2004). These resources are mainly social capital, human capital, and financial, limited due to the double liability of being small and new (Lukes et al., 2018).

Start-ups join incubator programs expecting to gain from a wider resource base and connections, boosting their legitimacy (Lasrado et al., 2015). However, it is not always clear which resources a venture needs initially. Instead, this becomes apparent over time as the venture develops (Peters et al., 2004). Incubators can help fill this resource discrepancy by providing resources or offering access to other sources of resources through informal and formal networking (Albort-Morant & Oghazi, 2016; Peters et al., 2004). These resources are usually available to all incubator tenants for free or at reduced costs, making resource provision more efficient because incubated start-ups do not need to procure their own (van Weele et al., 2020).

The accessibility, munificence, and relevancy of resources are important factors for resources to be effective (Hackett & Dilts, 2004a; Lee & Osteryoung, 2004; Wiggins & Gibson, 2003). Accessibility implies common access to the facility, equipment, and service space (Lee & Osteryoung, 2004). Resource munificence is the availability of plenty of quality incubator resources for utilization and is positively related to incubation performance (Hackett & Dilts, 2004b). Resource relevance, leveraging resources and on-site learning, is also influential for effective incubation (Wiggins & Gibson, 2003).

Incubator size is also a deciding factor for start-ups selecting which incubator to join. Larger incubators can offer a broader set and higher quantities of resources, equipping ventures with better infrastructure and wider business support (Klingbeil & Semrau, 2017). More resources benefit venture development because incubated start-ups usually lack many resources (Schwartz, 2013).

In addition, larger incubators are better connected as they host more tenants, increasing the availability of potential partners that could lead to collaborations (Klingbeil & Semrau, 2017; Schwartz & Hornych, 2008). While resource abundance does not predict firm survival (Amezcuca et al., 2013), Hackett & Dilts (2004a) suggested that a resource-rich incubator can provide more to tenants than incubators with fewer resources, which should raise incubation outcomes. However, most start-ups pursue incubation to access tangible resources like office space rather than intangible resources, such as networks or training, a poorly understood discrepancy (van Weele et al., 2020).

Observing that innovation projects and start-ups have increased in complexity, Schwartz & Hornych (2008) emphasized that specialization can be a crucial strategy, resulting in higher-quality equipment and premises, better mentorship and services, and beneficial image effects. An incubator's impact is strengthened when it is specialized because services can be customized to the needs of incubatees (Mas-Verdu et al., 2015). Specialization benefits enable larger start-up teams to utilize their resources more efficiently, which reduces barriers to venture growth as resources are less constrained (Klingbeil & Semrau, 2017). Therefore, an incubator's resource munificence is more beneficial for smaller start-up teams than larger ones.

Survival of Incubated Start-Ups

Young ventures are fragile and face significant odds of failure, particularly in their early years (Pena, 2004). Therefore, they need external support, with incubators increasingly recognized as improving new start-ups' survival (Allen & McCluskey, 1991; Deyanova et al., 2022). This notion rests in incubators supporting tenants to surmount the liabilities of newness, which heightens their chance to survive (Amezcuca et al., 2013).

However, there is discord about whether incubators influence firm survival. Hackett & Dilts (2004b) conducted a systematic literature review on incubation research and found that most studies agree that incubators lead to fewer venture failures. Nonetheless, Schwartz (2013) found no statistically significant higher survival probabilities for incubated ventures than non-incubated ones; three out of five incubator locations demonstrated a statistically significant lower likelihood of survival for incubated firms, questioning the effectiveness of incubation in ensuring the long-term survival of new start-ups. More recently, Blank (2021) also concluded that the findings about incubator's influence on survival are inconclusive, with research pointing to improved survival, negative effects, and no effects. Furthermore, participation in an incubator program alone is insufficient to ensure survival, but survival is heightened if connected with other factors such as size, sector, or technology (Pena, 2004). Given the conflicting landscape, there is no agreement on whether incubators improve firm survival.

The availability of resources is a critical element supporting the positive effect of incubation on start-up survival. This relationship is argued based on the vulnerability of new start-ups in their initial years and the reduction of operational costs by incubators, lowering the barriers start-ups face and helping them overcome the hardships associated with starting a business (Bøllingtoft &

Ulhøi, 2005). Incubator services and opportunities offered during the incubation process can increase the probability of firm survival (Pena, 2004). In contrast, Amezcua et al. (2013), while expecting the survival of incubated firms to improve due to the incubator's resource provisions, mentoring, and social capital, have found that this effect does not hold. The divergences in incubators' effects on survival might be due to studies disregarding the tailored service approach of incubators since incubation services are more helpful when addressing the resources needed by tenants and the entrepreneurs' characteristics (Blank, 2021).

Survival has also been assessed from a mentoring perspective in the context of student start-ups in an academic incubator (Blank, 2021). The study revealed that the survival probabilities of start-ups with teams experienced in management or inexperienced in entrepreneurship are low when the team rarely participates in incubator mentoring sessions. Conversely, frequent participation in the incubator's mentoring activity resulted in higher survival rates, irrespective of the start-up team's managerial experience. A plausible explanation is that incubated founders imitate managerial routines and operations that are destructive in an entrepreneurial context and that these practices could be avoided when teams draw on the incubator's mentoring program (Blank, 2021).

Performance of Incubated Start-Ups

While incubators have the potential to influence their incubatees' performance positively, this is not always the case. While some studies suggest that incubators positively impact the performance of the firms they support, others are hesitant to concur with the effectiveness of incubation (Tang et al., 2022). For example, Schwartz & Hornyk (2008) stated that conclusions regarding incubators' effectiveness and goal accomplishment could not be drawn. Conversely, Patton et al. (2009) noted general agreement that incubation significantly enhances the likelihood of business ideas becoming commercially viable ventures.

However, measuring incubator performance is burdened by the heterogeneity surrounding how it should be evaluated and compared. It is further complicated by the lack of a clear theoretical framework for assessing incubator performance and identifying best practices (Bergek & Norrman, 2008). The use of different methodologies and measures in studies, and observations at varying levels, ranging from the macroeconomic to the firm level (Hausberg & Korreck, 2020), may account for these conflicting findings. Evaluation measures for incubator performance are inconsistent, and there are few empirical tests of these measures. Thus, incubation performance and best practices should be linked to how the incubator is organized and managed, while outcomes should be measured concerning the incubator's goals (Bergek & Norrman, 2008).

Common measures are tenant graduation upon surmounting the resource gap and the sustainability of the venture's business model (Hackett & Dilts, 2004b). Other factors include the number of tenant start-ups closing down while being incubated, firm growth, and scattered development measures (Hackett & Dilts, 2004b). Growth metrics often involve sales and the number of jobs created, while development measures focus on management team quality, product innovation, and strategic alliances entered (Hackett & Dilts, 2004b).

Incubated firms exhibit higher growth rates than non-incubated ones, reaching average annual growth rates of 55%, while non-incubated ones grow by 30% (Colombo & Delmastro, 2002). Sales growth has further been examined by Lukes et al. (2018), who focused on the short and long-term effects of incubation on the sales revenue of innovative tenants. Incubation has significant negative effects on short-term sales but positive long-term effects, indicating that incubated firms start slower but have higher prospects for future growth (Lukes et al., 2018). Start-ups who are at most two years old experience negative effects, while those older than three years see positive gains in sales revenue. However, it is important to interpret the findings on older start-ups cautiously, as the sample size was notably smaller.

Besides growth, incubated firms participate more in international R&D programs, adopt more advanced technologies, and are more involved in collaborative ventures, particularly with universities (Colombo & Delmastro, 2002). These findings might explain why incubated firms show higher growth rates, as team members of these firms tend to have higher levels of education (Colombo & Delmastro, 2002). Meanwhile, R&D intensity did not differ significantly between similar incubated and non-incubated firms, and incubated start-ups were only slightly more innovative (Colombo & Delmastro, 2002). In contrast, Tang et al. (2022) demonstrated that incubated start-ups score higher in innovation than other firms.

Job creation by incubated firms may not be as pronounced as expected, as Lukes et al. (2018) revealed that incubation has no significant effect on job creation. Only inconclusive evidence could be obtained, pointing to four-year-old incubatees showing faster employment growth than non-incubated firms of the same age. Nonetheless, Pena (2004) found that an incubator's services, namely consulting assistance, business courses, and mentoring, positively affect employment growth, supporting prior assumptions voiced by Mian (1996).

2.1.6 Networking

Networking is a central, recurring theme in the incubation literature (Aernoudt, 2004; Bøllingtoft & Ulhøi, 2005; Hackett & Dilts, 2004a). It is relevant on the regional, national, and international levels (Wiggins & Gibson, 2003). Network theory suggests that an incubator's network plays a key role in fostering the development of ventures, commercializing business ideas, and ultimately shaping successful incubation outcomes (Hackett & Dilts, 2004a). Incubators connect entrepreneurs with a resource network, considered their most prominent activity, helping entrepreneurs overcome the liability of newness (Phan et al., 2005). Thereby, incubators act as brokers by establishing links between people who do not share a prior connection, acting as an intermediary in a vaster web of networks (Peters et al., 2004). Incubators are thus knowledge intermediaries, connecting and leveraging international networks of knowledge creation and application (Gao et al., 2021).

Incubators are a hub for networking activity, where entrepreneurs can raise economic and private concerns, express social interests, and discern eco-

conomic and social opportunities with the ulterior motive of building social capital (Bøllingtoft & Ulhøi, 2005). Hence, an incubator's network connections can help entrepreneurs surpass the lack of experience needed to succeed (Franco et al., 2020). However, the impact of networking rests on tenant firms being aware of the competencies, knowledge, and resources they need to bridge, as well as the team's recognition of the incubator's potential to overcome these gaps (Hausberg & Korreck, 2020).

Incubated entrepreneurs can benefit from two types of networks: internal and external (Bøllingtoft & Ulhøi, 2005; Hausberg & Korreck, 2020; Pena, 2004). This categorization is comparable to Mian's (1996) notion of relationships within and outside the incubator. Internal networking comprises activity among incubatees (Aernoudt, 2004; Hausberg & Korreck, 2020), between graduates and tenants (Aernoudt, 2004), and between tenants and the incubator staff (Hackett & Dilts, 2004a; Hausberg & Korreck, 2020). Meeting like-minded entrepreneurs is vital for most start-ups joining incubators (Patton et al., 2009). Further, larger team sizes alleviate the challenges of starting a new business because the pool of knowledge is vaster (Klingbeil & Semrau, 2017). For instance, having more team members widens access to external network contacts that each team member provides (Klingbeil & Semrau, 2017). The incubator advisory board is also a valuable internal network link (Hackett & Dilts, 2004a).

External networking refers to activities between the incubator and other incubators, outside advisors, governments, universities, and other firms. Networking between different incubator institutions creates an exchange platform for entrepreneurs to discuss their experiences, giving rise to cooperation between tenants or graduates of the two incubators, particularly in the case of sector-specific incubators (Aernoudt, 2004). External advisors usually come from various specialties, such as business planning, finance, marketing, manufacturing, or legal (Peters et al., 2004). Hackett & Dilts (2004a) also mentioned those professionals, in addition to business angels and venture capitalists. However, instead of referring to advisors, they categorize these network nodes as industry contacts and professional service providers (Hackett & Dilts, 2004a). Moreover, government agencies are also important contacts (Hausberg & Korreck, 2020). Ties to local universities and their members have also been identified as success-determining external networks (Hackett & Dilts, 2004a; Lasrado et al., 2015; Wiggins & Gibson, 2003). In addition, incubation is more effective when incubatees connect with external firms offering collaborative opportunities and access to additional resources (Amezcuca et al., 2013).

2.1.7 Internationalization

The liability of foreignness can impede a firm's success when entering foreign markets, but incubators can alleviate this obstacle by providing benefits that encourage start-ups to engage abroad (Blackburne & Buckley, 2019). Incubators can pave the way for foreign market entry in two ways: by offering international connections (Franco et al., 2020; Gao et al., 2021) or by acting as a market entry vehicle (Blackburne & Buckley, 2019).

International cooperation networks of the incubator play a crucial role in supporting incubated start-ups' internationalization (Franco et al., 2020). Similarly, Blackburne & Buckley (2019) stressed that the connectivity of incubators is vital in the internationalization of incubated firms. Further, incubators act as knowledge intermediaries by providing incubatees with knowledge about the internationalization process (Gao et al., 2021). They enable networking and knowledge creation, building international market networks that provide start-ups with productive assets and access to customers in a foreign market (Gao et al., 2021).

Moreover, incubators can reduce resource limitations and address needed capabilities as incubatees expand internationally (Gao et al., 2021). In addition, incubators can be the method of international market entry when start-ups join an international incubator abroad to familiarize themselves with a foreign market at lower costs without significant up-front commitment (Blackburne & Buckley, 2019). Start-ups benefit from reduced market entry costs, risk mitigation, and local knowledge about distributors, customers, or agents (Blackburne & Buckley, 2019). Case companies also mentioned that internationalization would have progressed much slower had they not been incubated because of distractions from home markets and unfamiliarity with the foreign market (Blackburne & Buckley, 2019).

2.2 Entrepreneurial Ecosystems

EEs are networks of interconnected actors, organizations, institutions, and processes that foster entrepreneurial activity. The concept underlying EEs is that entrepreneurs attract each other and relevant entrepreneurial players in institutional, geographic, and relational vicinity (Brown & Mason, 2017). Ecosystems have gained popularity in recent years and are viewed as accounting for high-growth entrepreneurship within regions (Spigel, 2015). This research examines EEs because they can catalyze entrepreneurial activity, stimulate start-up growth, and spur economic development. Start-ups create jobs and promote economic welfare, and an ecosystem that fosters entrepreneurial activity is vital for forming and supporting new ventures (Tripathi et al., 2019). This notion concurs with Wurth et al. (2022), who argued that EEs supply the context and support that help new firms to launch and grow. EEs steer innovation and ensure its quality by determining which ventures are legitimized, influencing technological development (Autio et al., 2014). They have proliferated in entrepreneurship research, referred to as the latest trend (Brown & Mason, 2017).

Venture development programs, such as incubators, have attracted interest from entrepreneurs and policymakers because of their role and effectiveness in supporting start-ups (Woolley & MacGregor, 2021). Incubators are essential to entrepreneurial value chains (Phan et al., 2005) and are considered crucial actors within EEs (Klofsten et al., 2020). They assume the role of ecosystem inter-

mediaries, facilitating interactions and connections among the various actors within the EE (Woolley & MacGregor, 2021).

2.2.1 Definition of Entrepreneurial Ecosystems

EEs have received limited theoretical development, and the concept has been applied with varying interpretations, resulting in the lack of a widely accepted definition (Brown & Mason, 2017). Likewise, Spigel (2015) characterized EEs as an umbrella term that entails divergent perspectives rather than a coherent theory explaining the emergence of entrepreneurial communities. Similarly, Wurth et al. (2022) highlighted the conceptual and empirical ambiguity surrounding EEs. While various definitions have been proposed, most converge on the idea that interdependent localized connections among entrepreneurial actors are critical to ecosystem performance (Brown & Mason, 2017).

A broad definition of EEs is that they are a range of “interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship” (Stam, 2015, p. 1765). Prominent examples of EEs are Silicon Valley in the USA and Tel Aviv in Israel. They combine actors, social networks, institutions, and cultural values that foster entrepreneurial activity (Roundy et al., 2018). More specifically, EEs are “the set of interconnected entrepreneurial actors, entrepreneurial organizations, institutions and entrepreneurial processes which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment” (Mason & Brown, 2014, p. 5). Spigel (2015) characterized EEs as the amalgamation of a region’s economic, social, cultural, and political components conducive to supporting and nurturing innovative new ventures, inspiring first-time entrepreneurs and other actors to undertake the risk of launching and financing a new venture. Along these lines, Tripathi et al. (2019) referred to start-up ecosystems, environments where ventures and their support systems interact in a development and growth-oriented setting. In summary, definitions of EEs comprise various actors, institutions, and processes (Brown & Mason, 2017).

EEs are self-organized, do not need a global controller, and display characteristics similar to natural ecosystems: they are confined to geographic areas and are adaptable to changing conditions due to the actors’ actions within the system (Roundy et al., 2018). This pattern of behavior of actors at different levels can create or destroy new start-ups (Roundy et al., 2018). EEs are non-linear and subject to significant changes over time, as policy changes, for instance, can influence the ecosystem’s trajectory (Brown & Mason, 2017).

It should be cautioned that EEs have been described as a buzzword and a conceptual umbrella, widely applied but lacking actual meaning (Oh et al., 2016). The “eco” prefix in the term EEs has been criticized for its metaphorical use in describing regional and national innovation systems, and the metaphoric use of the term has not changed in recent years (Wurth et al., 2022). Concerns have been raised about the inappropriate use of the term with its misleading analogy to ecosystems found in nature (Oh et al., 2016). Innovation ecosystems and innovation systems are often used interchangeably, with the “eco” prefix

being metaphorical rather than rigorous (Oh et al., 2016). Unlike biological ecosystems, innovation ecosystems are designed and engineered for a specific purpose, with a value chain that may produce dominant links (Oh et al., 2016). While acknowledging the criticism of the “eco” prefix for its misrepresentation of natural ecosystems, I will adhere to the conventional use of the term EE because it is widely adopted in the literature, providing a common language for discussion.

2.2.2 Emergence of Entrepreneurial Ecosystems

EEs emerge gradually when components and processes at the micro-, meso-, and macro-level converge (Roundy et al., 2018). At the micro-level, the focus is on entrepreneurs' intentions to establish new and growing firms and the harmonization of entrepreneurial activities, wherein actors pursue comparable activities and exhibit similar behaviors, leading to mutually dependent goals (Roundy et al., 2018). The meso-level, which includes incubators, focuses on supporting start-ups through resource injections, with incubators acting as a controlling factor to stimulate desired behavior (Roundy et al., 2018). For example, infusing financial capital into a region known for a particular technology may entice more entrepreneurs to start ventures in the same field, fostering the coherence of entrepreneurial actions (Roundy et al., 2018). At the macro-level, entrenched societal values, such as the ecosystem's culture, play a crucial role.

Moreover, EEs emerge from the interplay between material, cultural, and social attributes (Spigel, 2015). Material attributes include regulations and government programs, universities educating entrepreneurs and creating knowledge spillovers, and support services assisting venture creation, such as incubators (Spigel, 2015). Physical infrastructure, transportation, and open markets with unrestricted access are also considered material attributes (Spigel, 2015). Culturally, EEs exhibit a supportive culture that fosters and normalizes entrepreneurial activity, often due to a history of successful entrepreneurship (Spigel, 2015). Socially, EEs encompass the availability of worker talent, the skills and ambitions of workers, investment capital, networks, role models, and mentors (Spigel, 2015).

Isenberg (2011) presented a similar EE characterization comprising policy, finance, culture, supports, human capital, and markets. Policies denote leadership and governmental intervention, finance is linked to the availability of capital, culture refers to success stories and societal norms, and supports include infrastructure, support professions, and non-governmental institutions like incubators. Human capital denotes labor and educational institutions, and markets refer to early customers and networks. Tripathi et al. (2019) also suggested a similar categorization, including the market, human capital, the entrepreneur, support factors, finance, technology, education, and demography. These attributes and their interactions shape and sustain EEs, creating an environment that promotes regional entrepreneurship and raises start-ups' competitiveness (Spigel, 2015).

EEs, akin to economies, are susceptible to path dependencies (Wurth et al., 2022). They are liable to their initial conditions, and decisions made in the early stages of ecosystem development often become irrevocable, reinforcing path dependency (Roundy et al., 2018). For instance, an ecosystem that emerges with the creation of an accelerator specializing in a particular technology or industry is likely to continue on that path (Roundy et al., 2018).

2.2.3 Actors in Entrepreneurial Ecosystems

The most prominent actors in EEs are entrepreneurs, venture development programs, and governments, working in coherence (Hayter et al., 2018). Entrepreneurs aim to launch start-ups (Tripathi et al., 2019) and are a crucial linkage in the ecosystem environment (Tripathi et al., 2019; Wurth et al., 2022). They are leaders in innovation, the community, and organizations (Wurth et al., 2022). Entrepreneurs may even be considered the most important actor in EEs (Brown & Mason, 2017). Government institutions also play a central role in EEs as strategic partners (Fernandes & Ferreira, 2022). They establish economic policies (Spigel, 2015). For example, the European Commission has implemented policies to enhance the business environment for small firms, including cutting out bureaucracy, providing better access to finance, and promoting innovation (Franco et al., 2020). Universities are also vital actors in EEs (Spigel, 2015), bringing novel characteristics and processes to the table (Fernandes & Ferreira, 2022).

Lastly, entrepreneurial resource providers are vital players who strengthen the ecosystem's core by injecting resources into growing start-ups (Brown & Mason, 2017). Business incubators, for instance, are one such resource provider that has become an essential element in EEs, helping start-ups grow (Hausberg & Korreck, 2020). They can exert direct and indirect effects (Hausberg & Korreck, 2020). Indirect effects are seen when incubatees establish new connections with other actors in the EE, promoting economic activity (Hausberg & Korreck, 2020). Accelerators and investors are also important resource providers in EEs (Spigel, 2015; Wurth et al., 2022).

2.2.4 Connectivity of Entrepreneurial Ecosystems

The development and outcomes of EEs are influenced by networks and the variety of stakeholders involved (Fernandes & Ferreira, 2022). As Hayter et al. (2018) previously noted, the structure connecting the swarm of components in these networks is central to the notion of EEs. Relational aspects that shape the ecosystem affect entrepreneurship (Brown & Mason, 2017), and the network of EEs can stimulate high-growth entrepreneurial activity (Fernandes & Ferreira, 2022). Collaboration in the ecosystem's network creates synergistic effects for all actors (Fernandes & Ferreira, 2022).

Entrepreneurs and support institutions are the most relevant network nodes in this study. Entrepreneurial connections inspire and produce role models for upcoming entrepreneurs where experienced entrepreneurs can mentor

other entrepreneurs through formal mentoring and social behavior, creating a cumulative, self-sustaining effect (Brown & Mason, 2017). Collaboration relationships and sharing among entrepreneurs are highly conducive to entrepreneurial activity, and mentors play a crucial role (Fernandes & Ferreira, 2022).

Spigel (2015) alluded to mentoring between entrepreneurs and support organizations, which contributes to the success of new ventures. Entrepreneurs interact with supportive institutions part of the EEs, such as governments, educational organizations, or investors (Tripathi et al., 2019). These interactions provide infrastructure and establish a supportive network for venture development (Tripathi et al., 2019). Entrepreneurial support institutions are crucial in strengthening local networks and uplifting promising start-ups, encouraging new entrepreneurs to participate in networking and subjecting them to new instances of successful entrepreneurship, resulting in increased resources for the network (Spigel, 2015).

2.3 Business Model Innovation

BMI is a new, holistic type of organizational innovation (Foss & Saebi, 2017) crucial for a firm's long-term prosperity (Bucherer et al., 2012). It has become increasingly popular among academics and practitioners (Abrahamsson et al., 2019; Casadesus-Masanell & Zhu, 2013; Clauss, 2016). Business leaders have come to recognize the need to adapt their business models to foster competitiveness within their industry or to achieve growth in new industries (Pohle & Chapman, 2006).

With technological advancements, deregulation, and evolving customer preferences, more business model configurations are now available (Casadesus-Masanell & Zhu, 2013). In addition, start-ups are encouraged to innovate their business model as it can prove as valuable as developing an innovative new technology (Chesbrough, 2010). Therefore, businesses should adapt and innovate their business models to remain competitive (Abrahamsson et al., 2019). Introducing the same idea with different business models can result in distinct economic outcomes, so much so that an excellent idea pursued with an ordinary model may be of less value than an ordinary idea packaged in a great model (Chesbrough, 2010). A more robust business model can also better withstand economic downturns and other disturbances (Morris et al., 2005). Despite the benefits of BMI, it is not commonly practiced (Bucherer et al., 2012). Nevertheless, CEOs are increasingly aware of its importance (Pohle & Chapman, 2006).

Start-ups may fail regardless of the availability of market opportunities, sufficient resources, new ideas, and skilled entrepreneurs (Morris et al., 2005). In these cases, the business model might be the reason (Morris et al., 2005). Besides, most entrepreneurs begin only with a partially complete model and refine it through trial and error as they learn more about what works for their venture (Morris et al., 2005). External changes can also render an existing busi-

ness model ineffective, necessitating the development of a new one (Morris et al., 2005). These observations warrant closer inspection of whether BMI assistance from incubators can help sustain and grow firms and whether BMI may be the missing link explaining differences in incubator performance.

2.3.1 Conceptualization of Business Models and Business Model Innovation

Business models depict how firms do business (Amit & Zott, 2012; Cosenz & Bivona, 2021; Zott & Amit, 2007). They represent a company's design and architecture and define how the business creates, delivers, and captures value (Osterwalder & Pigneur, 2010, p. 14; Teece, 2010). Thus, business models outline who customers are, how customer needs are addressed, and how the business monetizes the created value (Baden-Fuller & Haefliger, 2013).

Value creation refers to generating value for a company's customers through a unique value proposition (Teece, 2010). Value creation takes place when resources are combined in a novel way to yield innovative outcomes, such as introducing new products (Morris et al., 2005). However, value creation in small and medium-sized companies requires different strategies and organizational features than in larger enterprises (Cosenz & Bivona, 2021). Value delivery pertains to how an enterprise provides value to its intended customer base (Abrahamsson et al., 2019; Teece, 2010). This dimension involves a viable structure of costs and revenues for delivering value to customers and the transfer of that value from the firm to its customers (Teece, 2010). Moreover, value delivery encompasses the organization's capabilities and resources, and the value-chain structure to provide that value (Abrahamsson et al., 2019). Value capture refers to how a company retains a portion of the value it offers to customers (Teece, 2010). This dimension of the business model also incorporates the venture's profitability and ability to maintain a sustainable business performance (Clauss, 2016).

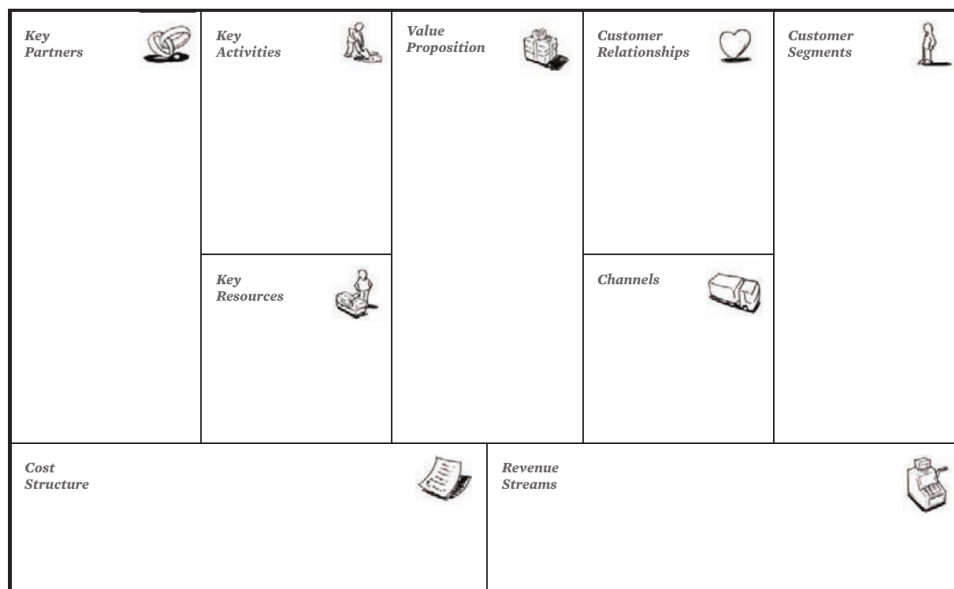
Business models can be visually depicted on a canvas that outlines nine fundamental elements - the value proposition, customer segments, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and the cost structure - explained by Osterwalder & Pigneur (2010, Chapter 1) as follows:

In the business model canvas, the value proposition encompasses the value customers place on a firm's products or services. Sources of value can be newness, performance, price, cost reduction, customization, design, status/brand, accessibility, effectiveness at getting something done, risk reduction, or usability/convenience. Customer segments represent the groups of customers that the business targets. Examples of customer segments include mass market, niche market, segments, diversified customer base, or multi-sided platforms. Channels are how a firm communicates with its customer segments. They can be direct or indirect. Direct channels are owned by the company, while indirect channels involve partnering with distribution channels to reach customers. Customer relationships refer to the interactions and connections between a firm and its customers. Relationship categories include personal assistance, co-creation,

automated or self-service, communities, and dedicated personal assistance. Revenue streams define how a company generates revenue from its customer segments, such as through asset sales, subscription fees, usage fees, advertising, licensing, brokerage fees, renting, leasing, and lending. Pricing can be fixed or dynamic. Key resources illustrate the assets needed to implement the business model. These can be physical, intellectual, financial, or human capital. Key activities outline what needs to be done to implement the business model. Common are production, problem-solving, and a network or platform. Key partnerships show the network of partners and suppliers required to execute the business model. The cost structure component lists all costs associated with the business model. These nine building blocks can be drafted on a canvas, resulting in the business model canvas below.

Figure 1

Business Model Canvas (Osterwalder & Pigneur, 2010, p. 44)



BMI should be distinguished from business model development, the latter rooted in dynamic capabilities and the resource-based view of the firm, and the former grounded in strategic entrepreneurship (Carayannis et al., 2014). BMI involves modifications in at least one of the three components of business models: value creation, delivery, or capture (Amit & Zott, 2012; Björkdahl & Holmé, 2013). This definition coincides with Casadesus-Masanell & Zhu (2013), who referred to BMI as new ways of creating and capturing value for the firm's stakeholders, usually through new revenue sources and value propositions, not just to customers but also partners and suppliers. Recent literature, notably Latifi et al. (2021), also described BMI as changes to business model elements, resulting in a novel value creation, delivery, and capture system. In broader terms, BMI involves purposeful changes to core components of the firm's logic (Bucherer et al., 2012). Hence, BMI does not equate to innovating products, processes, or services per se (Baden-Fuller & Haefliger, 2013; Björkdahl & Holmé, 2013). Instead,

it rests on alterations of the logic of how value is created, delivered, and ultimately captured (Björkdahl & Holmé, 2013) – innovating the model rather than the firm’s offering (Baden-Fuller & Haefliger, 2013). Textbook examples of BMI include Dell in the computer industry, Uber in transportation, and Walmart in retail, all of which introduced a new, unprecedented business model in their respective industry (Latifi et al., 2021).

Generally, studies conceptualize BMI as dynamic or static (Foss & Saebi, 2017). Dynamic BMI is an ongoing process that requires appropriate capabilities, mechanisms, and leadership to adjust the business model to changes in the internal and external environment (Bucherer et al., 2012). It involves searching for and experimenting with new models while transitioning from the old to the new (Bucherer et al., 2012). In contrast, static BMI results from creating a new and innovative business model (Foss & Saebi, 2017).

There is a lack of consensus in the literature regarding the level of novelty required for an innovated business model to classify as BMI. Some scholars argued that BMIs must be new to the enterprise but not necessarily new to the industry, while others contended that they are new to both (Foss & Saebi, 2017). There are also divergent opinions regarding the scope of BMI and how much it alters the existing business model (Foss & Saebi, 2017). BMIs can modify one or more components and potentially even all parts of a business model. Besides, BMI can also relate to modifications in how different model elements interact and relate to each other, referred to as the model’s architecture (Carayannis et al., 2014; Foss & Saebi, 2017). These discrepancies have led Foss & Saebi (2017) to conclude that BMI lacks a uniform understanding.

2.3.2 Sources of Business Model Innovation

Diverse sources compel firms to instigate BMI (Bucherer et al., 2012; Teece, 2010), primarily rooted in the external environment or internally in the firm’s context (Keiningham et al., 2020). Specifically, Bucherer et al. (2012) classified four distinct sources of innovation into two dimensions: internal or external threat and internal or external opportunity. External sources of innovation arise outside the enterprise, while internal sources come from within. A threat arises when a firm is coerced to innovate its business model to survive, while an opportunity arises when it seeks to capitalize on new possibilities (Bucherer et al., 2012). Young firms tend to pursue opportunities, while established firms tackle both threats and opportunities (Bucherer et al., 2012). Technological progress and globalization have presented threats and opportunities (Pohle & Chapman, 2006). Global connectivity has reduced transaction and collaboration costs, enabling businesses to collaborate with specialized firms in shared centers and expand their internal knowledge (Pohle & Chapman, 2006). An example of an internal threat is when resources become too expensive or no longer required, resulting in a shift toward outsourcing (Bucherer et al., 2012). However, in most cases, BMI occurs due to external circumstances (Clauss, 2016). External opportunities can arise from discovering new business models through trial and error

based on customer insights, new organizational or technological opportunities, overall improvements (Teece, 2010), and new processes (Clauss, 2016).

2.3.3 Stages of Business Model Innovation

Firms can innovate their business model in three ways (Amit & Zott, 2012). First is through a new activity system content, which pertains to the choice of activities to pursue. For instance, firms may decide to integrate forward or backward. Second, companies can create new activity system structures by connecting activities in novel sequences. Third, firms can modify their activity system governance by changing the parties responsible for different activities.

BMI is a four-stage process that progresses from analysis, design, and implementation to control (Bucherer et al., 2012). During the analysis stage, firms observe how the existing model loses appeal over the years or they discover a new opportunity. In the design phase stage, firms develop and experiment with alternative models, often in an iterative process. Piloting and prototyping in a test market can reduce risks and enable practical learning. The design phase is typically shorter for opportunity-driven business models. The old model is superseded in the implementation phase, or a parallel implementation is gradually rolled out over several years. Lastly, success is measured in the control stage, and internal and external changes are continuously monitored. However, it should be noted that BMI varies considerably between firms. Therefore, generalizations about specific actions within the four phases should be avoided (Bucherer et al., 2012). Thus, there is no uniform approach.

2.3.4 Purpose of Business Model Innovation

Companies innovate their business model to survive, increase resilience, grow, attain competitive advantage, or meet customer expectations. Small and medium-sized enterprises, in particular, pursue BMIs to compete for survival in complex and fast-paced markets (Cosenz & Bivona, 2021). Similarly, Latifi et al. (2021) acknowledged that firms must adjust their logic to improve long-term survival. Enhanced organizational resilience through BMI is also closely associated with survival (Eriksson et al., 2022).

By changing at least one of the elements of business models – value creation, delivery, or capture – ventures can capitalize on neglected value sources within the firm or build new systems that are hard to copy (Amit & Zott, 2012). Value sources include markets not yet addressed by competition or the revelation of new market niches (Foss & Saebi, 2017; Latifi et al., 2021). Further, BMI improves the resilience of firms by helping them cut costs, launch new products, streamline processes, and deliver better financial performance (Foss & Saebi, 2017). Firms can also seek resilience by adapting the business model to profit from business opportunities (Eriksson et al., 2022). Likewise, Foss & Saebi (2017) noted that BMI is often linked to capturing new opportunities, as is the case with the arrival of new digital technologies. Opportunities arise in changing environments because a firm's business model is not static (Eriksson et al.,

2022). Therefore, Eriksson et al. (2022) recommended that firms re-assess the need for BMI whenever a firm is subject to changes in present or future markets to maintain viability.

Another reason why firms engage in BMI is to stimulate growth. A chosen model confines the enterprise's architecture, which then sets boundaries on the possible expansion paths that a firm can pursue (Teece, 2010). Therefore, to expand beyond the limitations of the present model, firms may innovate their business model to explore new territories. Keiningham et al. (2020) showed BMI to be an essential link to firm growth and prosperity as BMIs raise a company's value proposition and the value derived from delivering the firm's offerings. In addition, firms also target revenue growth when innovating their business model (Keiningham et al., 2020). However, BMI and firm growth carry a disadvantage in disguise, for not only can BMI lead to considerable growth, but also can it bankrupt an entire enterprise when the innovated business model is poorly implemented (Latifi et al., 2021).

BMIs can also bring competitive advantages to the innovating firm (Abrahamsson et al., 2019; Latifi et al., 2021; Morris et al., 2005; Pohle & Chapman, 2006; Teece, 2010), particularly when the new model is hard to imitate (Teece, 2010). In that regard, Abrahamsson et al. (2019) observed that sustained competitive advantage rests on a firm's capacity to innovate and reconfigure the present business model. Similarly, Latifi et al. (2021) reported that BMI can establish a company's competitive advantage. Pohle & Chapman (2006), drawing on a study with 765 business leaders globally, ascertained that CEOs pursue BMI in expectation of sustainable competitive advantage and to differentiate their firms in the market, not shying away from subjecting a sacrosanct business model to changes.

To compete successfully, a company should have a functional business model that facilitates the enterprise's operations, but functional models are often not ideal (Keiningham et al., 2020). Thus, firms may innovate their business logic towards an ideal model to sustain growth. Notably, BMIs are seen as identical in importance to operations innovations and nearly equal to product and service innovations (Pohle & Chapman, 2006).

Meeting customer expectations and satisfying new, opaque, unmet needs is a further driver of BMI (Cosenz & Bivona, 2021). Therefore, successfully innovating one's business model often hinges on customer evaluations of the experience the new model engenders (Keiningham et al., 2020). However, while customer experience seems to be a plausible reason for BMI, its consideration in practice has often been neglected, with managers innovating the model according to their beliefs about what the market desires (Keiningham et al., 2020).

2.3.5 Performance Implications of Business Model Innovation

Some business models are more conducive to innovation than others (Carayannis et al., 2014). Despite this difference, the literature on performance implications has not given much consideration to the specific type of business model. In addition, small and medium-sized enterprises face more barriers than larger

organizations in innovating their business models. These barriers include limited networking, resources, and capabilities (Cosenz & Bivona, 2021). Internal and external resistance also pose additional barriers, such as a lack of understanding, increased effort, the need to gain new competencies, changes in the value chain, and the need to reallocate resources and power (Bucherer et al., 2012). Despite these barriers, small firms innovating their business models tend to experience performance improvements (Heikkilä, 2018).

Small firms tend to be more successful at BMIs than established ones as they are more adaptable to the organizational re-design and changes in governance competencies accompanying the innovated model, encompassing dynamic capabilities and resources (Carayannis et al., 2014). Therefore, BMI approaches developed for larger firms may not necessarily apply to smaller firms, which require a tailored approach specific to their needs (Cosenz & Bivona, 2021). Aspara et al. (2010) supported differentiating between smaller and larger firms. Their large-scale empirical study revealed that BMI has a diverging impact on the financial performance of smaller and larger firms, as measured in profitability growth. When firms focus on both BMI and replication, profitable growth is greater than firms that focus on neither. However, small firms committed to BMI but less to business model replication achieve higher growth than small firms not devoted to innovation or replication. Unlike larger firms that show an inverse relationship, growth tends to be lower when only the innovation dimension receives attention. A plausible explanation for the performance differences between smaller and larger firms is that while larger firms enjoy economies of scale, smaller firms often face resource limitations when adjusting to changes in their environment (Aspara et al., 2010). However, smaller firms have an advantage in that they are more effective at creating and establishing themselves in new market niches, and they are generally more adaptable to shift their business models as needed (Aspara et al., 2010).

The ability of the focal firm to capture a fair share of value from the innovated business model is a determining factor for the success of BMI (Abrahamsen et al., 2019). BMI has ushered in remarkable business success for new ventures, even in intensely competitive environments (Casadesus-Masanell & Zhu, 2013). BMIs can positively impact firm performance by lowering costs and enhancing strategic flexibility (Pohle & Chapman, 2006). Moreover, operating margins tend to grow stronger in firms focusing on BMI than those prioritizing other innovation types (Pohle & Chapman, 2006). Further support for performance gains is that new models are hard to copy by competitors because implementing them demands time, effort, and changes to core elements of a company's logic, as well as the need for the new model to be congruent with the imitating firm's culture, strategy, and competences (Bucherer et al., 2012). Given this landscape, companies should be aware of how BMI impacts their performance to be more productive (Latifi et al., 2021). However, while the literature often refers to good performance concerning BMI activity, it often remains unclear how performance is defined.

In contrast, Latifi et al. (2021) challenged conventional beliefs about the positive impact of BMI on firm performance, revealing that the association be-

tween the two concepts is insignificant and that efficiency growth, revenue growth, and organizational capabilities mediate the relationship. BMI incurs a sizable degree of risk, uncertainty, and ambiguity emerging from irreversible changes in central components of a firm's business model (Latifi et al., 2021). One such risk is introducing a new, innovative business model, as it exposes the new model to competitors and reduces the innovating firm's potential to capitalize on its innovation (Casadesus-Masanell & Zhu, 2013). However, intellectual property rights protection can reduce this risk (Casadesus-Masanell & Zhu, 2013).

Nevertheless, start-ups are encouraged to experiment with business models to identify the most ideal one, following a process of discovery that reveals the model's suitability quickly and at reduced costs (Carayannis et al., 2014; Latifi et al., 2021). Likewise, Chesbrough (2010) also highlighted the significance of experimenting with business models, acknowledging that businesses must overcome substantial barriers. When experimenting, firms should take an effectuation approach: accepting that some models will fail but learning from them and staying within the affordable loss criteria, that entrepreneurs limit the risk to the amount of loss they can bear if their venture fails (Chesbrough, 2010).

Learning from failed models is vital, and incubators can provide valuable support by assisting in the experimentation process. One support vehicle helping to overcome the barriers young ventures face is construct maps, elucidating the processes underlying the business model, and helping firms to experiment and play with alternative scenarios (Chesbrough, 2010). However, it should be remembered that BMI does not necessarily guarantee strong performance (Latifi et al., 2021).

2.3.6 Business Model Innovation and Internationalization

BMI as a pathway to start-up internationalization is a relatively recent research field (Abrahamsson et al., 2019). Small and medium-sized enterprises that internationalize often need to modify their products, competencies, partners, or delivery (Eriksson et al., 2022). These modifications can be so substantial that the business model is reinvented (Eriksson et al., 2022). All case firms studied by Eriksson et al. (2022) had to introduce BMIs to expand abroad and achieve sustained international growth. In addition, small and medium-sized businesses may innovate their business model to acquire resilience through international growth (Eriksson et al., 2022). International resilience is developed through strategic collaboration, agile allocation of expertise and resources, digitalization, improvements in the revenue model, and customer intimacy (Eriksson et al., 2022).

As firms grasp new opportunities, the need for BMI increases (Eriksson et al., 2022), promoting firm growth (Pohle & Chapman, 2006). Particularly international new ventures received attention concerning BMI and internationalization (Abrahamsson et al., 2019). These ventures tend to innovate all three basic elements of business models, focusing on the value delivery and value capture dimensions. International new ventures innovate their business model because

the initial model may not suffice for long-term internationalization efforts, rendering it ineffective as the firm develops and matures (Abrahamsson et al., 2019). Furthermore, international new ventures are more engaged in re-configuring external relationships than other firms (Abrahamsson et al., 2019). Overall, BMI is a valid pathway for new ventures to compete in the international market (Abrahamsson et al., 2019).

2.4 Summary of Theory

The EE acts as the environmental foundation supporting start-up growth. EEs comprise various stakeholders working together to create a nurturing environment for start-up growth. Participants include entrepreneurs, venture development programs such as incubators and accelerators, other organizations supporting start-ups, government bodies, infrastructure providers, cultural influences, human capital, markets, and financial resources. Figure 2 depicts the EE as the outer circle, representing the contextual conditions in which incubators and incubated start-ups are embedded.

Incubators are illustrated as the middle circle of Figure 2, serving as intermediaries connecting start-ups within them to the EE. They support entrepreneurs in overcoming the challenges when starting and scaling a new venture. Their effectiveness varies depending on their specific goals and aspirations. While several studies have evaluated the effectiveness of incubators in promoting start-up growth, there remains a lack of consistency and clarity regarding the definition of incubator effectiveness, as many studies did not articulate the criteria used to evaluate incubator success. This study focuses on a public incubator, emphasizing two key metrics: turnover and job creation. These metrics align with the public ownership of the incubator, which aims to stimulate local job opportunities and boost tax revenue by facilitating start-up growth.

Nevertheless, several practices were identified as critical to incubator effectiveness. First, monitoring and assisting the progress of incubated start-ups is considered an integral support activity of incubators and vital for their effectiveness. This support activity typically involves mentoring and coaching on specific areas, such as sales or marketing. The second practice is promoting networking, with incubators acting as intermediaries in facilitating connections among various stakeholders. Networks are internal or external to the incubator, with external networks connecting start-ups to the EE in which the incubator is embedded. Third, incubators are key resource providers for early-stage start-ups, particularly in filling the resource gap of social and human capital. However, their impact on start-up survival has yielded mixed findings, indicating a lack of conclusive evidence in either direction. Even though larger incubators tend to have more resources, the size alone does not predict start-up survival. Fourth, the range of services provided by incubators also surfaced as a key factor of incubator effectiveness, as they can complement the skills and experience

of start-ups. Fifth, ensuring a good fit between the incubator and the start-up is a key consideration in the selection process, influencing incubator effectiveness. When goals and expectations are aligned, start-ups are more likely to benefit from incubation, leading to improved performance. However, the performance and growth implications for incubated start-ups remain unclear as findings diverge, leaving an uncertain understanding of what constitutes performance or growth. Most studies did not provide a clear definition or measurement of performance or growth.

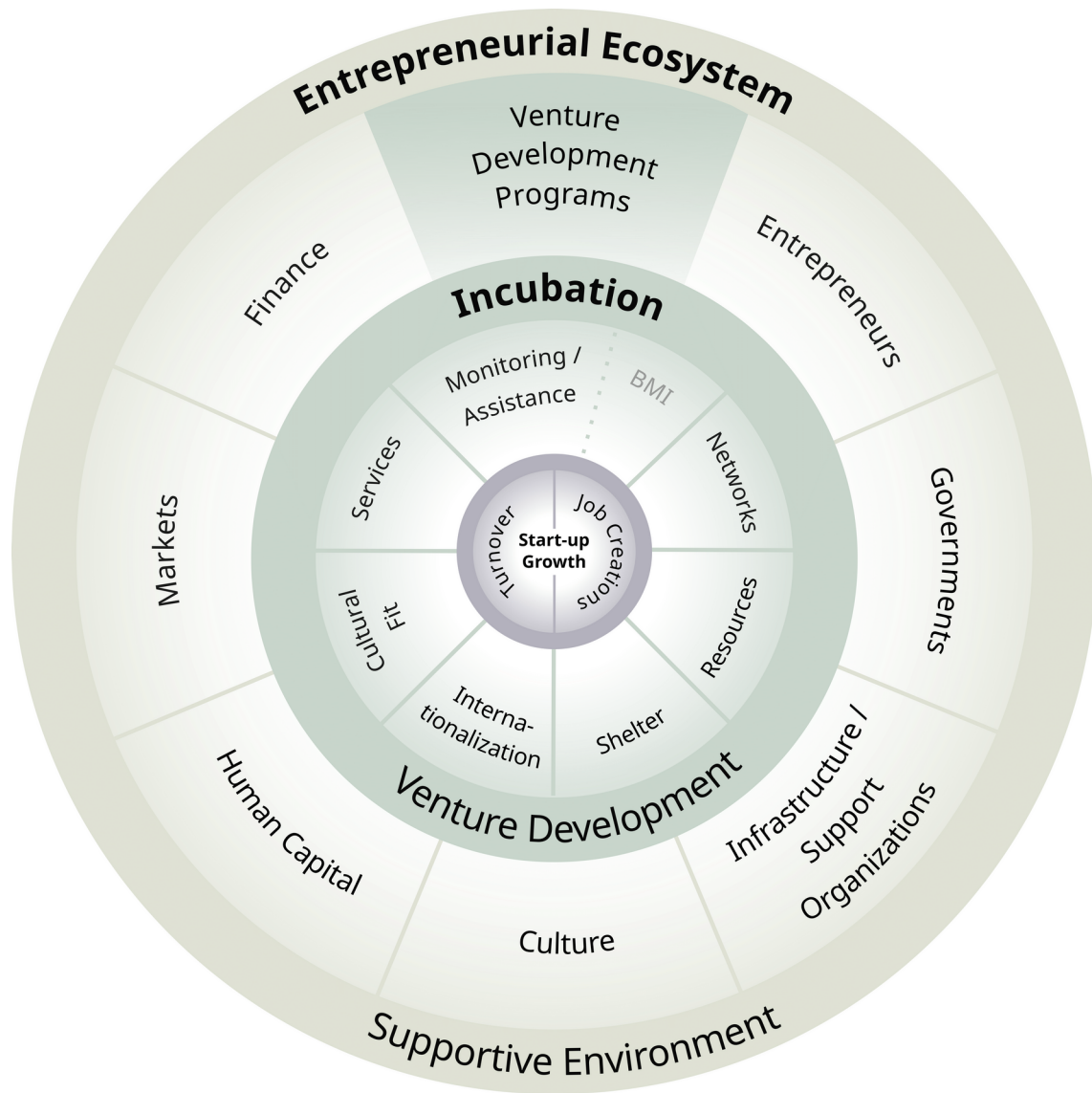
Moreover, incubators can offer psychological shelter to start-ups. However, this support mechanism has scantily been addressed. Seeing that starting a business can be challenging and isolating, especially for first-time entrepreneurs, it can be speculated that incubators can play a key role in helping to alleviate some of the stress and pressure. This may be done by creating a supportive community of like-minded individuals who also navigate the challenges of starting a business. This community can provide a sense of belonging, connection, and access to valuable resources and mentorship opportunities. By providing such emotional and psychological shelter, incubators can help start-ups feel less alone and more confident in their ability to succeed. Lastly, incubators can play a key role in promoting the internationalization of start-ups by facilitating international connections and reducing barriers to foreign market entry.

Despite the factors influencing incubator effectiveness, it is surprising that BMI support has received no prior attention in incubator contexts, considering its potential as a growth promoter for start-ups. In recognition of its absence from previous literature, yet acknowledging its importance, BMI is incorporated into Figure 2 with a subtle gray hue, symbolizing the need for inclusion. BMI is essential for firms to remain competitive and achieve long-term prosperity. Although many benefits are associated with it, such as resilience, survival, growth, competitive advantage, and meeting customer expectations, it is not commonly practiced. Yet, BMI is particularly relevant for start-ups as entrepreneurs tend to begin with a partial business model and refine it over time. Therefore, start-ups operating in an uncertain environment are encouraged to experiment with business models to identify the most suitable one, following a process of discovery that reveals the model's suitability quickly and at reduced costs.

However, while BMI can boost growth, it also incurs a sizable degree of risk, uncertainty, and ambiguity emerging from irreversible changes in central components of business models. In addition, smaller firms face more barriers to innovating their business models than larger organizations. Therefore, incubators should support start-ups in mitigating these risks and providing adequate support to lower innovation barriers so that start-ups can reap the benefits of BMI.

Figure 2

Support Mechanisms for Incubated Start-Ups



3 DATA AND METHODOLOGY

This chapter explores the research methodology, strategy, design, data collection, and analysis procedures. The study employs a qualitative research methodology, using multiple case studies to produce theory from informal, semi-structured interviews. The analysis draws on Gioia's coding scheme of first-order codes, second-order themes, and aggregate dimensions.

3.1 Research Methodology

Quantitative, qualitative, or mixed methods are the most common research methodologies in social sciences (Creswell & Creswell, 2018, p. 53). Applying quantitative methodologies for this study is less fruitful as the research questions build on ex-post incubation experiences, which are difficult to measure or experimentally manipulate, as practiced in quantitative methodologies.

Therefore, this study adopts a qualitative approach, which is most suitable to explain the causes and consequences of outcomes across cases (Eriksson & Kovalainen, 2008; Mahoney & Goertz, 2006), namely how incubation supports or could better support BMI of incubated start-ups, and what role EEs assume for incubated start-ups. Further support for the qualitative approach is that this study investigates the meaning and interpretation of BMI and EEs within the context of incubation to acquire a holistic understanding (Creswell & Creswell, 2018, pp. 258, 333; Eriksson & Kovalainen, 2008; Ketokivi & Choi, 2014). Choosing a qualitative approach allows me to become aware of how incubated start-ups perceive BMI and EEs, helping me to identify key factors at play and to portray the emergent model of interacting factors representing the natural setting of case start-ups, the business incubator (Creswell & Creswell, 2018, p. 257). Furthermore, a qualitative approach is favored for this study since prior literature inadequately covers the researched domain and previous revelations are relatively modest (Creswell & Creswell, 2018, p. 57; Ghauri & Gronhaugh, 2005). Moreover, qualitative research aims to establish interpretation and understanding (Eriksson & Kovalainen, 2008), making it an appropriate choice for the explanatory purposes of this study (Creswell & Creswell, 2018, p. 162; Ghauri & Gronhaugh, 2005). The chosen research methodology allows me to gain a richer and more detailed understanding of BMI support for incubated start-ups and the broader role of EEs than quantitative research could provide (Langley & Abdallah, 2011). Therefore, the selected methodology is based on its fit with the study's objectives (Eriksson & Kovalainen, 2008).

Qualitative research can be categorized by its interest in language, reflection, the discovery of regularities, and the discerning of meaning (Tesch, 1990). Thereof, this study centers on discovering regularities by developing a model of BMI support and EE participation in an incubation context. The study also

seeks to discern meaning by adopting a case study design to reveal how participants perceive the role of the incubator in view of BMI and the broader EEs.

My research logic involves examining multiple cases and arriving at a plausible explanation based on contextualized observations rather than beginning with preconceived notions or established theories (Flick, 2004, p. 126; Timmermans, 2022, p. 15). The inferences I make are educated guesses based on my observations. This research logic allows for identifying novel variables and relationships (Dubois & Gadde, 2002), particularly in the pursuit of developing new theories (Flick, 2004, p. 126; Timmermans, 2022, p. 2).

3.2 Research Strategy

3.2.1 Case Study Method

There is no singular approach in qualitative research. Instead, there are various heterogeneous approaches (Gehmann et al., 2018), and choosing an appropriate research strategy is as crucial as selecting the research methodology (Eriksson & Kovalainen, 2008). This study follows a case study research strategy, a distinctive social science inquiry mode (Schwandt & Gates, 2018, p. 590; Yin, 2018, p. 56).

The situation of start-ups being incubated is the focal theme. Hence, a case-study research strategy was chosen because it effectively examines complex managerial, organizational, and other business scenarios (Ghauri & Gronhaugh, 2005). Drawing on case studies enables me to develop theory by gathering detailed information about the experiences of incubated start-ups (Dubois & Gadde, 2002). Moreover, case studies are the preferred mode of inquiry for explanatory *how* type of research questions concerned with the meaning assigned by members of incubated firms (Yin, 2018, p. 44). A further reason why I opted for a case study method is to encompass both the past and present of incubated start-ups whose experience has no distinct outcome (Yin, 2018, p. 46). Also, as I have no control over the incubation process, and because the start-ups' real-world context is critical, case studies are the preferred mode of inquiry (Eisenhardt & Graebner, 2007; Yin, 2018, p. 47), allowing me to develop a multifaceted and comprehensive understanding (Crowe et al., 2011). Hence, theory that explains the observed emerges from examining what start-ups and experts express (Mahoney & Goertz, 2006).

Multiple cases form the backbone of this study. I included several cases to examine and identify patterns and mechanisms common across cases (Eriksson & Kovalainen, 2008) to arrive at a more holistic understanding where multiple cases can converge and replicate each other's results (Yin, 2018, p. 104). Further justification for a multiple case study is that there is insufficient theory to explain BMI in incubators and missing theoretical work on EEs through an incubator lens (Eriksson & Kovalainen, 2008).

Moreover, multiple-case studies build more robust and grounded theories than single-case studies (Eisenhardt & Graebner, 2007; Yin, 2018, p. 102) and are preferred over a single-case study in this research project. Multiple case studies are also more generalizable (Eisenhardt & Graebner, 2007), enabling me to determine whether findings are unique to a specific case or applicable across multiple cases (Eisenhardt, 1991). By providing more persuasive evidence, multiple case studies increase the strength of my arguments (Yin, 2018, p. 206).

3.2.2 Rigor

Rigorous standards are employed in this thesis to improve the quality of research. Specifically, I follow Yin's (2018, p. 380) recommendation of using the same criteria as in quantitative research: construct validity, internal validity, external validity, and reliability (Yin, 2018, p. 87).

Construct validity is the extent to which a study accurately reflects reality and examines what it aims to investigate. This study draws on multiple sources of evidence during data collection to improve accuracy, namely experts and incubated start-ups, to enhance rigor and promote convergent inquiry (Yin, 2018, p. 89). These sources of evidence provide a deeper and more diverse understanding of start-ups' incubation experience and their real-world context (Yin, 2018, p. 197). Besides triangulating sources of evidence, investigators and perspectives are also triangulated (see Patton, 2015, p. 478). Two investigators collect data. Perspectives are diversified by gathering information from various start-up members whose ventures are at different growth stages and by including the viewpoints of the head of two incubators and an industry expert. Findings are reported in a clear chain of evidence to further contribute to construct validity, allowing readers to trace the chain of evidence from the research question to the case study's conclusions (Yin, 2018, p. 89). A clear chain of evidence also depends on elucidating data collection practices and data analysis (Gibbert & Ruigrok, 2010), portrayed in the following sub-chapter.

Internal validity is the degree to which a study's results establish a cause-and-effect relationship between its variables (Gibbert & Ruigrok, 2010) and is vital for explanatory or causal case studies that aim to identify how and why certain conditions lead to others (Yin, 2018, p. 91). In this study, as events cannot be directly observed, causal inferences are made based on interview data (Yin, 2018, p. 91). Further strengthening internal validity, I used comprehensive data treatment by thoroughly and critically examining all collected data to avoid anecdotalism, wherein the study would be based on a few well-chosen examples (Silverman, 2005, p. 211).

External validity is the extent to which a case study's results are generalizable (Yin, 2018, p. 92) beyond the research setting (Gibbert & Ruigrok, 2010). As a qualitative research, this study is limited in generalization as it cannot be applied to larger populations (Creswell & Creswell, 2018, p. 274). Instead, this work focuses on analytical generalization, generalizing theoretical propositions, concepts, and principles (Eriksson & Kovalainen, 2008; Gibbert & Ruigrok, 2010; Yin, 2018, p. 92). This type of generalization means that the theory pro-

duced by this case study can only be applied to a few similar cases (Mahoney & Goertz, 2006). Consequently, this case study is situationally grounded, considering the contextual idiosyncrasies of incubated start-ups while abstracting to a more extensive theoretical comprehension (Ketokivi & Choi, 2014). External validity of this study is strengthened by the case study selection and context (Gibbert & Ruigrok, 2010), discussed in the following sub-chapter.

Reliability concerns the consistency and repeatability of the case study's procedures and findings (Yin, 2018, p. 93). To strengthen this study's reliability, as many details are provided as possible, ensuring that different investigators can arrive at similar results (Silverman, 2005). This approach is recommended over replicating the case study with another case (Yin, 2018, p. 93).

3.3 Data Collection

This study's data is gathered from start-up founders and CEOs in their natural daily setting where the researched themes are experienced, the business incubator. This approach follows the standard practice used in case studies (Creswell & Creswell, 2018, p. 257; Yin, 2018, p. 154). However, a few of the interviews were conducted remotely online if preferred by the participant. In addition, the study also includes three interviews with experts: the CEO of an incubator located in central Finland, the director of an incubator from the community of Madrid, and the CEO of an accelerator from central Finland.

3.3.1 Case Selection

A combination of theoretical and convenience sampling produced the cases for this study. Cases were selected based on the criteria of being accessible and feasible, that is, incubators and experts located near the two researchers, and on their potential to produce theory and shed light on the research problem and question (Eisenhardt & Graebner, 2007; Eriksson & Kovalainen, 2008; Mahoney & Goertz, 2006).

Analyzed cases should be reasonably similar to facilitate comparisons between individual cases (Eriksson & Kovalainen, 2008). All of the start-ups in the case study were chosen from a single incubator with the expectation that they would have similar outcomes to ensure that the results could be replicated, constituting theoretical replication (Yin, 2018, pp. 252–253). The following selection criteria for start-ups were applied to meet the dual criterion of being a convenience and theoretical sample:

1. The start-up has been incubated by FastTrack Ventures in central Finland.
2. The start-up has been incubated for at least six months to capture the experience with the incubator after some exposure to the program. The final dataset contains only start-ups incubated for one year or more.

3. The start-up is a high-growth venture, as defined by the selection process of FastTrack Ventures. This means that the business idea is scalable and the start-up is seeking growth, implying that all start-ups at FastTrack Ventures meet this requirement.

The incubator's former chairman of 2019, now a board member, contacted potential informants totaling 27 start-ups through email. However, due to a lack of participating start-ups, interview dates were extended, and several reminder emails were sent. In total, 11 case start-ups and three expert cases form the data pool of this thesis. However, data collection is still ongoing for a larger research project. The profiles of all start-ups used in this research are provided in Table 4, the profiles of experts in Table 5, and the profile of venture development programs in Table 6.

Table 4

Overview of Case Start-Ups

	Interview Date	Interview Duration (Minutes)	Year of Establishment	Owners	Board	Industry	Start/Exit at Incubator	Sales Turnover before Incubation	Turnover after Incubation	Employees before/after Incubation
CareCom Connect	10/18/22	61	2017	Interviewee, Co-Founder, Angel Investor	Co-Founders	Healthcare	Q3 2020 - Q3 2022	€30.000 - €50.000	€190.000 - €200.000	3/3
DataVision Solutions	12/20/22	41	2014	5 Friends/Colleagues	/	SaaS	Q3 2021 - Intended Q3 2023	€210.000 - €220.000	€300.000 - €310.000	4-5/7
Impact Nexus	10/18/22	57	2018	3 Founders, 7 Additional Owners	7 Owners	Consulting/Business Development	Q4 2019 - Q4 2021	€90.000 - €110.000	€90.000 - €110.000	3/9
AutomateX	10/25/22	47	2018	4 Managers, 4 Business Angels, 1 VC Firm	3 Members	Software	2019 - 2021	€0 - €10.000	€500.000 - €520.000	2/7-8
IngredientXpert	18/04/23	55	2019	3 Founders, Employees	3 Founders	SaaS	01.03.22 - Intended March 2024	€90.000 - €110.000	€200.000 - €220.000	4/7
IntelliReach	18/04/23	47	2022	3 Founders	3 Founders	Publishing/Ad-tech	Q3 2022 - Intended Q3 2024	€0 - €10.000	€140.000 - €160.000	4/5
WellSustain Solutions	19/04/23	48	2020	3 Founders	3 Founders	Leadership Development	May 2022 - Intended May 2023	€30.000 - €50.000	€110.000 - €140.000	3/3
Carbon-Clear Construction	28/04/23	46	2019	3 Founders, 2 VCs	2 Founders, 2 VCs	Mechanical Woods	01.04.22 - 01.04.23	€0 - €10.000	€0 - €10.000	3/7

Table 5*Overview of Case Experts*

	Interview Date	Interview Duration (Minutes)	Background of Interviewee	Role of Interviewee	Term since
A	14.12.2022	47	Economics, Health and Sport Sciences	CEO of FastTrack Ventures, Coach at FastTrack Ventures	June 2022
B	15.12.2022	56	Economics, Entrepreneurship	Director of Start-Up Launchpad Academy	January 2021
C	16.02.2023	50	Information and Communication Technology, Finance	CEO and Founder of SpeedLaunch Lab	2005

Table 6*Overview of Venture Development Programs*

	Location	Year of Establishment	Organizational Structure	Annual Budget	Funding Sources	Employees
FastTrack Ventures	Central Finland	2017	Non-Profit	€1m - €1.5m	Owners, Incubation Fees	5 Full-Time, 3 Part-Time, 6 Coaches
Start-Up Launchpad Academy	Central Spain	2010	Non-Profit	Undisclosed	Affiliated University	4 Full-time, 20-40 Mentors
Speed-Launch Lab	Central Finland	2005	For-Profit	€10m - €12m	Own Operations	15 Consultants, Back-Office

CareCom Connect

Established in 2017, CareCom Connect is a technology company specializing in communication tools for social and health care in IT. The business, which the founder, co-founder, and an angel investor own, grew its annual turnover by roughly 130% during the two-year incubation period without expanding its workforce of three employees. The business is funded through a pre-seed financing round and government grants. The company's mobile application is sold to the public and private sectors, with the venture aiming to become the go-to communication tool in social and health care. The company plans to expand its reach to the Nordics and German-speaking Europe long term. The founders' inspiration for the business idea came from wanting to make a meaningful impact, as their grandparents were in home care, where communication between nurses and families was ineffective. CareCom Connect joined FastTrack Ventures after being invited and based on past positive experiences with similar programs. FastTrack Ventures agreed to provide tailored coaching to

meet the specific needs of CareCom Connect. At enrollment, CareCom Connect already had a product in the market and generated revenue but was still seeking product-market fit.

DataVision Solutions

Founded in 1994, DataVision Solutions remained dormant until 2014, when five friends and former colleagues with a technical background brought it to life. The business is publicly funded, with the CEO and founder holding 70% ownership and no established board. The venture has seen its annual turnover increase by roughly 60% and expanded its workforce from 4 to 7 since being incubated in Autumn 2021. Specializing in SaaS software development for business intelligence, DataVision Solutions provides simplified dashboards and visualization analytics. The company has plans to scale and find direction in the long term. The business idea stemmed from wanting to generate profit and capitalize on a market opportunity. DataVision Solutions joined FastTrack Ventures to expand its network and make new connections.

Impact Nexus

Established in 2018, Impact Nexus is co-owned by three founders and four employees, each with a one-seventh stake in the company. The venture's workforce has grown from three to nine employees during its two-year incubation period, while the annual turnover remained stable. The start-up specializes in consulting and business development, offering professional advisory services to create positive societal changes. Impact Nexus aims to scale its impact to promote the common good in the long term. The venture's inspiration for its formation is to influence society positively. Impact Nexus joined FastTrack Ventures primarily to take advantage of its office space.

AutomateX

Founded in 2018, AutomateX is co-owned by the founder, four managers, four angel investors, and a venture capital company. The start-up has a three-member board. The business is funded personally and through a small angel investment, with the CEO's background in finance and entrepreneurship. During its two-year incubation period, the venture grew from having no annual turnover to achieving an annual turnover of around €500,000, with its workforce increasing from two to seven employees. Specializing in the software industry, AutomateX offers a multi-channel communication platform for enterprises to engage with customers through mobile devices. The company aims to automate business processes by catering to different use-case verticals. Initially joining as an investor, the CEO of AutomateX fell in love with the company's idea and industry, leading to active involvement in the venture. The company joined FastTrack Ventures based on recommendations. At enrollment, AutomateX had some product development but not much.

IngredientXpert

Founded in 2019, IngredientXpert provides a SaaS service for professional kitchens, including a product database for ingredients with basic information such as package sizes, nutritional information, and allergens. The CEO's educa-

tional background is in information technology, as is his work background as a software developer and chief technology officer. The venture's competitive advantage is its centralized product database containing almost thirty thousand ingredient products. IngredientXpert is co-owned by the three founders, who also act as board members, whose aim is to eventually exit by selling their shares. The business is funded through a bank loan, a government support initiative from Finland, an EU-wide initiative, and personal investments. The venture's annual turnover has doubled since joining the incubator, and two new employees were hired. The founders were motivated to start the business when realizing that smaller customers lacked the resources to create ingredient data, which hindered their ability to benefit from traditional ERP systems. IngredientXpert joined FastTrack Ventures because they received a call from the incubator and saw the potential benefits of a good workplace, access to supportive facilities, and the opportunity to network and learn from other start-ups in the incubator. At enrollment, IngredientXpert already had some customers and revenue.

IntelliReach

Founded in 2022 as a spin-off, IntelliReach offers contextual targeting as an alternative to third-party cookies for digital advertising. This service enables publishers to target advertisements based on the page content without disturbing ads based on a visitor's browsing history, whereby IntelliReach operates as an API company, offering APIs for monthly fees. The CEO is a serial entrepreneur with a background in information and communication technology. IntelliReach is co-owned by the three founders, who also act as board members. The business is funded exclusively through personal investments of the founders. The venture did not have any turnover when starting the incubation program but is now heading towards €140.000 - €160.000 over the eight months since joining the incubator. In addition, the start-up hired an employee. After discussions with local newspapers on how artificial intelligence could help with advertisements, the founders were motivated to start the business. IntelliReach joined FastTrack Ventures because the founder felt he was too technical to run the business independently and sought professionals to provide advice and support. Also, the start-up is seeking guidance and support in securing a larger investment. At enrollment, IntelliReach had already developed a product over four years and had customers.

WellSustain Solutions

Established in 2020, WellSustain Solutions provides sustainable performance and work well-being solutions to companies through a mobile app and a tool. The app provides insights on how to lead and manage employees' well-being and performance at the individual and group levels. The start-up also offers training and consulting services to help companies use the app effectively. The start-up aims to become a SaaS business, making it easier for companies to use its tool independently. The CEO has an educational background in economics, has founded a start-up before, and has worked in sales and project management. WellSustain Solutions is co-owned by the three founders, who also act as

board members. The venture is funded through personal investments, an outside investor, government grants, and a bank loan. The start-up increased its turnover by almost 200% since joining the incubator, while the number of employees stayed the same. The founders were motivated to start the business when seeing the problems that companies and work communities face regarding sustainable performance and work well-being. WellSustain Solutions joined FastTrack Ventures because they recognized that it could benefit from the expertise and guidance of experienced professionals to gain a broader perspective on their business and identify opportunities for growth and development that they may have overlooked otherwise. At enrollment, WellSustain Solutions had some customers but did not market the venture.

CarbonClear Construction

Founded in 2019, CarbonClear Construction develops natural, carbon-negative acoustic solutions for construction. The start-up aims to scale to around €500.000 in revenue in the next decade. The CEO has a background in entrepreneurship and acoustic design. CarbonClear Construction is co-owned by three founding partners and has a board with two founding partners and two investors. Due to product development activity, the venture has had no turnover so far and is not expecting any turnover in the upcoming years. Starting with three employees at the beginning of the incubation program, it has now been seven, one year into the incubation program. The start-up was founded because one of the founders read an article about foam forming and saw a potential use case for acoustic tiles. CarbonClear Construction joined FastTrack Ventures because they lacked expertise in financing, marketing, and sales, particularly in international sales, which they thought the incubator could help them with, and also because they would benefit from the incubator's office space. The start-up is funded mainly through venture capital and government grants. At enrollment, CarbonClear Construction had just received their first funding of roughly €1.6 million, and the founders had recently employed themselves in the venture.

Expert A and FastTrack Ventures

Established in 2017, FastTrack Ventures is a limited liability company owned by a Finnish municipality and three educational institutions, two of which are universities. Its annual budget of €1.3 million mainly comes from its owners, supplemented by a small portion from monthly incubation fees of €245 per start-up. The incubator employs five full-time, ten to eleven indirect employees, and six coaches. Start-ups benefit from a three-month pre-incubation service if they are not yet mature enough to apply, followed by a two-year incubation program. During the incubation period, start-ups can use the incubator's office space and are assigned a dedicated coach who conducts monthly business reviews with the start-up team. Other coaches with different expertise are brought in on a per-need basis. Additionally, there are group coaching sessions on various topics, such as funding, sales, marketing, internationalization, strategic planning, IPR, and team building.

FastTrack Ventures seeks to expedite the growth of start-ups and enable them to reach their full potential more quickly than if they were not incubated. Throughout the program, the incubator supports start-ups in tackling challenges and prepares them for venture capital funding after the program. To measure its success, FastTrack Ventures evaluates the growth of incubated start-ups, including the amount of funding they receive, the number of jobs they create, and the generated tax revenue. Given that the incubator is public, these metrics interest its owners. In the long run, the incubator aims to bolster its reputation, draw companies from outside its municipality, and seek partnerships to assist its start-ups in expanding internationally.

The incubator sources potential start-ups from the municipality and its partners without limiting itself to a specific industry. Selection criteria are based on the business idea's scalability, a team of at least two members, securing funding in the next twelve months, being registered in the city of the incubator, and a willingness to share ideas and receive coaching. Pre-incubation follows selection, after which start-ups pitch to the board and sign up for one to two years, with a premature exit triggered if revenue exceeds €1 million or a merger or acquisition occurs. The incubator's primary goal is to accelerate the growth of incubated start-ups and help them realize their full potential quickly, focusing on evaluating success in terms of funding, job creation, and tax revenue generated. Additionally, it seeks to enhance its reputation and attract firms from beyond its municipality while partnering with external entities to facilitate the internationalization of start-ups.

Expert B and Start-Up Launchpad Academy

Expert B has a business background and a career focused on start-ups. The expert has been the Director of an early-stage academic incubator in Spain for two years, but the incubator has been established for 12 years. The incubator's mission is to create an entrepreneurial mindset rather than just creating entrepreneurs. While the incubator receives its budget from a university, it is an independent entity, with a team of four people and external mentors and coaches hired per need. The incubator primarily focuses on helping students and young alumni go through the initial phase of becoming an entrepreneur, with a minimum requirement being that they have an idea. The incubator supports idea validation and business simulation, intending to get incubatees from validation to a minimum viable product.

Expert C and SpeedLaunch Lab

Expert C has a finance and information and communication technology background and is the CEO and founder of a private accelerator in central Finland, established nearly two decades ago. The accelerator of Expert C aims to support early-stage companies with the potential for international growth. With a team of 15 people, a back-office, and a more than ten million euros turnover, the accelerator provides funding, business plan support for changes and modifications, business analytics, and sales support to 50 companies annually. One of the key criteria for companies that the accelerator supports is that they have a minimum turnover of €1 million and a demonstrated understanding of the

market problem, product solution, and fit. The accelerator's goal is to help companies achieve their full potential.

3.3.2 Interviews

This study relies on interviews as sources of evidence to allow entrepreneurs of incubated start-ups to provide unique and valuable insights (Yin, 2018, p. 185), as interviews with well-informed actors are common in case studies (Eisenhardt & Graebner, 2007; Gibbert & Ruigrok, 2010; Yin, 2018, p. 185). Start-up members are knowledgeable agents in this study's context, and interviews enable them to articulate their thoughts, actions, and intentions (Gioia et al., 2012). Through these interviews, the study aims to illuminate meaningful perspectives and discover participant stories (Patton, 2015, p. 628). Interviews allow me to obtain explanatory insights regarding the *hows* of BMI and EEs, helping me to understand the interviewee's relativist perspectives of their experience at the incubator (Eriksson & Kovalainen, 2008; Patton, 2015, p. 628; Yin, 2018, p. 183).

Retrospective sense-making bias is a concern in this study (Eisenhardt & Graebner, 2007). To mitigate this, the researcher incorporates the perspectives of many highly knowledgeable informants with diverse viewpoints, specifically CEOs and founders who received personalized coaching. Additionally, the study ensures balance in the analysis by including the viewpoint of the CEO of FastTrack Ventures and incorporating the perspectives of the director of another incubator, Expert B. The perspectives of Expert C, CEO and founder of an accelerator, are also included. The interview guide for the expert interviews can be seen in Appendix B.

This study follows semi-structured interviews because of their potential to generate knowledge (Brinkmann, 2018, p. 990). Due to the complexity of BMI and EEs, direct observation is not practical, making interviews an especially appropriate method for this research (Patton, 2015, p. 628). Semi-structured interviews provide me more flexibility on follow-up questions and allow interviewees to be more prominent while keeping the conversation focused on BMI and EEs (Brinkmann, 2018, pp. 990–991). This study specifically used semi-structured interviews to explore start-ups' past and present experiences, as recommended by (Gioia et al., 2012). The case study interviews lasted roughly 45 minutes to one hour and were focused and conversational, aligning with Yin's (2018, p. 184) suggestion. Further, the interviews were standardized and open-ended, following the same set of themes outlined above, per Patton's (2015, p. 645) recommendation.

An interview guide was prepared in advance to ensure a consistent line of inquiry with each interviewee (Patton, 2015, p. 644), as is recommended for semi-structured interviews (Eriksson & Kovalainen, 2008; Patton, 2015, p. 644). Using an interview guide aided me in pursuing the research topic comprehensively and systematically (Eriksson & Kovalainen, 2008; Patton, 2015, p. 644). Interview questions were designed to be closely related yet distinct from the research question, allowing for unique insights to emerge from the analysis (Eriksson & Kovalainen, 2008).

The interview guide for start-ups, in Appendix A, included several themes discussed with the interviewees: a company overview, the business model, changes to it, resources, incubation services, next steps for growth, and internationalization. The main emphasis was exploring the business model, related changes and incidents, and the available resources. The discussions around the company overview and founding story were relatively brief. The themes of incubation services, next steps for growth, and internationalization were also explored in some detail but to a lesser extent than the business models and resources. The interview themes are presented below.

1. *Company overview*: This theme provided background information, such as the venture's establishment, owners, board members, and industry. The purpose of this theme was to provide context for the interview and to understand the entrepreneur's background and experience.
2. *Founding story*: Why and how the interviewees founded the business, their motivations for joining an incubator program, and the state of their start-up when they joined the incubation program.
3. *Business model*: Interviewees were asked to describe their business model canvas to provide context for BMI activity.
4. *Changes and critical incidents related to business models*: This theme aimed to understand how the incubator program had influenced the entrepreneur's business and what had occurred during their time there. The interviewees were asked to reflect on the changes and developments in their business model while in the incubator and any other critical incidents that may have occurred.
5. *Resources*: Interviewees were asked about the kind of networks they were in, how they benefited from these networks, their team composition, their skills and competencies, and how they saw the role of the incubator personnel. Additionally, the interviewees were asked how their firm was funded. This theme aimed to understand the resources available to entrepreneurs and how they utilize them, also indicating their perception of EEs.
6. *Incubation services*: This was asked to understand the effectiveness of the incubator program and its impact on the entrepreneur's business. The interviewees were asked what services the incubator provided, how often or how much they participated in incubator activities, what they benefited from the most, what they learned during their time with the incubator, and whether their expectations were met.
7. *Next steps for growth*: This theme aimed to understand the entrepreneur's plans for growth and how they intend to achieve them. The interviewees were also asked how the incubator program could help them achieve growth.
8. *Internationalization*: This theme aimed to provide an understanding of the entrepreneurs' internationalization plans and how the incubator program could help them achieve these plans. The interviewees were asked whether their start-up had entered a foreign market before, how they did

it, and how the incubator program helped or could have helped facilitate the internationalization process.

The interview guide evolved throughout the study in an iterative process to enhance the depth and quality of the data collected. Initially, the interview guide consisted of direct questions about the concepts under investigation. For instance, participating start-up CEOs were asked to describe BMIs and, more generally, critical changes within their start-ups. However, it became evident early on that these direct questions did not yield substantial insights. This was primarily due to the founders' limited familiarity with business terminology, including key concepts such as the business model canvas. Modifications were made to address this issue and ensure a more comprehensive understanding of the subject matter. The revised interview guide took an indirect approach by incorporating a broader range of questions. Rather than inquiring about BMIs or the networks within the EE, the questions were tailored to specific subsets of these concepts that were easily comprehensible to the interviewees. For instance, instead of asking for a generic account of critical changes to their business model, interviewees were prompted to describe alterations in their communication strategies with customers or modifications to their partnerships in creating or delivering their products. By employing this more nuanced approach, the interview guide aimed to elicit more detailed and meaningful responses from the participants, shedding light on the intricacies of their entrepreneurial endeavors. Questions were optimized over several interview rounds until interviewees sufficiently reported on the inquired domains.

Throughout the interviews, I sought to obtain specific and tangible accounts of how participants encounter incubation regarding BMI and EEs. The objective was to avoid theoretical abstractions and instead focus on real-world problems, often opaque and subject to conflicting interpretations (Brinkmann, 2018, p. 992).

3.4 Data Analysis

The interviews were transcribed using the online tool Otter.ai. The transcripts were then manually checked for accuracy and corrected in three iterations to ensure error-free data. MAXQDA, a qualitative data analysis software, was used to code, organize, and analyze the data. Themes and categories were coded according to the MECE principle, ensuring that they were mutually exclusive and collectively exhaustive.

Unlike their quantitative counterparts, qualitative studies lack prescribed rules, norms, or formats (Langley & Abdallah, 2011). However, the Gioia and Eisenhardt methods are two popular qualitative research templates in management research (Langley & Abdallah, 2011). This study followed the coding approach outlined in the Gioia method, as the method is particularly suitable for understanding the real-life experiences of start-up members and experts (Gehmann et al., 2018), further enhancing the transparency of this research (Ke-

tokivi & Choi, 2014). Moreover, the Gioia method is a systematic approach to theory development. It imparts my study with academic rigor (Gioia et al., 2012), ensuring objectivity and accuracy in theory-building from start-up and expert cases (Eisenhardt & Graebner, 2007), making it an appropriate choice for this research. I aimed to discover new concepts rather than confirm what is already known by emphasizing the informants' voices in data gathering, analysis, and reporting, as recommended by Gioia et al. (2012).

The first-order codes were derived by thoroughly reviewing the interview transcripts. This process involved reading through the data multiple times to identify key phrases, terms, or concepts that emerged from participants' responses. The identified phrases were then clustered based on their similarities. This resulted in a comprehensive list of first-order codes aligned with the participants' language and terminology or the underlying concepts they addressed. For example, *network to customers* is a code closely associated with participants' own language (e.g., "If there would be a capability to offer some networks to potential customers that would be also very very useful" - AutomateX), and *peer exchange* is a code that captures the underlying concept of what interviewees described (e.g., "Like you guys are all in the same boat, like ask because if you're struggling, you're having your business model, somebody might have figured out the week before" - Expert B). Identifying and grouping first-order codes was iterative and involved constant refinement until saturation was reached, meaning no new codes emerged from the data. These first-order codes were then allocated to one or two folders named BMI and EEs.

After the first-order codes were established, the next step was identifying and grouping similar codes into larger, more abstract categories called second-order themes. This process involved looking for patterns or connections between the first-order codes to develop a deeper understanding of the underlying concepts and themes present in the data. The second-order themes served as a means of organizing and summarizing the first-order codes, providing a higher level of abstraction and enabling a more comprehensive data analysis.

Additionally, I identified emergent theories, concepts, and connections to create aggregate dimensions that captured the overarching topics that clustered the second-order themes together. This process involved further abstraction, where the second-order themes were grouped based on their similarities to form broader categories or dimensions. These aggregate dimensions provided a comprehensive overview of the key topics from the data, enabling a more focused and structured analysis of the finding. By identifying and analyzing the relationships between the codes and themes, I gained a deeper understanding of the data and could develop a more comprehensive theoretical framework.

Overall, the resulting data structures of first-order codes, second-order themes, and aggregate dimensions guided the narrative of this study's findings, presented below. The figures are neither causal nor dynamic, showing only the fundamental concepts on which the analysis builds.

Figure 3

Business Model Innovation Code Structure

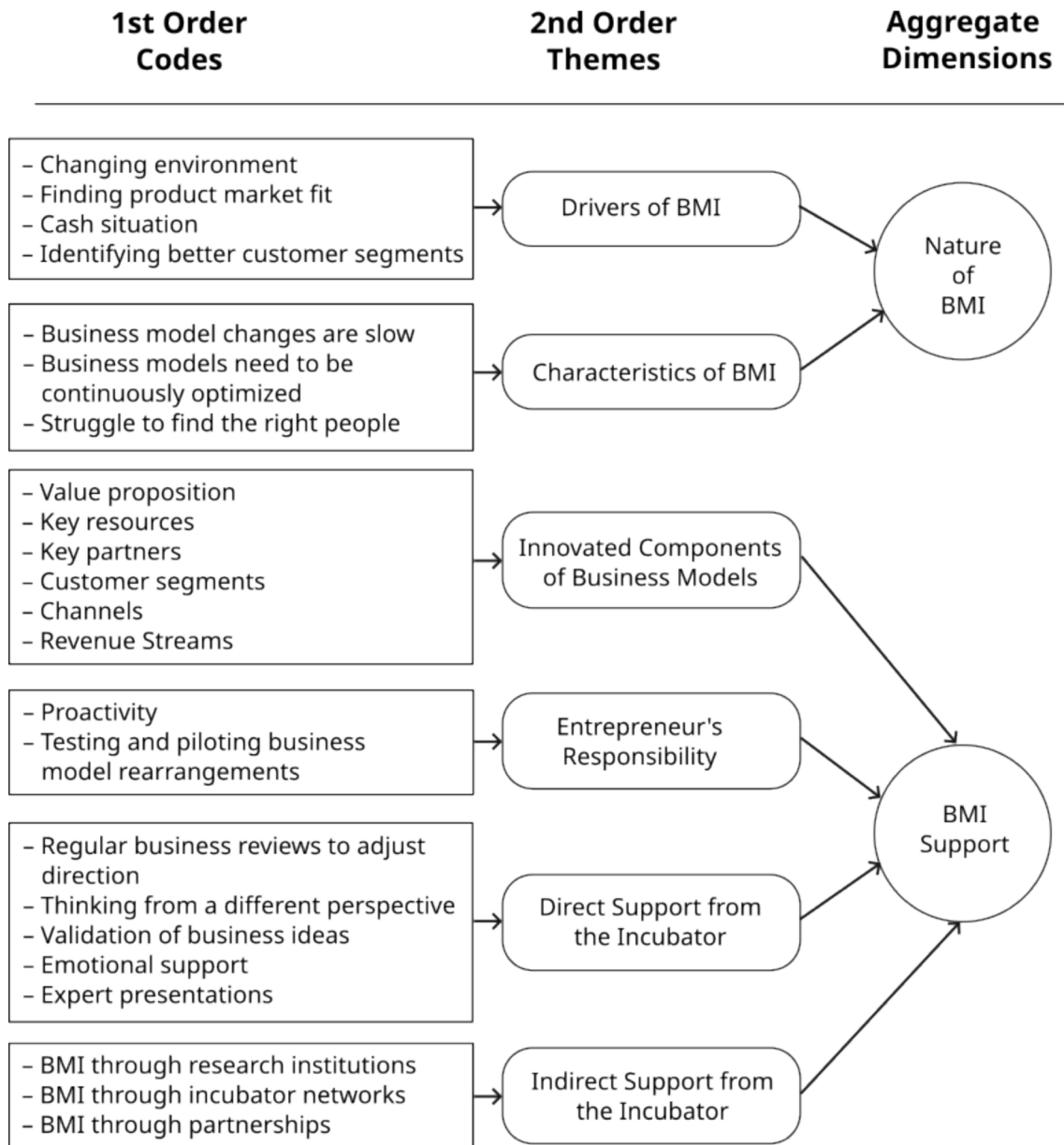
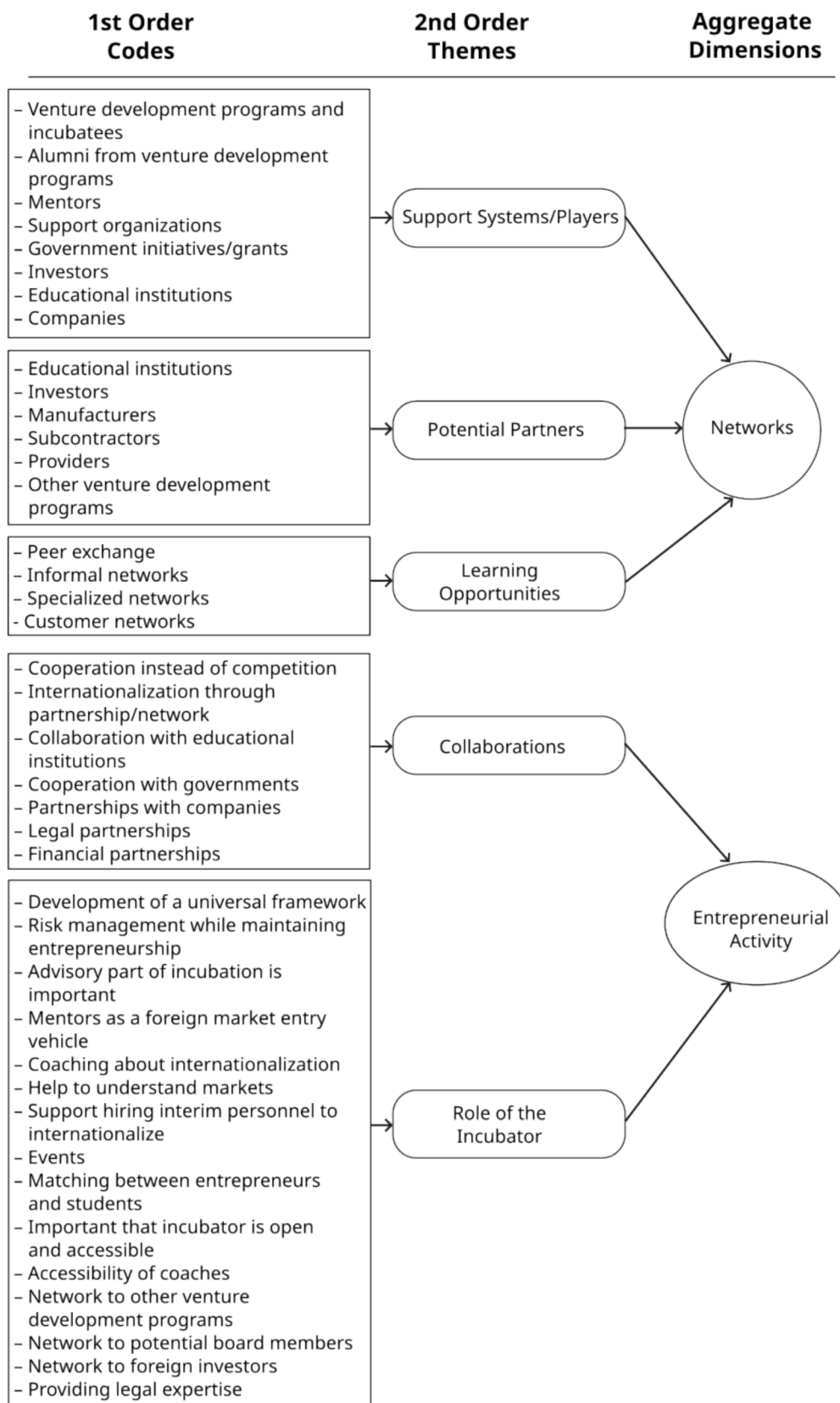


Figure 4*Entrepreneurial Ecosystems Code Structure*

4 FINDINGS

This chapter presents the findings of all case interviews with incubated start-ups and industry experts. The Gioia method was used to code the data, providing a structured framework for the analysis and identifying themes and patterns present in the data. The analysis is split into two code structures, the first related to BMI and the second to EEs. The BMI code structure incorporates the nature of BMI and how it can be supported, and the EEs structure centers on networks important for start-ups and on fostering entrepreneurial activity. The following sub-chapters explore how the aggregate dimensions and their underlying themes surfaced.

4.1 Nature of Business Model Innovation

Case start-ups reported drivers that motivated them to innovate their business model and overall characteristics of BMI. These are summarized as the nature of BMI.

4.1.1 Drivers of Business Model Innovation

- Changing environment
- Finding product market fit
- Cash situation dictates possible business models
- Identifying the right customer segments

Case start-ups were motivated to innovate their business models when faced with shifts in the competitive landscape, achieving product-market fit, encountering financial constraints incompatible with the original business model, or identifying more suitable customer segments.

Changes in the business environment, notably when competitors introduce novel products or services, and customer satisfaction insights are pivotal to BMI. These changes carry particular significance, particularly when they cause disruptions within the market (Expert C). Those changes can challenge existing business models and necessitate re-evaluating competitive strategy. In response, start-ups may need to modify their business models to remain competitive. IntelliReach's CEO also alluded to changes in the business environment. Although their business model has not undergone significant changes, they have recognized the importance of keeping up with industry advancements such as generative artificial intelligence and its potential benefits for start-ups. In response, IntelliReach has already incorporated ChatGPT, a language model that uses deep learning to generate human-like text based on prompts, into one of their services to create content. As a newly established start-up, they understand the importance of continuous learning and quickly

adapting to profitable opportunities in the market, articulated the CEO. Start-ups should thus keep up with industry advancements and regularly re-evaluate competitive strategies to modify their business model as needed.

Finding product-market fit is a further driver of BMI, emphasized Expert C and the CEO of AutomateX. As per Expert C's insights, start-ups should have a comprehensive understanding of how their product or service, along with its design, sales, and marketing strategies, aligns with the market dynamics. AutomateX's CEO reported discovering product-market fit as the most significant factor influencing their business model. In addition, they are now seeking product-market fit for their new use-case verticals, which may result in additional changes to their business model.

The cash situation, notably cash flows, is a further driver of BMI as it determines what business models a start-up can employ (Expert C). If the current business model fails to align with the funding requirements of the start-up or if the projected cash flow significantly deviates from the actual cash inflows and outflows, it becomes imperative to innovate the start-up's business model. The new model should then reflect the risks and delays investors face because more risky ventures usually need more money. Sustaining operations with the existing model would inadequately address investors' risk premiums, potentially leading to insufficient funds to support ongoing activities (Expert C).

And there must be, the, we need to understand if there's conflict of the, between the business model and the funding. So, funding of the business model must be including the risk and the delays calculated, because if you are running the business model that is very powerful in the future, you probably need to put more money because it's more, it's a risk balancing and that equation is, it's badly programmed in most of the cases. (Expert C)

So, there's a lack of money, type of thing. Normally, that is actually, that's a threshold to really to do something. (Expert C)

For instance, if a start-up aims to generate recurring revenue swiftly, it often needs a greater infusion of capital and a different financial position than those relying on revenue from one-time projects or fees (Expert C). This is because generating recurring revenue entails a divergent approach from generating income through singular sources (Expert C). Hence, a paucity of funds often indicates the need to recalibrate the business model, prompting start-ups to evaluate the feasibility of their chosen model concerning its impact on cash flow, suggested Expert C.

Identifying and pursuing a more promising customer segment with a genuine need for the product or service offered by the start-up emerged as another source of BMI. By finding the right customer segments, start-ups can target their marketing efforts and resources toward those most likely to benefit from and be willing to pay for the product or service. This realization may involve fundamental changes in the pricing models and arguments used, as demonstrated by AutomateX CEO's comparison of enterprise versus small and

medium-sized enterprise customers. Therefore, locating the appropriate customer segment that needs start-up's services, particularly those without an existing solution, is essential (AutomateX).

4.1.2 Characteristics of Business Model Innovation

- Business model changes are very slow
- Business models need to be continuously optimized
- Struggle to find the right people

BMI involves exploring and developing new ways to create, deliver, and capture value. BMI may involve significant organizational change, such as restructuring teams, retraining employees, and developing new partnerships or collaborations. These changes can involve rethinking the core components of a business, such as products or services, target customers, distribution channels, revenue streams, and cost structure. Therefore, innovating business models can be a slow process that requires substantial effort to develop and implement new strategies (Expert C). Especially established start-ups that may have existing systems and processes in place face barriers to innovating their business model. However, relatively small and more flexible start-ups often face fewer internal barriers and have greater agility to experiment with innovative business models than established companies with more complex organizational structures and entrenched systems. Furthermore, innovative business models can help start-ups respond to changing market conditions, customer preferences, and technological advancements, critical to remaining relevant and successful in rapidly evolving business landscapes.

Moreover, BMI is an ongoing commitment not limited to one point in time (Expert C). The expert explained that business models should be continuously optimized to align with customers. IntelliReach's CEO also emphasized the importance of continuous learning and optimization. Start-ups should be willing to experiment with different approaches, test their assumptions, and refine their strategies based on what works and what does not.

Finding the right hires to implement BMIs can be daunting for start-ups. They need to hire individuals who are not only talented but also share the same vision and values as the start-up. CareCom Connect and IngredientXpert struggled to find qualified candidates for product development roles. For CareCom Connect, this led to hires who were not a good fit, resulting in failed attempts and layoffs. Likewise, IngredientXpert faced challenges in finding the right people for sales positions. Mentorship and guidance from experienced professionals can help navigate the hiring challenge and find the right fit, reported the CEO of IngredientXpert, whose mentor helped them profile a sales position.

4.2 Business Model Innovation Support

The data revealed that some components of business models are particularly fruitful for BMI. These are the value proposition, key resources, key partners, customer segments, channels, and revenue streams. Incubators can support start-ups directly through regular business reviews, diverse perspectives, validating business ideas, emotional support, and expert presentations. In addition, incubators can offer indirect BMI support through collaborations with research institutions, the incubator's network, partnerships, and financial support.

4.2.1 Innovated Components of Business Models

- Value proposition
- Key resources
- Key partners
- Customer segments
- Channels
- Revenue streams

Several elements of business models were identified as key areas for innovation, each playing an important role in the overall success of a start-up. Understanding how start-ups innovate these elements can produce insights into the strategies utilized by incubated start-ups.

In the value creation dimension of business models, case firms innovated their value proposition, key resources, and key partners. Value delivery was innovated by moving towards other customer segments and substituting channels. With regards to the value capture dimension, innovations centered on revenue streams.

The case start-ups innovated their value creation dimension by modifying the start-ups' product offerings. However, the start-ups did not report radical shifts in their value proposition. Most mentioned optimizing and expanding their value proposition. CareCom Connect expanded its product portfolio by prototyping additional services, such as in-app purchases for services like window cleaning, to complement its existing instant messaging service for home-care customers. Expert C took a stronger stance, stating that value proposition innovations can change product offerings and even a new business model entirely. Thereby, achieving customer satisfaction is a driving force (Expert C).

You need to modify the products offering and also the business model to make sure that the customer satisfaction is okay. (Expert C)

Another strategy employed to innovate the value proposition is adding additional competencies and increasing the workforce to expand the start-up's offering. IngredientXpert hired a new developer, a salesperson, and a person for support services. With these new hires, the start-up was able to create more features for its customers, grow its sales, and improve its support services. This

move allowed the start-up's CEO to use his time more efficiently, focusing on more valuable tasks. New features brought forth by the newly recruited employees could then be sold as an additional service to the clientele of IngredientXpert. The start-up also developed a new concept with a smaller price point, making it more accessible to smaller customers.

A more innovative approach was taken by WellSustain Solutions, turning its business into a software-as-a-service model, away from on-demand coaching. The CEO recounted that this new approach requires a different business model, which they are still exploring.

Attaining customer satisfaction is a recurring theme in innovating the value proposition. Therefore, start-ups should clearly understand their target customers' needs and preferences, optimizing and expanding the venture's value proposition accordingly. Further, start-ups should be open to exploring new business models, helping them improve their value proposition and reach new customers. This experimentation may produce significant changes in operations, but it can also lead to new opportunities for growth and success.

Key resources and key partners are also playgrounds for BMI. CareCom Connect reported challenges with their existing resource base due to a shortage of human and financial resources, which impeded their product development. Consequently, they adjusted their resources to overcome those limitations. They bridged the resource gap by partnering with a software development company. This collaboration enabled the entrepreneurs to delegate almost all their product development tasks, freeing them to concentrate on strategic activities rather than getting bogged down in operational activities.

Therefore, start-ups should scrutinize their resource pool and identify deficiencies that might impede their growth. In addition, deficiencies in key resources can necessitate changes in other aspects of the business model. For example, start-ups can resolve these gaps by forging strategic partnerships to overcome resource constraints, gain expertise, and access networks they could otherwise not. Partnerships played a role for WellSustain Solutions, albeit not to the degree of novelty that CareCom Connect experienced. Rather than key partnerships, WellSustain Solutions' CEO described smaller, more informal partnerships. These have been more focused on networking and building relationships within their industry. For example, they have started working with developers that are part of their network.

Innovations in value delivery are shifts to different customer segments and new channels. Moving to new customer segments has been a common way of innovating the value delivery among the start-ups studied, practiced by CareCom Connect, DataVision Solutions, WellSustain Solutions, and expressed by Expert A, B, and C. The most significant changes observed were shifts between business-to-business (B2B), business-to-consumer (B2C), and business-to-government (B2G) segments (Expert A, B, C). Expert A noted that some incubatees initially targeted B2C but eventually shifted to B2B or B2G. Expert B mentioned a trend in shifts between B2B and B2C segments. Expert C confirmed that such changes between B2B and B2C segments are common.

They are the ICT companies, which, which thought that they are doing B2C service, but they ended up to doing the B2B and B2G. So these kinds of things happened. (Expert A)

There's people that [shift] from B2B to B2C or from B2C to B2B. (Expert B)

CareCom Connect initially targeted eldercare service providers in the B2C segment but later shifted their focus to B2G, providing the same services to municipalities and cities. Consequently, their previous B2B contacts were no longer helpful, and the start-up had to rebuild its sales in the B2G market. In contrast, DataVision Solutions is considering shifting its customer segment while remaining in the B2B space. Initially, they targeted Finnish travel providers, but they have realized that the potential for growth in this segment is limited to two million euros. Consequently, they plan to enter the e-commerce sector, offering more substantial growth potential and scalability. These findings suggest that start-ups should be aware of the limitations of their current customer segments, be open to exploring new segments, and be willing to pivot their business model if needed.

Moreover, start-ups can innovate their business model by exploring new channels, such as digital platforms or alternative distribution networks, to reach untapped customer segments and expand their reach. Prior to the COVID-19 pandemic, AutomateX relied solely on in-person channels. However, in response to the pandemic, all channels were moved to digital-only as customers shifted to remote work. This move allowed the start-up to expand internationally without incurring travel costs, facilitating experimentation with their business model at a lower cost. Even after the pandemic, the start-up intends to maintain its digital channels, as they have proven efficient and are expected not to change. The CEO of WellSustain Solutions also reported channel innovations, given their new sales model. Based on AutomateX's experience, other start-ups can learn that BMI can be fostered when adapting quickly to changing circumstances and that business models should be continually evaluated and refined.

In the dimension of value capture, there have been notable innovations in revenue streams, specifically in pricing models. Expert B drew attention to the increasing prevalence of the adoption of freemium pricing models among incubated firms. Likewise, Expert C emphasized the importance of understanding customer price points.

Initially, AutomateX charged a fixed fee supplemented by a smaller usage-based fee. However, with the shift toward enterprise customers, the venture recognized the potential of transactional pricing to generate more sales, leading to a shift in its pricing model. They also acknowledged that they must develop specific arguments and pricing models that appeal to enterprises and cater to their unique needs.

WellSustain Solutions adjusted its pricing model when considering the sales cycle and how to make the buying decision process more efficient. The start-up initially tried to sell large cases to companies, which may have made

the sales cycle longer and more complicated. However, by exploring different options, the start-up realized they could sell potential customers a small pilot program for a month at low costs. This pilot program would allow customers to try out the product without committing to a larger purchase, making the buying decision easier and faster. By offering this pilot program, WellSustain Solutions can attract customers who may have hesitated to commit to a larger purchase or may have been unsure if the product would meet their needs. This approach also allows the start-up to build trust with potential customers and demonstrate the value of their product. Therefore, start-ups should consider their revenue streams as a potential starting point for BMIs, employing a better-suited pricing model.

IntelliReach innovated its pricing model by introducing new pricing methods and splitting services. The entrepreneurs recognized that the start-up's existing pricing structure was not meeting the needs of smaller publishers. Hence, they took steps to address this issue. To achieve this, they split the start-up's services into five units, each with separate pricing models. By employing this approach, the venture was able to present a pricing option that is more accessible to smaller publishers who might not require the complete array of services offered by the start-up.

4.2.2 Entrepreneur's responsibility

- Proactvitiy
- Testing and piloting business model rearrangements

The proactivity of entrepreneurs plays a vital role in BMI. The CEO of DataVision Solutions highlighted the significance of taking proactive measures to drive innovation within their business model. The interviewee reflected that while he generally understood what needed to be done and how to do it, the daily work demands often caused him to overlook strategic aspects of the start-up's business model. The CEO found that periodic reminders by the incubator staff were necessary to prompt him to reflect on the essential aspects of the business that otherwise got neglected in the chaos of day-to-day operations.

I kind of know what I should do, and how I should do things, but in the everyday work, you tend to forget those things. And you just do, do the things you have in mind at the moment. (DataVision Solutions)

Furthermore, the CEO of DataVision Solutions stressed the importance of entrepreneurs taking personal responsibility for driving change within their businesses. Although external resources and support can be valuable, the entrepreneur has recognized that true transformation and innovation require personal initiative. Trusting that change would happen on its own was deemed insufficient by the interviewee. Instead, he emphasized the need for self-motivation and the willingness to take concrete steps independently.

You shouldn't trust that it will change your business because you have to do it yourself. (DataVision Solutions)

Testing and piloting business model rearrangements by entrepreneurs are also crucial for driving BMI. This approach allows entrepreneurs to understand better the potential business models and their viability in the market. Expert C emphasized the importance of comprehending the potential business model early on and testing it to some extent. This proactive approach enables entrepreneurs to identify the proposed model's flaws, challenges, and opportunities before fully committing to it. One company that exemplifies this strategic approach is CareCom Connect. In the interview, the CEO highlighted the start-up's commitment to continuously piloting and testing different business model rearrangements, prototypes, and pilots. This iterative process of testing and rearranging their business model is an ongoing strategy for them.

4.2.3 Direct Business Model Innovation Support

- Regular business reviews to adjust direction
- Thinking from different perspectives
- Validation of business ideas often leads to BMI
- Emotional support
- Presentations by experts for incubated start-ups

Incubators have emerged as important facilitators of BMI, providing start-ups with a supportive environment and relevant resources that enable them to change and develop their business models. One of the most important ways incubators can support start-ups in innovating their business model is through regular business reviews, which help start-ups adjust their direction and identify areas for improvement (Expert A, C). This support vehicle also involves identifying potential problems in present business models (Expert C). Incubators can also support BMIs by providing different perspectives and helping start-ups test and validate their ideas. In addition, emotional support may support start-ups in navigating the challenges of BMI. Expert presentations are another support vehicle, as they can offer insights and advice from industry experts and successful entrepreneurs.

Regular Business Reviews

FastTrack Ventures conducts monthly business reviews to assess the progress of its incubatees. During these meetings, start-up teams evaluate the performance of their business with their dedicated coach, ensuring that the venture is on the right track or identifying what needs to be done to steer it back in the right direction (Expert A). Relevant topics in those meetings are the overall business, strategy, financials, sales, marketing, human resources, and development (WellSustain Solutions). Additionally, teams communicate their experiences from the previous month, outline their future plans, and discuss the challenges they have encountered with their coach, who offers guidance and facilitates valuable connections (WellSustain Solutions). Furthermore, key perfor-

mance indicators are scrutinized to assess the progress of start-ups, and the session fosters an environment where entrepreneurs are encouraged to reflect upon their venture's strategic approach (Expert A). DataVision Solutions described these monthly business reviews as follows:

It's some sort of monthly business checkups. See how the business is going and what is happening and all these. And then we actually go through everything within the business. Personnel stuff, financial, stuff, sales, and also, also development. So, all this part, and the good thing is that you also use yourself, when you have done, done your summary for, of last month, then you can check it through the month before what you have actually written back then. And then you can see if things are happening as you wanted them to, to do. And then if they don't. So, that, that kind of helps you get more systematic and, and see how things are developing. (DataVision Solutions)

These business reviews are key to promoting BMI, as they provide start-ups with a regular opportunity to evaluate their business models and make adjustments. CareCom Connect's CEO attested to the importance of these meetings, citing the review of revenue and financial figures in those meetings, which Expert C identified as a critical metric for evaluating the health of the business model and the need for BMI. Therefore, business review meetings help start-ups to identify potential issues with their current business model and devise solutions (CareCom Connect).

Coaches can help start-ups identify problems in their business model early and prepare ventures before problems aggravate. Also, coaches can offer specialized expertise on particular matters (Expert A). Analytical tools are valuable in identifying potential problems and supporting start-ups in modifying their business model (Expert C). Expert C further stressed that it is the venture development program's responsibility to identify problems or misunderstandings in the business model of its tenants.

Our job is to find the, the misunderstanding and the problems in the business model. (Expert C)

We can analyze that there is something to be done. And then we can have tools how to modify, so we can support to, to their, to realize that there's something to be innovative, innovated. (Expert C)

Based on these observations, it is recommended that incubators and start-ups engage in regular, collaborative reviews of the start-up's business. This process should entail reflecting upon the venture's strategy, identifying potential issues within the existing business model, and devising appropriate solutions to address any issues. By reviewing revenue and financial figures, start-ups and incubators can evaluate the health of the venture's business model and determine the need for BMI. Additionally, start-ups can use the review process to assess their progress over time. These practices can help start-ups stay on track and promote growth.

Thinking from Different Perspectives

Incubators can further support start-ups by providing them with diverse perspectives and expertise, which can encourage and aid incubatees in BMI. Impact Nexus and AutomateX highlighted the importance of meeting new people within the incubator to gain new perspectives and ideas. Professional advice and an outside perspective can be valuable, even if the start-up has already experience in a particular area, said the CEO of IntelliReach. Getting advice and new ideas from an external perspective is what motivated DataVision Solutions to join an incubator in the first place, which the CEO described as important in keeping the venture awake. These experiences suggest that incubators should provide start-ups with opportunities to network and build relationships. Experts A and B and AutomateX's CEO also suggested that bringing in people with different backgrounds and expertise can be useful for start-ups. This practice indicates that incubators should offer start-ups exposure to a range of perspectives and ideas that they may not encounter otherwise.

And of course, there you can get a lot of like, out of the box ideas, when you meet, like variety of people at the same time. (AutomateX)

Business Idea Validation

Incubators can further support BMIs of their incubatees by facilitating the validation of business ideas, which often leads to the discovery and implementation of new and more effective business models. In many cases, start-ups base their business plans on assumptions, which remain untested until the venture executes its strategies, thereby exposing the reality of the situation (Expert A). Similarly, Expert B observed that many start-ups have a sense of confidence that they understand the business. However, this sense of certainty is often challenged as they begin to learn and adapt, sometimes resulting in the realization that their initial assumptions were misguided. In that regard, Expert A mentioned that through active listening and a deeper understanding of customer needs, start-ups could adapt their business ideas to meet customer demands and expectations.

Many of the start-up companies are writing assumptions on their business plan. And the reality hits them, when they start doing, when they start executing the plans. (Expert A)

Everybody, a lot of people think they have figured out when they start like getting secured, they know that they need to learn, think that they're pretty sure like, this is how it's gonna work. And almost always, it's the opposite. (Expert B)

CareCom Connect recounted how they initially assumed that their primary value proposition of saving nurses' time and reducing family members' stress would be enough to attract customers in the social and healthcare industry. However, after validating their business idea, they discovered that many people in this industry do not prioritize the well-being of nurses and home-care customers. This realization challenged their assumption and led the start-up to

explore ways to scale their business by providing additional value beyond their initial proposition. Specifically, they have now focused on helping private sector home care providers increase sales by offering extra services through their application, validated through prototyping. When learning about its customers, AutomateX realized the importance of tailoring its business model and pricing strategies according to the needs and preferences of different customer segments. They observed that enterprises have different buying methods and require specific arguments to be convinced to purchase. Expert A recounted a start-up that conducted a thorough market study and actively engaged with potential customers to validate their business idea. Through this process, they identified the ideal timing for their carbon footprint business idea and adjusted their original business plan. As a result, they executed a completely different business plan than the one they had initially presented to the incubator. This example demonstrates the importance of market research and customer validation in the BMI process.

Validation of business ideas can result in significant changes to the initial concepts and overall direction of the business as start-ups innovate their business model to incorporate lessons learned during the validation process, ultimately leading to more refined and successful business models.

Emotional Support

Emotional support from an incubator can play a crucial role for start-ups. Starting a new venture can be a daunting experience, and entrepreneurs may encounter obstacles and setbacks along the way. Having support that provides encouragement, motivation, and guidance can help entrepreneurs stay focused on their goals and navigate their challenges. Emotional support can be especially important regarding BMIs, as entrepreneurs may need to think creatively and take considerable risks to succeed.

The CEO of Impact Nexus believes that providing hope and opportunities for young people is crucial, particularly for those just starting their careers after school. The CEO emphasized giving people space to innovate and do things differently. This suggestion could be interpreted as a call to action for incubators to create environments that foster creativity and experimentation with new ideas.

The CEO of AutomateX highlighted that being a start-up founder is a challenging endeavor demanding substantial hard work and that learning is an arduous task. Therefore, prioritizing well-being is crucial to navigating the challenges and focusing on the venture's objectives (AutomateX). The interviewee contended that the reality of being a start-up founder primarily revolves around constant learning, whereby emotional support from the incubator becomes pivotal to facilitating learning and expediting progress. The incubator's emotional support served AutomateX's CEO as a reminder to prioritize his well-being and to engage in regular activities. The program established a framework supporting the interviewee's mental and physical wellness.

AutomateX's CEO also emphasized the significance of a personalized approach to the emotional support the incubator provides. The interviewee mentioned that one person is designated to take care of the team's well-being and

that this person strives to understand their everyday life. Thereon, the person caters to the founder's unique needs, which may differ from those of others in different situations. Likewise, IntelliReach's CEO emphasized the significance of emotional support as a valuable resource, considering entrepreneurs are often left to navigate their entrepreneurial journey alone.

I definitely recommend this for every start-up because when you are starting up, even though you would have done it before, you're still quite alone there. So, even though the advisements would be something that you might have already known, but it's always good to have some professional to talk with and move through because you'll get advice on your own doing very quickly. (IntelliReach)

Expert Presentations

As in FastTrack Ventures and Start-up Launchpad Academy, expert presentations can provide start-ups with valuable insights and perspectives to help them with BMI. Expert A pointed out that successful entrepreneurs may share their experiences and knowledge on various topics in those presentations. By attending these presentations, start-ups can broaden their understanding of their industry, gain new ideas and perspectives, and identify potential areas for innovation.

I would say that's a very powerful way that we are bringing some experts, we're bringing some, some successful entrepreneurs and they are giving their thoughts. (Expert A)

4.2.4 Indirect Business Model Innovation Support

- BMI through research institutions
- BMI through incubator networks
- BMI through partnerships
- Financial support

Incubators can foster BMI of their start-ups by leveraging partnerships with research institutes, offering access to their established networks, and facilitating collaborations between incubated start-ups and established companies. Research institutions like universities have diverse programs and facilities to help entrepreneurs innovate and test their ideas (Expert A). For FastTrack Ventures, these are the nearby University and a leading non-University research institution owned by the Finnish state. Partnerships with research institutions can support BMIs of incubated start-ups by providing access to cutting-edge technologies and knowledge, ultimately enabling start-ups to integrate new knowledge and ideas into their business models for greater success and competitiveness in the market.

While incubators provide a supportive environment for start-ups to develop and refine their business models, their network also assumes a critical role in providing BMI assistance. Expert C believes that having a strong network and ecosystem is essential for providing high-quality service to tenant

start-ups. IngredientXpert's CEO reported a positive experience with partnerships and outsourcing services for their digital marketing needs. The CEO mentioned a partnership with another start-up that the incubator helped establish through its network and that the start-up benefited from the incubator-initiated connection.

Facilitating partnerships between incubated start-ups and external companies, incubators can support start-ups to innovate their business model by providing access to a network of potential partners and resources for collaboration, allowing for knowledge sharing and potential co-creation of new products or services. IngredientXpert benefited from the partnerships facilitated by Fast-Track Ventures, as they were able to improve their digital marketing system through collaboration with an external company and guidance from their trainer, resulting in new customers and revenue. In addition, IngredientXpert's CEO also mentioned partnering with a company that offers a food waste management system and suggested that this partnership helped them expand their ecosystem and offer more to their customers. In turn, IntelliReach created a partnership model for ad-tech companies and data platforms that become their reseller partners with a shared revenue model. This suggests that the incubator's facilitation of partnerships may have helped IntelliReach to create a new revenue stream and expand its market reach through collaborations with other companies.

Financial support through connections to investors can also be a critical resource for incubated start-ups seeking to innovate their business models, enabling them to invest in research and development and acquire necessary resources. Furthermore, financial support through the incubator's network can give start-ups access to a wider range of potential investors, increasing their chances of securing funding (IntelliReach). The incubator can help start-ups prepare for funding rounds by providing knowledge on what investors need, what resources are available, and what steps they should take to prepare for the future (WellSustain Solutions). Incubators can leverage their relationships with investors and industry experts to facilitate introductions and create opportunities for start-ups to pitch their ideas and secure funding. By leveraging these networks, start-ups can tap into new sources of capital and accelerate their growth trajectory.

4.3 Networks

4.3.1 Support Systems and Players in Entrepreneurial Ecosystems

- Venture development programs and incubatees
- Alumni from venture development programs
- Mentors
- Support organizations
- Government initiatives and grants

- Investors
- Educational institutions
- Companies

The interviewees highlighted various support systems and key actors involved in EEs. These include venture development programs like incubators or accelerators, the entrepreneurs actively engaged in these programs, alumni who have previously participated in venture development programs, mentors offering guidance and expertise, entities that provide support to early-stage start-ups such as the Chamber of Commerce with its programs and networks, government initiatives and grants, investors, and educational institutions. These diverse stakeholders collectively contribute to fostering a thriving environment for entrepreneurial ventures. They provide critical support in funding, mentorship, networking opportunities, and access to resources crucial for entrepreneurs to develop and scale their businesses.

Incubators, or venture development programs more generally, are key players in EEs, facilitating networking opportunities, providing access to investors, and hosting events. IntelliReach's CEO, for example, identified the incubator as a valuable place to meet new people and expand one's network, such as finding new channels to apply for venture capital funding. Similarly, Care-Com Connect's CEO highlighted the networking opportunities that arise from the incubator programs and events. The CEO of AutomateX also cited networking as the most significant benefit at the incubator, indicating that access to networks is essential for start-up success.

I think what for example, this, this [FastTrack Ventures] has, has given me. That's, that's a good example what's useful and then, yeah, I think that's, that's maybe the biggest thing of course. (AutomateX)

The role of the incubator as a central networking hub is exemplified by IngredientXpert, whose CEO expressed that coexisting with other companies within the incubator is advantageous. Similarly, the CEO of WellSustain Solutions identified the incubator's network as the most critical resource, highlighting the importance of physical presence in the incubator's office space. These findings illustrate how incubators provide a platform for new ventures to access needed resources through the incubator's networks. One critical incubator network is its alumni network (Expert A, B). Alumni can provide expertise, money, and connections (Expert A).

Mentors play a vital role in incubated start-ups' EEs, offering entrepreneurs guidance, support, and industry insights by sharing their knowledge and experience. Based on the interviews with experts and start-up CEOs, it appears that mentorship is highly valued and actively sought after. The CEOs of IntelliReach and WellSustain Solutions emphasized having a mentor that guides them through the start-up journey. IntelliReach's CEO further highlighted the importance of mentorship in their network. In addition to their mentor at the incubator, they have mentor partners in a US-based ad-tech company, meaning that their mentors have a diverse range of industry experience and

connections. Expert B attested to the importance of mentors by paying mentors of Start-Up Launchpad Academy, indicating mentors' significant role in supporting early-stage start-ups.

Organizations or companies that support early-stage start-ups also play a crucial role in fostering and sustaining EEs. For example, they can conduct relevant studies that are then shared with entrepreneurs (Expert C). Expert A referenced any entity or company that can help early-stage start-ups move forward as a vital player of EEs, suggesting international accelerator programs such as the *Y combinator* in the United States. After the incubation program, many early-stage start-ups could benefit from participating in such accelerator programs, as they offer valuable resources, exposure, and potential investment opportunities (Expert A).

Another support organization is the Chamber of Commerce. Its network provides business development resources, mentorship programs, and networking opportunities. Expert A highlighted the significance of the Chamber of Commerce as a key partner in the EEs:

Chamber of Commerce is a very vital, vital partner. They, they have good programs, they have good networks, not only for start-up companies for, for more mature companies. (Expert A)

Government initiatives or grants can also serve as an effective support mechanism in EEs. They can provide financial and non-financial resources to early-stage start-ups, such as funding, tax incentives, and regulatory support, which can help mitigate the risks and challenges associated with starting and scaling a new business. Additionally, government initiatives can foster a favorable environment for entrepreneurship by promoting education and training, creating supportive legal frameworks, and encouraging innovation and collaboration. For instance, the network run by *JSI Finland* is being funded by *Business Finland*, which provides financial support to early-stage start-ups (IngredientXpert). Expert B emphasized the role of government institutions in supporting Spanish start-ups. These institutions help start-ups secure certain grants, which could provide much-needed financial support (Expert B). The Expert also cited supportive government initiatives, such as offices that can assist with the grant application process, with grantors not taking a cut or requiring repayment. This landscape suggests that the government is actively supporting the growth and development of the EE in Spain by offering financial support and resources to help entrepreneurs overcome the challenges of starting and scaling a new business.

Likewise, *Venture Development Finland* acts as a platform for fostering connections between investors and promising start-ups, offering financial support and resources directed to scaling operations effectively, as pointed out by Expert C. By creating investment targets, *Venture Development Finland* may be able to attract more capital to the Finnish EE, which could support the growth and development of new ventures and ultimately contribute to the overall success of the EEs in Finland. In line with this, Expert A confirmed that start-ups could apply for grants from *Business Finland*.

Moreover, investors are a vital player in EEs, as the study found that the incubator's network to investors assumes a critical role for start-ups. Key investors addressed by the case start-ups and experts include venture capitalists, funding panels, business angel networks, and the *Finnish Venture Capital Association*. Additionally, events such as *Slush* (a gathering of venture capitalists) and initiatives by universities and governments, such as *FINRA* or *Business Finland*, provide opportunities for start-ups to connect with international investors and build their networks. Therefore, incubators should work closely with investor networks and help start-ups to connect, as FastTrack Ventures already practices by inviting investors, business angels, and potential board members to the incubator (Expert A). Expert C described their investor-related goals:

And we would like to convey that message and try to, try to work more actively in the network to help really the investors and the best cooperative partners to find each others and thus reduce the risk of failure. (Expert C)

Educational institutions, including students, are another player in EEs by providing start-ups with access to education, resources, and talent. At the same time, students have the opportunity to engage in entrepreneurial activities. For instance, Expert B mentioned student entrepreneurship clubs focused on private equity and venture capital, and the CEO of WellSustain Solutions talked about the benefits of student talent and ideas through a thesis worker in their venture.

4.3.2 Potential Partners for Start-ups

- Educational institutions
- Investors
- Manufacturers
- Subcontractors
- Providers
- Other venture development programs

In the previous section, I identified different players within EEs. In this section, the attention turns to potential partners which incubators and start-ups should seek. These play a crucial role in the development of EEs, as partnerships establish interactive links and connections between different ecosystem players.

The partnerships that start-ups should enter vary based on each venture's specific needs and goals. However, several common partners can provide significant value to start-ups, as emerged from the interviews. These include educational institutions, investors, manufacturers, subcontractors, providers, and other venture development programs.

Educational institutions are good partners for start-ups due to their access to various resources and expertise. For instance, the CEO of WellSustain Solutions mentioned that university people are actively involved in their entrepre-

neurial activities. Such involvement can take many forms, from research collaborations to mentoring and advising start-ups. Similarly, Expert B noted that many faculty members, such as professors, are directly or indirectly involved in supporting start-ups.

Additionally, educational institutions can offer start-ups access to specialized resources and talent. For instance, Expert B noted that the partnership with the university's STEM program would significantly impact and lead to notable progress. This program will likely give start-ups access to students and faculties with expertise in science, technology, engineering, and mathematics. Furthermore, as Expert C noted, there are also opportunities for collaboration with international universities in selected areas.

Moreover, educational institutions can offer valuable support for start-ups in terms of development. Expert C highlighted the example of *YAMK*, an educational institution specializing in entrepreneurship and innovation, which can provide resources and expertise to start-ups looking to grow and develop.

Partnerships with manufacturers, subcontractors, and suppliers are also key potential partners for start-ups in EEs (Expert C). These partnerships offer start-ups access to crucial resources such as specialized knowledge, production capabilities, and distribution channels, which can significantly accelerate their growth. Expert C highlighted the importance of partnering with manufacturers willing to collaborate with start-ups and provide access to their network of providers. This type of partnership can be a valuable resource for start-ups, allowing them to tap into the expertise and capabilities of established companies and gain exposure to potential customers. By building these partnerships, start-ups can leverage the strengths of larger companies in their ecosystem and accelerate their growth trajectory.

Start-ups graduating from FastTrack Ventures have matured and are ready to explore other venture development programs tailored to more established companies, offering them the opportunity to continue growing and developing beyond the initial incubation stage (Expert A). Hence, while incubated start-ups are already in a venture development program, they are still encouraged to partner with other venture development programs after exiting from the current program. This activity can provide them with additional resources and networking opportunities that can help them grow beyond the initial incubation stage, as additional venture development programs can offer access to more expertise, capital, and potential customers, as well as valuable feedback and support, making them important partners for start-ups looking to scale and grow their businesses. Similarly, Expert B explained that they encourage start-ups to find another incubator program after completing their initial incubation stage, indicating that continuing to seek support and resources from different venture development programs can benefit their growth.

So, we actually encourage them to go and find another incubator afterwards. So right now, as I said earlier, we have two start-ups in start-up Chile. And that's a really, I think, the biggest incubator in Chile right now. So, and these were two that some themes. [...] So

that's something we're not members of that. But that's something that we are members, are part of networks. (Expert B)

4.3.3 Learning Opportunities

- Peer-exchange
- Informal networks
- Specialized networks
- Networks to customers

Incubated start-ups can benefit greatly from networks as a form of entrepreneurial learning. Sources of learning include peer exchange with other entrepreneurs, informal networks, specialized industry-specific networks, and networks with customers. These networks offer valuable resources and opportunities for entrepreneurs to learn and improve their businesses.

Peer Exchange

Peer-to-peer exchange was reported most frequently among the case start-ups and experts, representing a critical part of the support system of EEs. The CEO of AutomateX conveyed that peer-to-peer learning, particularly through concrete examples and stories, can be valuable in understanding how similar start-ups in a comparable development phase have adapted to certain situations and produced out-of-the-box ideas. Although AutomateX's CEO still sees value in learning from companies in different phases, he acknowledged that the lessons might vary in relevance and applicability. In addition, he also highlighted the importance of learning from successes and failures to identify best practices and pitfalls. Ultimately, the CEO of AutomateX expressed that there is always room for more of these lessons and insights.

It's most important for me to spend time with colleagues, which are more or less experiencing the same kind of things that I am. (AutomateX)

So, the more founders in the same development phase I can spend time with, the more I will learn from the same questions that I have. (AutomateX)

Similarly, Expert B conveyed that incubatees are all in the same boat. By asking questions and seeking support from those who may have experienced similar struggles, it is possible to learn from each other's successes and failures. This practice can help start-ups refine their business model and avoid potential pitfalls (Expert B). Similarly, IngredientXpert's CEO attested to the importance of being surrounded by other companies at the incubator who are in a similar position, so it can be inferred that IngredientXpert has recognized the value of peer-to-peer exchange in EEs to share experiences, exchange knowledge, and learn from each other's successes and failures. Being around entrepreneurs who might be interesting motivated Impact Nexus to have their office at the incuba-

tor. The importance of peer-to-peer exchange has been highlighted by Expert B and CareCom Connect and AutomateX:

The biggest resource are we each other. (Expert B)

The most important thing is that people will meet and match up and then something good we'll come out of that. (CareCom Connect)

It's most important for me to spend time with colleagues, which are more or less experiencing the same kind of things that I am. (AutomateX)

So somehow the casual meetings were like, every day, next to the coffee machine. I think that's the, that might be even the, be the most important thing. (AutomateX)

These interactions through peer exchange can provide relevant support and resources for entrepreneurs navigating the challenges of starting and growing their businesses. However, time is a limited resource, so start-ups should surround themselves with a network that can provide guidance and support on the right topics at the right time, highlighted AutomateX's CEO. He also acknowledged that as they progress, it might become necessary to adjust their network accordingly to ensure continued growth and success.

Informal Networks

Besides formal networks, informal networks can also play a critical role in an entrepreneur's learning and development. Informal networks refer to the relationships and connections entrepreneurs build through personal and professional networks outside formalized programs and structures. Through informal networks, entrepreneurs can access a wealth of knowledge and expertise from experienced entrepreneurs, industry experts, and peers who have overcome similar challenges. These networks can provide opportunities for informal learning and knowledge-sharing, such as informal discussions, informal mentorship, and learning from the experiences of others.

IngredientXpert's CEO highlighted the value of learning from peers, getting tips from trainees, and building relationships with other entrepreneurs outside formal programs and structures. CareCom Connect's CEO also emphasized building networks and connections by contacting companies and organizations, meeting investors, and asking people for help. The CEO of CareCom Connect further found that official networks or collective initiatives are generally unhelpful:

I have found it very unuseful, or most of these official networks or collective things, they don't usually help the entrepreneurs that much as they would like. And I believe the best ones that have been beneficial are companies where I have contacted another company, or they have contacted me and said, hey, can I ask you a question? (CareCom Connect)

The case start-ups also highlighted the benefits of building strong relationships with other entrepreneurs. This can lead to opportunities like hiring employees from other companies that have gone bankrupt, said CareCom Connect's CEO. Overall, the start-ups suggested that informal networks play a critical role in their learning and development, and they value building relationships and connections with other entrepreneurs to gain access to knowledge, expertise, and resources.

Specialized Networks

Specialized networks can be another useful source of learning for incubated start-ups in EEs. These networks consist of individuals and organizations with specific expertise or interest in a particular industry or sector. By connecting with these networks, start-ups can gain access to specialized knowledge, resources, and opportunities that can help them overcome challenges and accelerate their growth specific to their area. The interviews revealed that case start-ups are involved in a range of specialized networks, such as e-commerce networks, SaaS networks, ad-tech networks, and health and wealth-tech networks. These networks provide opportunities to meet and learn from other entrepreneurs, investors, mentors, and experts in their respective fields.

Specialized networks are important for AutomateX to connect with other professionals in their field. Their CEO mentioned that team members join networks specific to the member's field, such as marketing or sales networks. IntelliReach's CEO also highlighted the importance of specialized networks for their ad-tech company. They are part of niche ad-tech networks and a US-based ad-tech network with mentor partners. They are also members of the *International Advertising Association Finland* and attend conferences to showcase their products.

Similarly, CarbonClear Construction joined industry-specific networks such as the Finnish Green Building Council. These specialized networks provide benefits by bringing industry insights and connections with like-minded people who share their values and interests, specifically those related to climate change. They also attend events organized by these networks, which provide opportunities to meet potential partners and customers. Being part of these associations makes it easier for CarbonClear Construction to initiate conversations and collaborate with companies working towards similar goals. The CEO said not being part of a specialized network is a weakness for DataVision Solutions, voicing that they need to join one.

Specialized networks can also be a source of support. Expert B shared their experience searching for mentors and workshops hosted by active industry professionals. The expert mentioned that Start-Up Launchpad Academy has a diverse network of specialized experts who can help start-ups regardless of their needs.

Moreover, collaborative partnerships may emerge from specialized networks. The CEO of IngredientXpert mentioned forming a food chain partnership with farmers and producers to support their key activities. They also have a network of SaaS companies in their city and have had some meetings with them.

Customer Networks

Networks to customers can provide incubated start-ups with valuable feedback, insights, and ideas to improve their product or service offerings and better meet customer needs (Expert C). In addition, Expert C mentioned providing such opportunities for clients to discuss with customers not just in Finland but also in other countries, including Germany, Sweden, Norway, Denmark, Netherlands, and the USA, through the accelerator's sales board in selected environments, which should help start-ups to internationalize. Thereby, Expert C showed the importance of customer feedback and its benefits for start-ups looking to improve their offerings. AutomateX, which does not receive such services, would desire networks with potential customers as they are considered useful.

I think when I'm running a start-up, which is like in the, in the, in the in the early phase of the journey, I think it's most important to focus on customers and try to spend time there because that's what I have to learn now, later on comes the time when I have to understand, like those kinds of issues more. (AutomateX)

The CEO of WellSustain Solutions also agreed that networks to customers could provide valuable benefits for start-ups. They have been able to get contacts and ideas through such networks. Although not all contacts have been useful, they think they may become useful in the future. Additionally, they have been able to acquire new customers through these networks. Someone from their network had recommended their company to others, which led to them becoming new customers. Similarly, DataVision Solutions experienced positive outcomes from participating in events with customers.

4.4 Entrepreneurial Activity

EEs play a critical role in stimulating entrepreneurial activity, primarily by fostering collaboration between different players in the EE. Through these collaborations, players can share knowledge, resources, and expertise, leading to the creation of new ventures and the growth of existing ones. Incubators are vital to EEs, as they provide entrepreneurs with the necessary resources and support to develop their ideas into viable businesses. By facilitating and encouraging entrepreneurial activity, incubators contribute to the overall health and vibrancy of the EEs.

4.4.1 Collaborations

- Cooperation instead of competition
- Internationalization through partnerships or networks
- Collaboration with educational institutions
- Collaboration with governments
- Partnerships with companies

- Legal partnerships
- Financial partnerships

Activities in EEs are characterized by a spirit of cooperation instead of competition and involve partnerships with universities, governments, companies, and financial and legal partnerships to support start-up growth. This was highlighted by Expert C, who noted that venture development programs should pursue cooperation and collaboration instead of competition. Instead of competing with one another or external ventures, start-ups should collaborate in a supportive and productive environment for innovation and growth.

Collaborations are especially relevant for incubated start-ups because they often have teams with similar experiences and backgrounds. For example, the CEO of DataVision Solutions mentioned that all six team members come from the same background, having initially worked for the same company on a project. Similarly, IntelliReach's CEO added that their team comprises only individuals with similar backgrounds. By collaborating with other players in EEs, start-ups can gain diverse perspectives and skills, which can help them overcome challenges and grow more quickly.

Collaborations and partnerships are key to helping start-ups expand internationally. For instance, some start-ups have been able to find local partners and dealers or even establish joint ventures, which has enabled them to succeed in new markets abroad (Expert A). Networking is a fundamental part of entering collaborations to expand internationally. Expert A pointed to the value of networks, mentioning that he knows Finnish start-ups that joined the *Future Accelerator* program in Dubai and the *Y Combinator* in Silicon Valley, which have helped the start-ups to enter new, foreign markets. Effective partnerships require partners who can bring real value to the start-up (Expert A). Similarly, Expert B concurred with the significance of international partnerships.

Partnerships are also critical to establishing sales channels in foreign markets. CareCom Connect's CEO, for example, noted that market research in a foreign country often requires a local partner with established sales channels. Similarly, AutomateX's CEO noted using local partners to understand foreign markets better, especially when on a limited budget. Incubators may initialize such partnerships, as IngredientXpert's CEO credited the support of FastTrack Ventures and their coach in facilitating partnerships with companies operating in the Nordic markets.

Overall, partnerships and collaborations can help start-ups overcome the challenges and risks associated with internationalization by providing valuable local knowledge, networks, resources, and access to established sales channels. Thus, identifying the right partners who bring real value to a start-up can improve entry into foreign markets.

Collaborating with universities is a crucial aspect of EE, as it provides start-ups with access to research, talent, and resources. Expert C highlighted the importance of collaborations with universities and universities of applied sciences from across Finland and other players, also with international universities, to create an ecosystem that fosters innovation and growth. Likewise, Expert A addressed the significance of cooperation with local universities.

And I'm in close cooperation with the [local university], and the University of Applied Sciences, I would say is big deal also. (Expert A)

Additionally, as highlighted by Expert A, universities have special programs designed for start-ups. These programs allow start-ups to work with groups of students on specific topics or challenges for a short period of time. Such collaborations can provide start-ups with fresh perspectives and innovative ideas while also giving students valuable experience working on real-world projects. Start-ups can also leverage the expertise of professors to expand into foreign markets by tapping into their network and knowledge of the local ecosystem. For example, Expert B mentioned contacting a Professor to help introduce a start-up to the Israeli ecosystem.

Collaborating with governments can be advantageous for start-ups as it provides them with opportunities to expand their reach and network. Working with governments can also help start-ups gain access to funding, expertise, and resources that can help them grow and develop their products or services. For example, Expert B highlighted initiatives like the *Tech for Democracy* program that can provide start-ups a platform to reach a wider audience and make a greater impact. Start-Up Launchpad Academy collaborated with the US State Department to create a center supporting start-ups' outreach efforts. This kind of collaboration can not only benefit start-ups but can also contribute to the growth and development of the overall EE.

Collaboration with established companies can also be vital. Start-ups benefit from the experience and resources of established companies, while established companies benefit from the innovation and agility of start-ups. As mentioned by Expert B, collaborative partnerships with Amazon, Miro, Stripe, and Revolut are examples of such successful collaborations. These partnerships help start-ups gain access to larger markets, funding, and mentorship. At the same time, established companies can tap into new business models. Collaborations between start-ups and established companies can help create a more robust and dynamic EE.

Financial partnerships are also essential for the growth of start-ups, particularly with a view to internationalization, as it usually requires a significant amount of money, and organic growth may not always be enough (IngredientXpert). New money and investments are needed for IngredientXpert to successfully enter new markets, with the Swedish market being a desired target.

Legal partners provide legal expertise and can help start-ups navigate complex regulations, intellectual property issues, and other legal matters. Expert C highlighted the importance of having multiple categories of investors. Financial partnerships provide start-ups access to funding, crucial for scaling up their businesses. As Expert B mentioned, Start-Up Launchpad Academy is now entering a financial partnership with *The Financial Times*. Ultimately, legal partnerships can help start-ups establish a strong foundation in unfamiliar areas, and financial partnerships can help scale the start-up.

4.4.2 Role of the Incubator

- Development of a universal framework
- Risk management while maintaining entrepreneurship
- Advisory part of incubation is important
- Mentors as a foreign market entry vehicle
- Coaching about internationalization
- Help to understand markets
- Support hiring interim personnel to internationalize
- Events
- Matching between entrepreneurs and students
- Important that incubator is open and accessible
- Accessibility of coaches
- Network to other venture development programs
- Network to potential board members
- Network to foreign investors
- Providing legal expertise

Incubators play a crucial role in stimulating entrepreneurial activity within EEs. They provide a universal framework for start-ups to develop businesses while minimizing risks, host external workshops and events, and match entrepreneurs with students for collaborations. The advisory aspect of incubation is important, with coaches readily available for guidance. Incubators can provide networks to other venture development programs, potential board members, and legal advisors. Incubators should remain open and accessible to foster a supportive environment for start-ups to grow and succeed.

Development of a Universal Framework

Incubators can play a leading role in fostering EE by providing a universal framework for start-ups to succeed. This framework should focus on what is needed for growth and can be a powerful tool. Expert C explained that venture development programs can create an EE model that relevant players engage with. With such a model in place, incubators can, for example, attract and support real customers for pilot projects.

While Expert C discussed the potential role of an incubator in establishing a model of the interactions and connections within an EE, Expert B referred to Start-Up Launchpad Academy's goal to become a global entrepreneurship center. They achieve this by closely working with local offices, such as the German office in Berlin. By establishing connections between different markets and regions, Start-Up Launchpad Academy aims to create a more supportive and conducive environment for entrepreneurship on a global scale. Branding also plays a crucial role in their efforts to promote and attract entrepreneurs to the incubator. Thus, both experts recognize the leading role of venture development programs in promoting entrepreneurship within the respective community, facilitating connections between relevant actors. These efforts can help to create a more supportive and conducive environment for entrepreneurship.

Risk Management While Maintaining Entrepreneurship

While incubators can provide a supportive environment for start-ups to grow and succeed, inherent risks remain. Expert A explained that the first few years are particularly challenging for start-ups, and incubators should aim to overcome these challenges. However, balancing between risk management and maintaining the spirit of entrepreneurship is important. As Expert C pointed out, risk management is crucial, but it should not stifle the essence of what makes start-ups successful. Incubators should aim to mitigate risks while still encouraging experimentation, innovation, and creativity. This means finding ways to manage risks without inhibiting the freedom and flexibility that start-ups need to thrive.

Advisory Service, Mentoring, and Coaching

One approach that incubators can take is to provide mentorship and guidance to start-ups. As Expert A noted, FastTrack Ventures offers a network to guide and mentor start-ups to help them through the critical first few years. By connecting start-ups with experienced mentors and advisors, incubators can help mitigate risks by providing start-ups with valuable insights, advice, and support. The advisory role of incubators has been described as vital by most case start-ups, helping them to overcome challenges and grow.

Incubators can provide start-ups with valuable market insights and knowledge through their connections in EEs. For example, AutomateX's CEO expressed the desire to learn more about the macro-economical aspects of their business and about differences between markets and regulatory issues, which the EE could help supply.

Incubator coaches can leverage their expertise and networks to help start-ups understand market trends, regulatory issues, and other critical factors that can impact venture success. By providing this knowledge, incubators can help start-ups make more informed decisions about where to focus their efforts and resources.

However, as CarbonClear Construction noted, the quality of coaching and advice can vary depending on the expertise and experience of the coaches. Therefore, incubators should have a diverse pool of coaches and mentors, including senior experts in specific fields, to cater to the unique needs and backgrounds of different start-ups. The CEO of CarbonClear Construction further mentioned that the coaching and guidance provided by the incubator had not been very helpful in the first year. However, after switching coaches, they have found it beneficial. Further, the CEO suggested that the coaches' expertise should match the start-up's level, and more senior expertise should be available in incubators. In addition, the CEO acknowledged that coaching on forward-thinking strategies such as sales plans is more useful than just historical events.

Further, incubators play a role in supporting the internationalization of start-ups by providing access to mentors who can facilitate foreign market entry. As noted by Expert B, the mentorship program of an incubator can serve as a vehicle for international scalability. Incubators can match start-ups with mentors with experience in specific target markets, providing start-ups with valuable connections and knowledge of local business practices (Expert B). In some

cases, incubators may also facilitate hiring foreign-based mentors to provide start-ups with on-the-ground support in target markets. For example, as noted by Expert B, they matched a start-up with a Japan-based mentor to assist with their expansion efforts in Japan. These mentor connections can greatly enhance the chances of success of start-ups seeking to enter foreign markets, as they provide local knowledge and support in navigating unfamiliar business environments.

Incubator coaching programs have been found to play a crucial role in helping start-ups enter foreign markets. As Expert A and the CEO of IngredientXpert noted, FastTrack Ventures offers a general coaching program called *Growing Global*, designed to support start-ups throughout the year. This coaching program is held every second month and is specifically tailored to help start-ups gain access to foreign markets. One of the key benefits of this coaching program is that it offers start-ups access to experienced mentors with plenty of internationalization-related knowledge. As mentioned by the CEO of WellSustain Solutions, these mentors can assist with entering foreign markets and helping start-ups establish contacts and secure funding. This level of support is especially valuable to start-ups with little to no experience with internationalization, as it can help reduce the risk of failure when entering foreign markets.

Moreover, incubators can help start-ups understand how factors vary across different markets and regions. By understanding the nuances of different markets, start-ups can develop more effective strategies for growth and expansion. As AutomateX's CEO illustrated:

If it's true in Finland, okay, but it's not enough if it's true in Nordics. Okay, good, but not enough for our growth targets. If it's true in Europe, that might be enough, maybe. So, we just have to understand the different things which affected the most. (AutomateX)

Hiring of Interim Personnel

Having the right personnel familiar with the foreign market is crucial for successfully entering a new market (IngredientXpert). Thereby, incubators play an important role in supporting start-ups to internationalize by helping them hire interim personnel, which can support them with country-specific operations (Expert C). For example, DataVision Solutions has already hired a British employee to help them enter the UK market.

The EE can also be vital in finding interim personnel for start-ups. CareCom Connect's CEO suggested that having advisory board members or personnel from that market can be beneficial when entering a new market. The ecosystem can provide a network of contacts and resources that can assist start-ups in finding the right personnel for their internationalization efforts.

Hosting Events

Hosting events is another way how incubators can create a vibrant EE that fosters collaboration, networking, and knowledge-sharing among entrepreneurs. Expert presentations or workshops can effectively provide specialized knowledge and skills to start-ups (Expert A, B). This strategy allows start-ups to gain

knowledge from experts in a particular field, which they might not be able to access otherwise. *InnoFlash* is another program that can bring students and start-ups together for a week of intensive work on a given topic, suggested Expert A. This program provides an opportunity for start-ups to work with talented students and gain fresh perspectives on their business challenges.

In addition to these one-time events, Expert A also mentioned regular events at the incubator:

Every second week, there are some type of events in our premises where they [incubated start-ups] can participate. (Expert A)

This approach provides opportunities for start-ups to meet with other entrepreneurs, investors, and experts in the field, which can lead to valuable connections and collaborations. Start-ups can also benefit from participating in pitching events and networking opportunities facilitated by incubators. As the CEO of WellSustain Solutions noted, they joined a pitching event, and one contact there gave them feedback about their pitch. Through this event, they received valuable feedback and ideas for marketing, which led to them buying consulting days from the contact. Furthermore, they collaborated with another company at the incubator to help them with their marketing campaigns.

However, CarbonClear Construction's CEO mentioned that they had not found the events at FastTrack Ventures to be particularly relevant to their business. They have participated in smaller events and parties but have not made significant connections or collaborations. They also feel that the events are directed more towards smaller companies than their own, which may be why they have not found them as useful.

Incubators can also attract start-ups from other parts of the world by hosting international events, suggested Expert B. This can expose start-ups to new markets and investors, which can be crucial for their growth and success.

Matching Between Entrepreneurs and Students

Further, incubators have the potential to facilitate valuable collaborations and partnerships between start-ups and students. To achieve this, they should act as matchmakers and create an environment encouraging encounters between these groups. Shared spaces, such as co-working spaces, can unite start-ups and students and facilitate learning, idea-sharing, and partnership formation. Additionally, events like speed networking, pitching competitions, and hackathons can be organized to create opportunities for these groups to meet and collaborate.

Openness and Accessibility

However, it is not just about formal events. Incubators should also create a relaxed and welcoming atmosphere encouraging informal interactions between start-ups and students. By doing so, they can foster an environment where start-ups and students are more likely to initiate conversations and form connections. CareCom Connect's CEO illustrated this:

I met a person who I'm now good friend of, and we started building business, we didn't do it. But it was just, we were walking randomly

in, in that place. And I, he asked, hey, can I come to this room? Because you have this monitor here? And then I, and then he asked, what are you doing? And then I told and he said, oh wow that's good thing, I want to do that also. So, these kinds of matching of entrepreneurs and students and people in general. (CareCom Connect)

The accessibility and openness of incubators to stakeholders within EEs is a crucial aspect that warrants closer attention. This means that the incubator should be a place where entrepreneurs, investors, mentors, and other community members can come together to share ideas, collaborate, and learn from one another.

One of the benefits of an open and accessible incubator is that it can create a sense of community and encourage the exchange of knowledge and resources. As the CEO of CareCom Connect pointed out, the incubator should be an open forum that people can go to. This highlights the importance of creating a welcoming and inclusive environment that encourages participation from diverse stakeholders.

The availability of coaches plays a pivotal role in the incubator's accessibility, albeit more relevant for incubated start-ups than for other actors of EE. Expert A stressed the importance of having a reliable point of contact to address urgent matters that require immediate attention. However, IntelliReach's CEO acknowledged the challenges coaches might face in balancing their professional commitments while highlighting the benefits of having a personal connection with their mentor.

Network Access

An incubator's connection with the EE can help source potential start-up board members. As IngredientXpert's CEO noted, FastTrack Ventures has been instrumental in helping them find new board members and investors, demonstrating the incubator's important role in facilitating such connections. Furthermore, incubators can provide training and guidance on building and maintaining a company board (IngredientXpert). This training can help start-ups create a strong foundation for their governance structures and prepare them for future growth.

Expert A also emphasized the benefits of having more board members interested in working with start-up companies. A strong and diverse board can provide valuable expertise, connections, and support, contributing to their long-term success. Therefore, incubators can play a vital role in connecting start-ups with potential board members with the skills, experience, and interest to work with them. By leveraging their network and expertise, incubators can introduce start-ups to investors looking for new and innovative businesses to support. This can be particularly valuable for start-ups seeking seed or early-stage funding, as they may not have established connections in the investment community. However, the investor connections facilitated by incubators need to fit the type and size of the start-up, expressed CarbonClear Construction's CEO.

This funding round that we are now raising, it's 25 million. The other companies, they are raising maybe 200k or something like that. So, if there is a business angel event, it's nonsense for us because business angels have maybe a few 100k to invest. We need investors that can invest 10 million. So, it's not relevant. Those kinds of events. (CarbonClear Construction)

Furthermore, incubators can help start-ups enter foreign markets by establishing investor connections. Expert C highlighted the support for internationalization, including realistic feedback and an understanding of the local market. Connections to foreign investors can provide start-ups with a better understanding of investors in those markets.

Expert A also highlighted the importance of bringing in foreign investors, mentioning venture capitalists with expertise in specific areas, such as the German or Swedish market. This activity effectively gives start-ups the expertise they need to succeed in foreign markets. Moreover, FastTrack Ventures has invited international investors to the incubator yearly, which can be a valuable opportunity for start-ups to meet potential investors and gain insights into different markets. Additionally, Expert A noted that the incubator encourages start-ups to partner with *Slush*, a global start-up event providing a platform for start-ups to showcase their products and connect with investors. Thereby, start-ups can open new channels to new markets in certain countries, which can significantly boost their growth prospects.

This knowledge of local markets can be essential for start-ups seeking to grow in foreign markets, as it can help them tailor their business strategies to the local market and attract the right investors. Hence, connecting with investors from different countries can be a vital resource for start-ups seeking to enter foreign markets.

One key advantage of an incubator's network to foreign investors is their deep understanding of the local market and what investors in those countries expect (Expert C). Some investors may even be willing to provide funding for start-ups looking to launch their operations in foreign markets (Expert C). This level of support can be especially valuable for start-ups looking to expand quickly and needing access to capital to fund their growth.

Legal Expertise

Lastly, start-ups frequently demand legal expertise, crucial to building their businesses. However, as Expert A noted, legal expertise may be lacking within the incubator's own team. Therefore, incubators need to draw on the wider EE to provide legal support to their start-ups. By leveraging their networks and partnerships, incubators can connect their start-ups with legal advisors who can offer valuable guidance on issues such as intellectual property, contract negotiation, and regulatory compliance. Furthermore, these advisors can provide start-ups with a deeper understanding of the legal landscape and how it affects their business operations.

4.5 Emergent Models

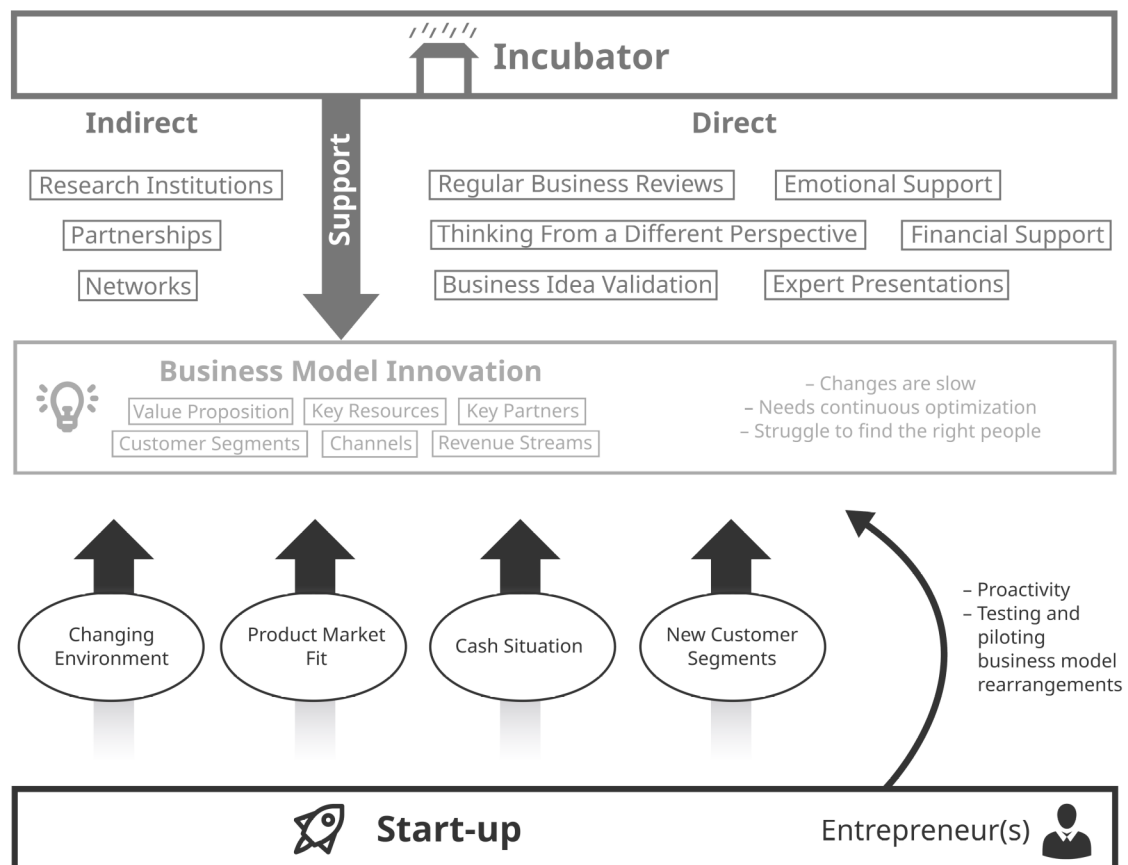
While Figures 3 and 4 presented the static data structure that arose from the data on BMI and EEs, Figures 5 and 6 show the model emerging from the findings. The model highlights that start-ups are motivated to innovate their business model when the business environment changes, when the start-up finds product-market fit, when it responds to financial constraints, and when identifying new customer segments. Entrepreneurs are encouraged to take a proactive approach, testing and piloting different business model rearrangements.

BMI typically involves changes to a start-up's value proposition, key resources, key partners, customer segments, channels, and revenue streams. Innovation-induced changes are slow and need continuous optimization, and start-ups often struggle to find the right people for BMI.

Incubators provide direct support for BMI through regular business reviews, alternative perspectives, idea validation, emotional and financial support, and presentations by experts. Indirect support from incubators is also available through collaborations with research institutions, partnerships, and networks.

Figure 5

Incubators and Business Model Innovation



The relevant players in the EEs for start-ups in this study include venture development programs, including start-ups and alumni, mentors, support organizations, government initiatives and grants, companies, investors, and educational institutions.

Incubators serve as vital connectors between incubatees and the wider EE, playing a pivotal role in fostering collaborations and partnerships with various stakeholders. As intermediaries, incubators facilitate access to networks to other venture development programs, educational institutions, and potential investors.

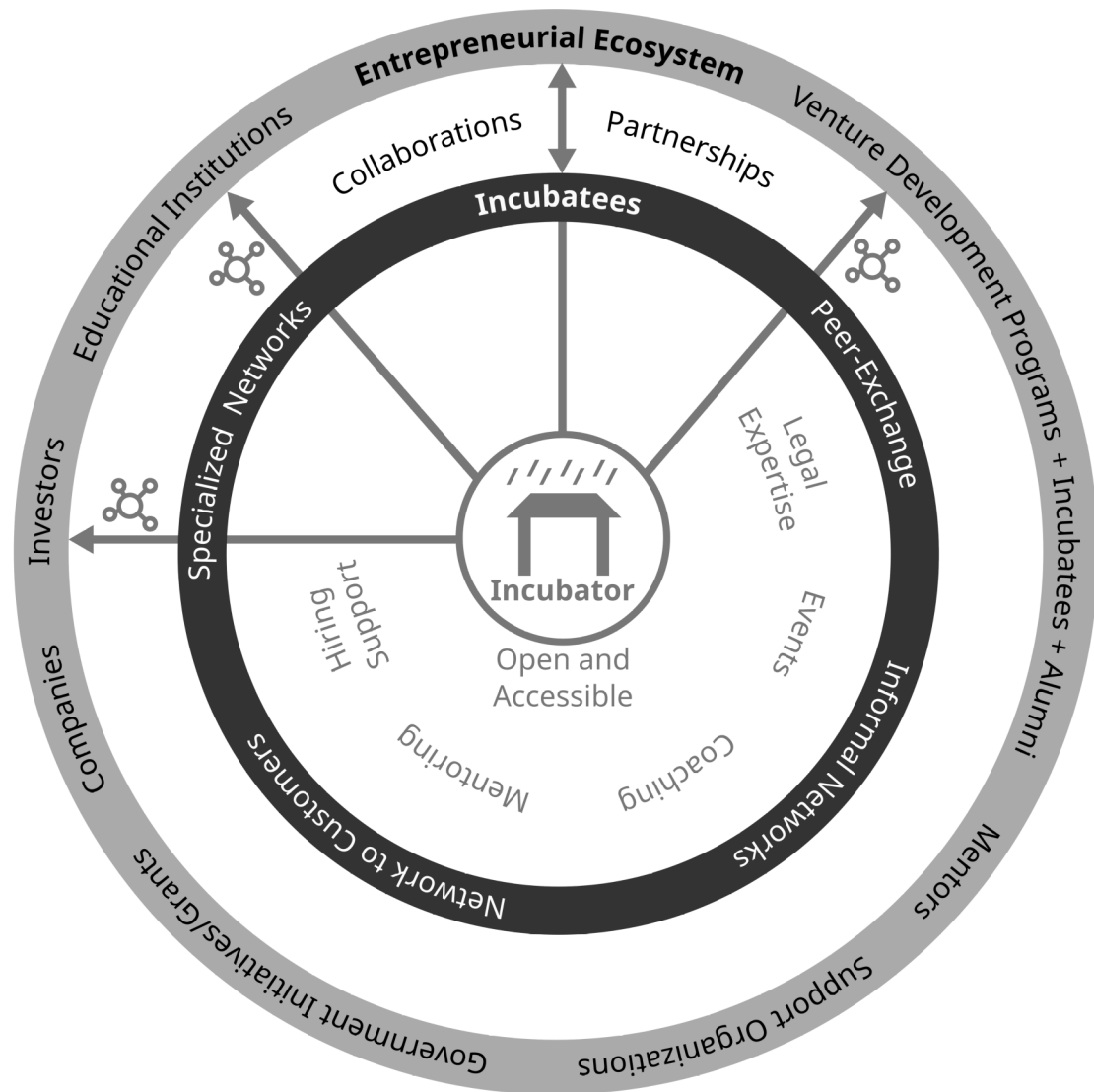
In addition to network provisions, incubators offer valuable resources and support to start-ups. They provide legal expertise, host events that bring together key players of the EE, offer coaching and mentoring services, and assist start-ups in hiring new employees.

One of the key advantages for incubatees is the opportunity for peer exchange and engagement with informal networks. By being part of an incubator, start-ups gain access to a community of like-minded entrepreneurs, enabling them to share experiences, knowledge, and insights. Moreover, incubators provide avenues for start-ups to connect with potential customers through their networks. This exposure can prove instrumental in helping start-ups establish their market presence and grow their customer base.

Furthermore, incubators often have specialized networks that cater to specific industries or sectors. This specialization allows start-ups to tap into targeted resources, guidance, and relevant expertise. By leveraging these specialized networks, incubatees can gain a competitive advantage, accelerate their growth, and enhance their chances of long-term success.

Figure 6

Incubators and Entrepreneurial Ecosystems



5 DISCUSSION

This chapter expands on the interpretation and analysis of findings and discusses theoretical and practical implications, the study's limitations, and suggestions for future research.

The study set out to explore and better understand how incubators can support growth-oriented start-ups with BMI and how incubators contribute to EEs. Data was collected through interviews with start-ups from a business incubator in central Finland and its CEO, complemented by interviews with two other industry experts. Start-ups were selected based on how long ago they joined the incubator to ensure they could sufficiently report on their experience with the incubation program. The incubator's former chairman invited potential informants through email. A qualitative research methodology using multiple case studies produced theory from informal, semi-structured interviews. The analysis draws on Gioia's coding scheme of first-order codes, second-order themes, and aggregate dimensions. The emergent theory was developed by gathering detailed information about the experiences of incubated start-ups and industry experts.

5.1 Business Model Innovation Support from Incubators

5.1.1 Drivers of Business Model Innovation

The study exposed key drivers of BMI for incubated start-ups: changes in the competitive environment, achieving product-market fit, cash flow and funding considerations, identifying more appropriate customer segments, and insights from customer satisfaction. Thus, start-ups should pay attention to these drivers of BMI to maximize their growth chances. The study provided a new perspective on the drivers of BMI by exposing that cash flows are key considerations that determine what business models a start-up can pursue. While prior research has discerned the overarching structure of this driver, namely internal threats (Bucherer et al., 2012), cash flow issues have not been made explicit. Yet, they are decisive in the type of business model a start-up can employ. Another driver not addressed before is identifying and pursuing a more promising customer segment, which can involve fundamentally changing pricing models and arguments. Finding the appropriate customer segment that needs the venture's services is essential. This driver of BMI can be ascribed to the overarching dimension of external threats and opportunities (Bucherer et al., 2012). While these drivers of BMI align with the broad typology of internal or external threat and internal or external opportunity identified by Bucherer et al. (2012), this study provided more depth by revealing concrete examples of threats and opportunities.

Start-ups and incubators supporting them should pay attention to these drivers of BMI to ensure that the venture's business model is sustainable and can adapt to changing conditions. Keeping up with industry advancements and regularly re-evaluating competitive strategies to modify business models as needed is important. Thus, the study's findings contribute to the start-up BMI literature by highlighting the importance of adapting to changing market conditions, developing a sustainable business model, and aligning with customers' needs and preferences.

5.1.2 Characteristics and Challenges of Business Model Innovation

Further, the study explored the characteristics and challenges of BMI for start-ups. BMI involves rethinking core components of business models, such as products or services, target customers, distribution channels, revenue streams, and cost structures to create, deliver, and capture value. The process of innovating business models can be slow, especially for more established start-ups that face internal barriers. In turn, start-ups have greater agility to experiment with innovative business models. BMI can help start-ups respond to changing market conditions, customer preferences, and technological advancements. It is an ongoing commitment that requires continuous optimization, as has been noted by Bucherer et al. (2012). Lastly, finding the right hires who share the same vision and values as the company can be challenging, which can be navigated by mentorship and guidance from experienced professionals.

5.1.3 Innovated Business Model Elements

Moreover, I examined the elements of business models particularly suitable for BMI: value proposition, customer segments, key resources, revenue streams, channels, and key partners. Therefore, incubators should funnel attention toward these in their BMI support activities. Start-ups should be open to exploring new business models to improve their value proposition and reach new customers, which may require significant changes in operations but can lead to growth and success. Despite the potential benefits of exploring new business models, it is not commonly practiced among the case start-ups, supporting Bucherer et al. (2012). Most entrepreneurs begin only with a partially complete model and refine it through trial and error as they learn more about what works for their venture (Morris et al., 2005). This observation suggests that innovating business models is often iterative and involves continuous experimentation and refinement, supporting my argument about the continuous, iterative nature of BMI.

BMI does not equate to innovating products, processes, or services per se (Baden-Fuller & Haefliger, 2013; Björkdahl & Holmé, 2013). Rather, it involves altering the logic of how value is created, delivered, and ultimately captured (Björkdahl & Holmé, 2013). This distinction is critical because it emphasizes that BMI is about innovating the model rather than the firm's offering (Baden-Fuller & Haefliger, 2013). However, this study found that case start-ups mostly cen-

tered on improving the offering rather than the start-up's logic. At the same time, the case incubator only hosts early-stage start-ups, which may explain why case start-ups did not frequently innovate their business models. At this stage, start-ups are still refining their initial business models through trial and error, and their primary focus is often on product development. This notion was also exemplified by BMIs of case start-ups often being linked to achieving product-market fit. Hence, case start-ups might be too young to gain significant value from BMI support.

Therefore, the relevance and importance of BMI support by incubators have been called into question by this research. While BMI has long been recognized as a crucial element for start-up success, my study suggested that BMI may not be a universally applicable growth path across all incubators and stages of start-up growth. The research showed that early-stage start-ups primarily focused on innovating their product offerings rather than the fundamental logic of their firms. This suggests that the case start-ups may not prioritize BMI due to their attention being directed toward other, more pressing concerns. Limited innovations in the start-up logic might be attributed to their relatively new business model, implying that significant changes may not be necessary at this stage. Therefore, BMI support might be more beneficial for late-stage start-ups looking to scale. It would be interesting to see whether the need and type of BMI support are perceived differently by start-ups who validate their business models and realize that the existing model is not feasible or economical. However, a situation like this was not present among the case firms. Nevertheless, research on BMI support for start-ups should differentiate between early and late-stage start-ups to clarify the effectiveness of support at different stages.

5.1.4 Direct Incubator Support

Despite the lack of pronounced BMI activity among case start-ups, the study unveiled a new framework for how incubators can provide BMI assistance. This support can be directly through regular business reviews to identify problems and spot opportunities, providing diverse perspectives, validating business ideas, emotional support, and presentations by experts. This framework adds to the current understanding of the importance of incubators in supporting start-up growth, highlighting the need for a more nuanced and comprehensive evaluation of incubator support mechanisms.

Start-ups are encouraged to review their business regularly, reflect on their strategy, identify potential issues with their current business model, and develop solutions as needed – together with a coach of the incubator. Coaches can help start-ups identify problems early and offer specialized expertise. In addition, incubators can host presentations by experts. Thereby, incubators support start-ups by providing them with diverse perspectives and expertise that can encourage and aid incubatees with BMIs.

Incubators can also facilitate the validation of business ideas, which often leads to discovering and implementing new and more effective business models. Networking and relationship building are also important to promote BMI,

as are emotional and financial support. My study further revealed that BMIs rely on customers' evaluations, as has also been stated by Keiningham et al. (2020).

An unexpected finding is the emphasis on emotional support as a critical component of BMI support. Incubation is typically associated with providing financial and expert assistance to start-ups. However, it is important to note that emotional support – which involves creating a supportive psychological atmosphere and providing guidance and motivation – is also crucial in helping start-ups innovate their business models. The study showed that incubators should offer such support by providing start-ups with a personal mentor and opportunities to network, build relationships, and gain new perspectives. These emotional support mechanisms can significantly impact entrepreneurs and should be considered by incubators when supporting BMI activity of their incubatees.

The emphasis on emotional support as a critical component of BMI support is a significant contribution to the literature. While financial and expert support by incubators has been widely studied, the importance of emotional support has been overlooked. At most, it has been hinted at by Bøllingtoft & Ulhøi (2005), mentioning that entrepreneurs can raise private concerns at incubators, albeit not discussing any further what that implies. Hence this study's findings suggest that emotional support mechanisms can significantly impact entrepreneurs, affecting their motivation, resilience, and ability to handle challenges. This insight broadens our understanding of the factors influencing BMIs in start-ups and highlights the need to consider the human side of entrepreneurship. Thus, incubators should strive to create a supportive psychological environment.

5.1.5 Indirect Incubator Support

Besides direct support, incubators can indirectly support BMI of their start-ups by facilitating partnerships with research institutions, networks, financial support, and collaborations with established companies. Partnerships with research institutions can provide access to cutting-edge technologies and knowledge, which can be integrated into start-ups' business models. Incubator networks can assist start-ups with BMI by connecting them to potential investors or partners and facilitating collaborations with established companies. Financial support through the incubator's network can provide start-ups access to a wider range of potential investors, increasing their chances of securing and preparing them for funding rounds. Facilitating partnerships can allow for knowledge sharing and potential co-creation of new products or services, resulting in new customers, partners, channels, and revenue streams.

Traditionally, incubators have been evaluated based on their direct support, such as providing office space, mentorship, and access to funding. However, this research revealed the importance of incubators' ability to connect start-ups with other potential partners in the EE, such as research institutions and established companies, to facilitate BMI. This finding broadens the understanding of how incubators can support start-ups beyond direct support mecha-

nisms, suggesting that incubators play a vital role in creating an EE that fosters innovation by connecting start-ups with other stakeholders, highlighting the importance of collaboration and knowledge sharing for BMI, aligning with the current open innovation trend.

5.2 Incubators and the Entrepreneurial Ecosystem

5.2.1 Networks

The study also discussed the support systems and players contributing to EEs, including incubators, mentors, entities supporting early-stage start-ups, government initiatives and grants, and investors. Incubators, and venture development programs more generally, play a critical role in EEs by facilitating networking opportunities, providing access to investors, and hosting events conducive to start-up growth.

The alumni network of incubators is also a valuable resource for incubated start-ups, providing expertise, money, and connections. This finding about the alumni network of incubators adds a new dimension to the conversation about actors in EEs. Specifically, the literature on EEs has not addressed alumni as important players, despite their value-creating potential.

Mentors are another essential component of EEs, providing valuable guidance, support, and industry insights to entrepreneurs by sharing knowledge and experience. This finding about mentors supports the literature on collaborative relationships between entrepreneurs and the role of mentors in EEs (Fernandes & Ferreira, 2022).

Organizations supporting early-stage start-ups can conduct relevant studies that are then shared with entrepreneurs, and government initiatives or grants can provide financial and non-financial resources to early-stage start-ups. Therein, the Chamber of Commerce and its network are important players by providing business development resources, mentorship programs, and networking opportunities to start-ups. Investors are also vital players in EEs, as they can provide financial support and resources needed to scale start-up operations. These players provide critical support for entrepreneurs to develop and scale their businesses.

The study further revealed potential partners within EEs that start-ups and incubators should seek to establish interactive links and connections with. Partnerships with educational institutions, manufacturers, providers, subcontractors, and other venture development programs are crucial for developing start-ups and the EE. Educational institutions are excellent partners for start-ups, providing access to various resources, expertise, and specialized talent. Additionally, partnering with manufacturers, subcontractors, and suppliers can provide access to specialized knowledge, production capabilities, and distribution channels that can significantly accelerate the growth of start-ups. Moreover, it was shown that start-ups should continue seeking support and re-

sources from different venture development programs beyond the initial incubation stage to scale and grow their businesses further.

An unexpected finding is that start-ups should not confine themselves to a single incubator program. Instead, they should actively search for other venture development programs that fit their stage of growth and requirements. This implies that graduating from an incubator program does not necessarily mean a start-up is ready to continue operating independently. Rather, they should seek additional resources and networking opportunities to grow beyond the initial incubation stage. This finding is unexpected because it challenges the prior belief that once a start-up has graduated from an incubator program, they are fully equipped to operate on their own and should no longer need additional support. Participating in multiple programs can give start-ups access to various expertise, capital, and potential customers. It can also provide valuable feedback and support, accelerating start-up growth and development. However, it is possible that the need for start-ups to seek additional venture development programs may be specific to smaller incubators with limited resources and expertise and that the situation might differ for larger incubators that offer more abundant resources and more extensive expertise.

In addition, the study supported the importance of networks as a form of entrepreneurial learning for incubated start-ups. Peer exchange, informal networks, industry-specific networks, and networks to customers are key sources of learning for start-ups. Peer-to-peer exchange is a critical part of the support system of EEs. Peer-to-peer exchange can provide valuable insights into how similar start-ups in a comparable development phase have adapted to certain situations or produced innovative ideas. Patton et al. (2009) also highlighted the significance of peer exchange in entrepreneurial learning. Informal networks are crucial as they can provide access to a wealth of knowledge and expertise from experienced entrepreneurs, industry experts, and peers who have faced and overcome similar challenges. Industry-specific networks offer valuable opportunities for start-ups to connect with other professionals in their field, gain access to specialized knowledge, resources, and opportunities, and accelerate their growth specific to their line of business. Thus, networks offer valuable resources and opportunities for start-ups to learn and improve their business.

This finding reinforces the central theme of networking in the incubation literature (Aernoudt, 2004; Bøllingtoft & Uhløi, 2005; Hackett & Dilts, 2004b). The interviews strengthened the argument that incubators act as brokers, connecting entrepreneurs with a resource network (Gao et al., 2021; Peters et al., 2004). In addition, case start-ups highlighted the vital role of incubators in EEs, supporting that they are essential to entrepreneurial value chains (Phan et al., 2005) and are considered crucial actors within EEs (Klofsten et al., 2020). Thus, this study supports the notion that incubators are ecosystem intermediaries (Woolley & MacGregor, 2021) and that networking is essential for entrepreneurial learning and growth (Franco et al., 2020).

My study advances understanding of the role of networks in incubation contexts by highlighting that networks to customers are crucial sources of learning for start-ups, not explicitly mentioned in the incubation literature. This in-

sight broadens the conversation about the role of networks beyond just support, industry-specific and peer-to-peer networks. Incubators should place greater emphasis on helping start-ups connect with potential customers as a way to accelerate their growth and learning. Also, this finding underscores the relevance of understanding the diverse network needs of start-ups in different stages of development. Start-ups in the early stages may benefit more from peer-to-peer exchange, informal networks, and customer networks to validate their business models, whereas late-stage start-ups may require more formalized networks.

Furthermore, the findings of why case start-ups initially joined FastTrack Ventures supported an interesting observation by van Weele et al. (2020) that most start-ups pursue incubation to access tangible resources, such as office space, rather than intangible resources, such as networks or training. This notion highlights the need for incubators to better communicate the value of networking and other intangible resources to start-ups.

Another unexpected finding is the strong emphasis on the value of informal networks for entrepreneurial learning and development. While formal networks and programs are often viewed as the primary source of support for incubated start-ups, case start-ups mostly highlighted the importance of building relationships and connections with other entrepreneurs outside formal structures. Informal networks provided opportunities for informal learning and knowledge-sharing, including informal discussions, mentorship, and learning from others' experiences, according to the case start-ups. This finding suggests that start-ups should not only rely on formal networks and programs, but also actively seek out and cultivate relationships with peers, industry experts, and experienced entrepreneurs to access valuable resources and support.

5.2.2 Entrepreneurial Activity

Moreover, the study explored how collaboration between different players in the EE can lead to start-up growth. Incubators are vital to EEs as they provide entrepreneurs with the necessary resources and support to develop their ideas into viable businesses. Collaborations and partnerships between start-ups, universities, governments, established companies, and financial and legal partners support start-up growth. Collaborations and partnerships can help start-ups gain diverse perspectives and skills, overcome challenges, and grow more quickly. Collaborations with universities can provide start-ups access to research, talent, and resources. Collaborations with governments can allow start-ups to expand their reach and network, and access funding, expertise, and resources. Collaborative partnerships with established companies can help start-ups gain access to larger markets, funding, and mentorship. Finally, financial and legal partnerships are also essential for start-up growth.

Furthermore, the study supported the role of incubators in stimulating entrepreneurial activity within EEs. Incubators can provide a universal framework for start-ups to develop their businesses, minimize risks, and host external workshops and events that hold the EE together. They also provide entrepreneurs with advisory services, networks, and mentorship opportunities,

establishing a link between start-ups and the EE. However, there are inherent risks involved in entrepreneurship, and incubators need to balance risk management with maintaining the spirit of entrepreneurship. Incubators can provide start-ups with valuable market insights, knowledge, and mentorship opportunities through their connections within the EE to mitigate these risks. Lastly, for incubators to be effective, they need to have a diverse pool of coaches and mentors with varying levels of expertise and experience to meet the unique needs and backgrounds of start-ups.

5.3 Entrepreneurial Ecosystems and the Internationalization of Incubated Start-ups

Incubated start-ups seeking to internationalize should consider partnerships with international universities, manufacturers, suppliers, and other venture development programs offering access to expertise, capital, potential customers, and valuable feedback and support. This finding aligns with Franco et al. (2020) and Gao et al. (2021) that incubators support start-up internationalization by providing international connections.

Collaborating with other players in the EE can provide start-ups with diverse perspectives, skills, local knowledge, networks, and resources to benefit their growth. Such collaborations can support start-ups to establish sales channels in foreign markets, gain access to funding and mentorship, and tap into new business models. These partnerships can help start-ups expand their network, accelerate their growth, and scale their businesses beyond the initial incubation stage.

The study further exposed that incubators can play a key role in supporting the internationalization of start-ups by establishing mentorship relations which can facilitate foreign market entry. Experienced mentors can provide valuable support and assistance to start-ups in entering foreign markets, establishing contacts, and securing funding. Thus, incubators should match start-ups with mentors with experience in specific target markets, providing start-ups with valuable connections and knowledge of local business practices. These mentor connections can greatly enhance the chances of success of start-ups seeking to enter foreign markets, as they provide local knowledge and support in navigating unfamiliar business environments.

In addition, incubators can offer coaching programs designed to help start-ups gain access to foreign markets by providing training on internationalization, in line with Gao et al. (2021), who noted that incubators equip incubatees with knowledge about the internationalization process. In addition, coaching programs offered by incubators are essential for helping start-ups understand international markets, particularly the nuances of different markets. Incubators can also host international events facilitating collaboration, networking, and knowledge-sharing among entrepreneurs.

A striking finding of this study is that some start-ups did not find the incubator events particularly relevant to their business. This observation suggests that while events can be a valuable way for start-ups to network and gain knowledge, they may not always be equally effective for start-ups, underscoring the importance of ensuring that events are tailored to the specific needs and interests of the start-ups attending them.

Moreover, the study offered insights into how incubators can assist start-ups in expanding internationally, going beyond traditional support mechanisms like mentorship, networks, and funding access. The study uncovered new dimensions of how incubators can support start-ups to internationalize, hiring foreign interim personnel and finding potential foreign board members. Traditional support mechanisms, such as mentorship and access to funding, may not suffice for start-ups to navigate the complexities of internationalization. Therefore, a broader understanding of the range of support mechanisms tailored to the specific needs of start-ups seeking to expand their businesses abroad is needed.

Overall, incubators facilitate the internationalization of start-ups by establishing connections to key actors in the EE that can provide support and resources for start-ups seeking to expand abroad. This finding adds to the argument by Blackburne & Buckley (2019) that the connectivity of incubators is vital for the internationalization of incubated start-ups.

5.4 Practical Implications

The practical implications of this study hold significance for those involved in promoting start-up growth and the creation of a flourishing EE, including start-ups, incubators, and policymakers. Based on the results, the following recommendations should be considered.

For start-ups, the study highlighted the importance of paying attention to the drivers of BMI to ensure that their business model is sustainable and can adapt to changing conditions. Start-ups should be aware of internal and external threats and opportunities, such as a changing environment, product-market fit, cash flow problems, and the best customer segments. Moreover, start-ups are encouraged to regularly review their business and reflect on their strategy to identify potential issues with their current business model.

Further, start-ups should not limit themselves to a single incubator program but instead actively seek out other venture development programs that suit their stage of development and needs. In addition, start-ups should not only rely on formal networks and programs but also actively seek out and cultivate relationships with peers, industry experts, and experienced entrepreneurs to gain access to valuable resources and support.

For incubators, the study suggests that BMI may not be a universally valid pathway for start-up growth across incubators. Start-ups at different stages of growth may require different types of support, and BMI support may be more

relevant for late-stage start-ups that have already achieved product-market fit and are looking to scale. Therefore, incubators should consider the growth stage of incubatees when planning what topics to support. If incubators decide to support BMI, they can provide direct support through regular business reviews that help start-ups identify potential problems, provide different perspectives, help validate business ideas, provide emotional support, and expert presentations. Indirect support can be through cooperation with research institutions, the incubator's network, partnerships, and financial support.

Additionally, incubators should assume the role of network intermediaries, connecting their incubated start-ups with other players of the EE. Incubators should build a local framework for the EE, which could include building a network connecting alumni of incubatees with present incubatees, as the alumni network of incubators is a valuable resource for incubated start-ups, providing expertise, money, and connections.

Furthermore, incubator networks should be beyond support, industry-specific, and peer-to-peer networks. Incubators should also focus on helping start-ups connect with potential customers to accelerate their growth and learning. Therefore, the study highlights the relevance of understanding the diverse network needs of start-ups in different stages of development.

Finally, there is a need for incubators to better communicate the value of networking and other intangible resources to start-ups because start-ups join mainly because of tangible resources such as office space rather than because of the advice and contacts they get at the incubator, which should be the main reasons for joining.

For policymakers, the study suggests that they should support the development of a diverse range of incubators tailored to start-ups' needs at different stages. In addition, policymakers should recognize the importance of incubators as key players in the EEs, providing support and resources promoting start-up growth.

5.5 Limitations and Suggestions for Future Research

Although this study provides a meaningful contribution to the literature, it is not without limitations. While qualitative interview studies typically have 20-30 individual participants forming the data pool (Creswell & Creswell, 2018, p. 262), this research is based only on 11 interviews, which falls short of the expected number of participants for a study of this nature. The small sample size of participants impairs reliability and may be insufficient to generate robust conclusions. The small sample size may have led to increased variability and decreased reliability of the findings. The results would be more representative and reliable with a larger sample size. However, the sample size suffices for the scope of a thesis.

Sample bias is another limitation, as all case start-ups are taken from the same incubator, which may impact the generalizability of findings. The similar-

ity of the sample means that they have all received the same support and are from the same region. Moreover, this study only examines one incubator, whereas different sizes and types could offer more diverse perspectives. However, despite these limitations, the findings can be analytically generalized to other contexts based on the applicability of similar theoretical concepts or principles (Yin, 2018, p. 379).

Further, an incubator specialized in BMI might have produced more insights than the general incubator that formed the data for this study. This concern is reduced by the study drawing on three expert interviews, two outside the context of the focal incubator.

The study's findings are general and should apply to other industry-agnostic incubators that host early-stage, growth-oriented start-ups, given the commonalities of incubator programs across contexts. The applicability of the study's results can be extended to other countries as well, except for the dimension of emotional shelter, which may differ due to cultural and societal norms. Nonetheless, the study's analytical generalization can serve as a framework for supporting BMI and the role of the EE.

The validity of the data is impaired by all information having been self-reported. There were no observations, which may compromise the accuracy of the data. The self-report method may have led to the participants providing biased or incomplete information, as they might have wanted to be seen in a better light. Additionally, the presence of a former chairman of the incubator board in most of the interviews might have influenced the answers provided by the participants. This presence could have resulted in an overestimation of the support provided by the incubator and how the start-ups benefited from it.

Despite these limitations, this study provides insights into the role of incubators in supporting BMI in start-ups and the role of EEs in fostering start-up growth. To build on these insights, future research could explore the relationship between BMI support by incubators and start-up performance. This could involve a quantitative study comparing start-ups with and without BMI support to examine whether this support leads to improved short and long-term performance. Moreover, in the context of BMI, future research could examine the impact of emotional support on start-up success and explore how incubators can provide effective emotional support to start-ups.

Furthermore, future research should investigate whether BMI support by incubators leads to more BMI activity in the future compared to start-ups that did not receive such support. Another area for future research is internationalization support by incubators. A quantitative study contrasting start-ups with and without internationalization support could examine the effect of this support on long-term start-up performance. Such a study should focus on early-stage incubators and whether start-ups are even ready for internationalization, as few of the case firms in this study were actively engaged in internationalization efforts.

Future research could also investigate how education and background influence a founder's decision-making process in a start-up. This could involve a qualitative study examining the decision-making process of founders with dif-

ferent educational backgrounds and identifying how this impacts their strategic capabilities and ability to think strategically.

In conclusion, this study contributes to the literature on incubation, BMI, and EEs, but the limitations must be considered. To further advance our understanding of these topics, future research should address the limitations of this study and investigate new areas of inquiry.

6 CONCLUSIONS

This study investigated how incubators can assist growth-oriented start-ups with BMI, the role of the EE for incubatees, and the role of incubators therein. By thoroughly examining these research questions, this study has illuminated the mechanisms that incubators can utilize to foster BMI and tap on EEs to promote start-up growth. The findings of this research offer practical implications for policymakers and practitioners seeking to promote entrepreneurship and economic development.

The study has identified key drivers that motivate BMI and its associated characteristics and challenges for incubated start-ups. It has also shed light on the business model components that are most fruitful for innovation, the factors innovating entrepreneurs must consider, and how incubators can support BMI both directly and indirectly. Among the drivers of BMI are a changing environment, product-market fit, the cash flow situation, and customer segments. BMI activities are slow and require continuous optimization while finding the right hires can present a challenge. Fruitful components for BMI activity include the value proposition, key resources, key partners, customer segments, channels, and revenue streams. Entrepreneurs innovating a business model should be proactive and commit to testing and piloting different business model rearrangements. Incubators can support BMI directly by offering regular business reviews with coaches to help identify problems in the current business model, offering diverse perspectives, validating business ideas, providing emotional support, and hosting presentations by experts. Indirect support includes cooperation with research institutions, access to the incubator's networks, facilitating partnerships, and financial support.

Furthermore, this study has identified relevant players in EEs, potential partners for start-ups within EEs, how entrepreneurs learn from EEs, and the collaborations that incubators should establish within EEs to foster start-up growth and internationalization. Important players in EEs include venture development programs and their alumni, mentors, support organizations such as the Chamber of Commerce, government initiatives/grants, investors, and educational institutions. Potential partners for incubated start-ups include educational institutions, manufacturers, subcontractors, providers, and other venture development programs. Entrepreneurs learn from peer exchange, informal and specialized networks, customer networks, and venture development programs with their alumni. Incubators can support start-up internationalization through the EE by connecting start-ups with customers, facilitating partnerships, connecting start-ups with university professors, and providing financial support. Incubators should foster a sense of cooperation instead of competition and facilitate collaborations between incubatees and educational institutions, governments, established companies, and pave the way for legal and financial partnerships.

Policymakers and practitioners can use the insights provided by this study to design and implement effective incubation programs that promote entrepreneurship, drive start-up growth, and promote economic development. As a flower requires fertile soil, nourishing sunlight, and protective shelter to reach its full potential, entrepreneurs require the support of a thriving EE. Incubators can serve as the gardeners, providing the necessary resources and mentorship to nurture these vital elements, supporting start-ups to innovate their business model, internationalize, and connect to the EE, enabling entrepreneurs to bring their ideas to fruition, creating thriving businesses that benefit both local and global economies.

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Appendix A

Interview Guide Start-ups

1. Research permission

You agree to participate in the study "The Incubation Advantage: Leveraging Business Model Innovation and Entrepreneurial Ecosystems for Start-Up Growth" (working title). Participation in the study is voluntary and your participation can be terminated at any time, you will remain anonymous in any work that is published based on this interview. There will be no negative consequences for discontinuing the study. The research data will be used in Sjarð Braun's master thesis, and in research articles by Dr. Mari Suoranta and her working group (University of Jyväskylä, School of Business & Economics, Finland).

2. Brief introduction to the research interview: contents, length, format

3. Interview

Company Overview

- Name of interviewee
- Firm marketing name
- Background of interviewee (education, work)
- Role of interviewee
- Year of the start-up's establishment
- Owners
- Board members
- Advisor board members (if any)
- Line of business/industry
- Start at the incubator Month Year
- Exit from the incubator Month Year
- Sales turnover in the beginning of the incubator program
- Number of employees in the beginning of the incubator program
- Sales turnover at the end of the incubator program
- Number of employees at the end of the incubator program

Business Idea

- Short description of the business idea
- Vision. Where are you in 5 years' time

Founding Story

- Why and how was the business founded?
- What motivated you to join an incubator program?
- What was the state of your start-up when you joined the incubator?

Business Model

- Value proposition. Please describe your product and/or services. What is your competitive advantage?
- Customer segments. Who are your customers?
- Channels. How and where can customers find and buy your products/services?
- Key activities. What needs to be done to run the business?
- Key partners. Who are your partners?
- Key resources. What are your resources?
- Cost structure. What are your main expenses?
- Revenue logic. How do you earn money?

Changes, Critical Incidents

- When you think back, what changes and developments have happened in your business model while you were at the incubator?
- Have you made any changes to the value you offer to customers since joining the incubator?
- How has the incubator helped you to create new value for your customers or other stakeholders?
- Have you made any changes to how you deliver value to your customers since joining the incubator? (For example, a new channel)
- Have you made any changes to your revenue model since joining the incubator?
- Have you entered into an important partnership during your time at the incubator? If so, what role does it play in your business?
- If yes: Has the incubator helped you establish that partnership? If so, how?
- Can you give an example of how you have created new revenue streams since joining the incubator, and how the incubator helped with that?
- What challenges have you faced while making changes to your business model (if any)?

Resources/Networks

- In what kind of networks are you in?
- How do you benefit from these networks?
- Have you participated in any networking events or activities organized by the incubator? If so, can you tell me about those experiences?
- How has being in the incubator helped you to expand your network?
- Can you describe any collaborations or partnerships the incubator has facilitated that have led to innovation or growth for your start-up or others in the incubator?
- Human resources. Your team composition, and their skills and competences?
- From a resource perspective, how did you see the role of incubator personnel?
- Monetary resources. How is your firm funded? (Own capital, public funding, grants, loan, angel investors, venture capital, etc.)

Incubation Services

- What did the incubator provide you with?
- How often or how much have you/team participated in the activities and services provided by the incubator? (For example, daily/weekly/monthly basis)
- What do you benefit from the most?
- What did you learn during your time with the incubator?
- What were your expectations of the incubator and were they met?
- What would you change? What could be done differently?
- Contents of coaching sessions and what was covered?

Internationalization:

- Has your start-up entered a foreign market before? If yes, how?
- What role do you think the incubator played / could play in helping your start-up expand into international markets?
- What additional resources or support do you think would be most helpful to internationalize?

Next Steps: Growth

- What is your growth plan, what actions does that growth require?
- Estimate of turnover after 3 years
- Estimate of number of employees after 3 years
- Growth challenges
- Growth drivers/enablers?
- What kind of funding does the growth require?
- How can the incubator help to achieve growth?

Free Word

- Any additional thoughts and ideas after the discussion

Appendix B

Interview Guide Experts

1. Research permission

You agree to participate in the study "The Incubation Advantage: Leveraging Business Model Innovation and Entrepreneurial Ecosystems for Start-Up Growth" (working title). Participation in the study is voluntary and your participation can be terminated at any time, you will remain anonymous in any work that is published based on this interview. There will be no negative consequences for discontinuing the study. The research data will be used in Sjärd Braun's master thesis, and in research articles by Dr. Mari Suoranta and her working group (University of Jyväskylä, School of Business & Economics, Finland).

2. Brief introduction to the research interview: contents, length, format

3. Interview

Incubator Overview

- Official name
- Background of interviewee (education, work)
- Role of interviewee
- Position of interviewee since
- Year of the incubator's establishment
- Organizational structure of the incubator
- Department
- Owners
- Board members
- Advisory board members (if any)
- Budget/turnover in the last fiscal year
- Monetary resources. How is the incubator funded?
- Number of employees in the incubator
- Number of non-employee coaches in the incubator
- Description of the Incubator
- What are the incubator's program goals
- Incubator's record of client success to date/metrics
- Vision. Where is the incubator in 5 years' time

Selection Process

- Where do you find potential start-ups (sales leads)?
- What do you look for in an incubated start-up?
- How does the incubator select incubated start-ups?
- What is the application process for incubated start-ups?
- What is the selection process for incubated start-ups?
- What are the ongoing program requirements and graduation criteria?

- What type of start-ups fit the incubator/target audience?
- What is the cost of joining the program?
- How many start-ups do you select per year / in total in the program?

Incubation Services

- Who are the coaches?
- What is coached (contents)?
- How are start-ups coached? (e.g., meetings, events, trainings, accessibility, frequency)
- What does the incubator offer to incubated firms?
- Who are the other stakeholders who participate in coaching e.g. mentors, investors, university experts? (e.g. IPR, licensing, technology transfer office, professors/other faculty & staff members, entrepreneurs-in-residence)
- Are there connections between incubator activities and the university's entrepreneurship courses and activities?
- If yes, do students receive study points, credit (ECTS) when they participate? Or is it an extracurricular activity?

Changes, Critical Incidents

- When you think about all the incubated firms here, what critical changes and developments have happened in their business models while they were/are at the incubator?
- What does the incubator do to help firms start-ups realize critical incidents in their business models?
- What does the incubator do to promote business model innovation?

Resources

- How does the incubator promote collaboration and networking?
- What kind of networks do incubated firms benefit from?
- Connections to the entrepreneurial ecosystem stakeholders? (e.g., Chamber of Commerce, SMEs, Large firms)
- What other players would you like to be involved in the ecosystem not yet part of?
- How do start-ups benefit from these networks?
- Human resources. The incubator's team composition, their skills and competences?
- From a resource perspective, how does the incubator personnel support incubated firms?

Internationalization

- How do incubated start-ups here internationalize?
- How does the incubator help/could help in facilitating the internationalization process of incubated firms?
- What international collaboration efforts is the incubator involved with? (e.g. EU-level incubator/accelerator networks, bilateral collaboration with partner incubator/accelerator)

SWOT

- Strengths
- Weaknesses
- Opportunities
- Threats

Free Word

- Any additional thoughts and ideas after the discussion