



**Linnéuniversitetet**  
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[Master Thesis]

# Business Incubators - Wind Turbines of Entrepreneurship?

*A qualitative study on University Business Incubators*



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## Abstract

Over the past three decades, interest in the topic of Business Incubation and more specifically University Business Incubation, has increased, due to its potential to encourage entrepreneurial activities, which initiate innovation and economic development. The literature on entrepreneurship devotes significant attention to BI as a tool for supporting entrepreneurs in overcoming difficulties associated with starting a business. Meanwhile, the fact that incubators themselves are vulnerable to different challenges needs to be sufficiently highlighted in the research currently in publication. By adopting an incubator's perspective on developing entrepreneurs and, therefore, its dynamics that form new ventures, this qualitative study has focused on difficulties adjacent to the administration of the incubator. By building on the Black Box model of incubation, the Triad model, as well as Institutionalized entrepreneurship, the researchers have contributed to the phenomena of UBIs, and the many challenges they encounter when incubating business tenants. The thesis has successfully confirmed the inherent value of ensuring the financial viability of publicly financed incubators while shedding light on the challenges involved in achieving self-sufficiency. This examination has delved into the acquisition of government funds by incubators and explored the opportunities and constraints accompanying such support. Building on existing literature, which identifies sustainability and growth as key indicators, this study has provided empirical evidence and analysis that underscores the detrimental impact on the incubator's core mission when these criteria are not maintained.

## Keywords

University Business Incubation, Incubator, Innovation, Institutionalized Entrepreneurship, Black-Box model, Triad Model, Entrepreneurship, Business Incubation, Challenges



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# 1 Introduction

## 1.1 Background

*“Ideation is important for innovation. But it is only the first step! Incubation must follow and so must acceleration for the circle of innovation to reach completion, or else, you risk expiration” - Peter-Cole C. Onele*

Success tales from nascent entrepreneurs serve as an invaluable source of inspiration for students with creative minds to begin turning their ideas into successful enterprises (Nijenhuis, 2020). However, the path to entrepreneurial prosperity is seldom straightforward, as aspiring entrepreneurs are likely to encounter numerous obstacles and hurdles along the way. The novelty of the enterprise, a lack of network connections, and a lack of expertise are examples of hindrances that may limit start-ups' capacity during the early stages of growth to expand and become recognized as established companies in the market (Shane, 2004; Vohora et al., 2004). Thus, providing adequate guidance in the early phases is fundamental to transforming an idea into a real business. Over the years, many initiatives have emerged to support *'the nascent entrepreneurial dream'* (Nijenhuis, 2020), and one such endeavor is the concept of Business Incubation.

Business Incubation (BI) first emerged in the late 1950s and has progressively advanced alongside societal and technical advancements (Hassan, 2020). Initially conceived in the United States, the idea of BI later spread to the United Kingdom and Europe through various related structures, including innovation centers, technopoles, and science parks (Sanyal & Hisam, 2018). The concept has been attributed many definitions over the years; However, several of them share the same implicit understanding, which is that BI is a business development tool that facilitates and directs the process of transforming a startup into a durable and prosperous organization (Robles, 2017). Nowadays, it is customary to distinguish between four primary types of BI, and these are presented as:



*Business Innovation Centres, University Business Incubators, Independent Private Incubators, and Corporate Private Incubators* (Grimaldi & Grandi, 2005). Having a large selection of incubators offering a range of services to achieve an array of objectives is desirable as new ventures have diverse needs and expectations (Grimaldi & Grandi, 2005). Notwithstanding the value of all kinds of incubation, extant literature has emphasized the importance of University Business Incubation in promoting students' growth as entrepreneurs (Secundo et al., 2021).

### *University Business Incubation (UBI)*

Since the 1990s, when economic development first became a prominent third mission activity of many institutions, alongside teaching and research, UBI has become necessary as a mechanism for supporting entrepreneurial activities linked to economic growth (Hassan, 2020). By fostering entrepreneurship to increase their financial resources and promote performance, as well as the growth of local, regional, and national economics, universities worldwide have started to function as agents of technological development and knowledge transfer (Urbano & Guerrero, 2013). The idea of the entrepreneurial university has grown significantly over the past twenty years to encompass initiatives linked to encouraging entrepreneurial thinking, activities, and institutions, as well as generating both entrepreneurial capital and knowledge (Audretsch, 2019). In our modern world, universities are viewed as social systems that engage in innovation to reassess their fundamental goals and methods beneficial to guarantee long-term vitality (Clark, 2004).

UBIs are established by universities willing to play a direct entrepreneurial role in producing and disseminating scientific and technical information (Radosevich, 1995; Evans & Klofsten, 1998; Grimaldi & Grandi, 2005). These institutions thus establish organizations that support and aid newly developing knowledge-based firms, and strong emphasis is placed on transmitting knowledge from universities to businesses. This provides a



more favorable environment for producing revenues and fosters an economically, legally, and technically advantageous interrelation between universities, corporate sponsors, governments, and society (Hassan, 2020).

### *Business Incubation: The context of Sweden*

One country that has garnered respect for having a supportive startup environment for entrepreneurs, as seen by the recent emergence of several successful ventures such as Spotify, Klarna, and iZettle (Björnsne & Smith, 2018), is Sweden. The success can be credited to a combination of factors, including government support, a vast talent pool, a well-developed infrastructure, and a proud history of prosperous entrepreneurs (Sweden Institute, 2022).

The Swedish government offers many incentives and programs, such as funding assistance and tax advantages, to facilitate the formation of new businesses (Swedish Institute, 2021). Such support contributes to the creation of a favorable atmosphere for startups, alongside the promotion of an entrepreneurial culture (Brattström & Wennberg, 2021). Furthermore, the significant talent pool is another crucial element that contributes to the country's robust business environment. The Swedish population is highly educated and has a strong tradition of innovation, providing a ready pool of skilled workers for startups (Jacob et al., 2003). The presence of numerous premier colleges and research centers in the country offers access to cutting-edge technology and innovative ideas, further enhancing the potential for successful startups. Additionally, it is argued that Sweden's well-functioning infrastructure is another decisive factor for its success (Swedish Institute, 2022). The country possesses a well-established transportation system and high-speed internet, both government-funded, allowing startups to connect easily with customers and partners (Swedish Institute, 2021). Lastly, Sweden also has a proud history of successful entrepreneurs, which creates a self-perpetuating cycle of success within the startup ecosystem. The achievements of companies





such as Spotify, Klarna, and iZettle serve as a significant source of inspiration for aspiring entrepreneurs, as they have established themselves as role models in the business world (Björnsne & Smith, 2018).

In 2003, the Swedish government agency *Vinnova* initiated a national program aimed at fostering economic growth and job creation through the commercialization of technology (Swedish Institute, 2022). The program's primary objective was to support existing incubators by creating an infrastructure conducive to innovation (Lindholm Dahlstrand, 2004; Alexandersson, 2015). In Sweden, BIs were formerly exclusively local or regional endeavors; However, to receive funding through the national program, incubators had to adhere to specific managerial requirements (Alexandersson, 2015). The initiative sought to enhance the management of BIs and encourage the exchange of best practices. The professionalization of incubator management was the goal of two organizations: *Swedish Incubators and Science Parks (SISP)* (Alexandersson, 2015). In 2006, the Incubator Forum had 121 members from 27 countries, including seven members from Sweden.

The recognition of novice entrepreneurs as significant drivers of economic growth has resulted in the designation of new venture development as a national policy (Pattanasak et al., 2022). The importance of startups in promoting social cohesion, competitiveness, innovation, productivity, and employment generation has been widely recognized among scientific scholars (Theodorakopoulos et al., 2014). Consequently, entrepreneurship development policy has gained increasing prominence in recent decades, shifting from a peripheral focus to a central one (Lewis et al., 2011).

## 1.2 Problem Identification

The field of BI, specifically UBI, is a realm of research that has gained interest over the past three decades due to its capabilities for fostering entrepreneurial activities, which initiates innovation and economic



development (Theodorakopoulos et al., 2014). BI was established in the U.S. during the 1950s; However, its nature and format have undergone significant changes since its infancy (Bruneel et al., 2012). From simply offering small office spaces and shared facilities, incubators now provide various intangible resources as part of their value proposition for the survival and scaling of small and medium-sized enterprises (SMEs) (Soetanto & Jack, 2016). Thus, a substantial body of research argues that BI can support the development of networks, business skills, mentors, and capital, along with additional resources which permit entrepreneurs to scale their businesses to the next level (Kakabadse et al., 2020).

The services and resources these organizations provide can vary significantly, with different UBIs giving different levels of support to their incubatees (Mian, 2011; Williams & Tsiteladze, 2019; Nijenhuis, 2020). Nevertheless, as Ratinho et al., (2010) highlight, UBIs generally focus on three dimensions expected to offer value to aspiring entrepreneurs. These are presented as *Infrastructure*, *Business support services*, and *Networking facilities*. Accordingly, when allocating resources to support startups, these three components of UBIs are crucial (Ratinho et al., 2010).

From an infrastructural angle, UBIs supply the underlying resources required for the development of new ideas (Chan & Lau, 2005). These resources play a multifaceted function for the incubator tenants, encompassing both tangible and intangible aspects. Tangibly, the infrastructure comprises resources, assets, and facilities that foster the new product development (NPD) process of incubator tenants (Prencipe, 2016). Intangibly, the infrastructure acts as a catalyst to encourage the incubatees to take action during the NPD process. Secondly are the business support services provided by UBIs, which often concentrate on the operational endeavors of the incubatees (Vanderstraeten & Matthyssens, 2012). Typically, these services include coaching, training, business plan assistance, and direct subsidies (Ratinho et al., 2010). Lastly, UBIs also



offer various networking services (Nijenhuis, 2020). In the marketplace, startups' often struggle with a lack of credibility (Chan & Lau, 2005). Consequently, a solid and valuable network can aid new ventures in establishing this legitimacy (Dahms & Kingkaew, 2016). The incubator can give access to networks, including those of consumers, suppliers, and investors (Chan & Lau, 2005). Thus, by utilizing their knowledge and experience to promote partnerships outside the venture, UBIs serve as intermediaries between the incubatees and third-party individuals (Nijenhuis, 2020).

It has been demonstrated that UBIs offer a solid foundation for fostering entrepreneurs. A significant amount of resources are nowadays being invested in incubators, as they are recognized as a crucial instrument for the growth of SMEs on a worldwide scale (Lose & Tenge, 2015). Although incubators are entrusted with promoting entrepreneurs and expanding SMEs, some academics highlight that due to their vulnerability to challenges, these organizations are, in some instances, unable to properly support the growth of new ventures (Akcmoak & Semih, 2009). Previous research in the field has shown that incubators face several difficulties, both in developed- and developing nations (Lose & Tenge, 2015).

First and foremost, it has been argued that recruiting and retaining qualified experts to manage business functions is a critical element for the success of any incubator (Cullen et al., 2014). Without the support of capable and experienced subordinates, entrepreneurial ventures may struggle to attain viability and deliver high-quality services. Nieman and Nieuwenhuizen (2009) affirmed that an organization's ability to maintain productivity and foster ongoing human resource growth constitutes one of its main advantages. Accordingly, investing in human capital is paramount for BIs to realize their objectives (Lose & Tenge, 2015).



Moreover, empirical evidence suggests that businesses lacking essential skills, such as technological proficiency, managerial expertise, entrepreneurial acumen, and adaptability, are more susceptible to failure (Rimington et al., 2009; Lose & Tengeh, 2015). Despite this, many entrepreneurial ventures tend to neglect considerations of efficiency and financial literacy (Morrison et al., 2019). Interestingly, it has been found that such competencies are not necessarily prerequisites for accessing resources from incubators (Grimaldi & Grandi, 2005). Lalkaka (2001) continues to argue that one of the reasons for the suboptimal performance of incubators may be attributed to the lack of entrepreneurial experience among managerial personnel, leading to insufficient support for aspiring entrepreneurs.

It has furthermore been discovered that one of the principal challenges that may impede the delivery of services and achievement of objectives by an incubator is the absence of development and sustainability (Scaramuzzi, 2002; Lose & Tengeh, 2015). The lack of sustainability refers to the incubator's inability to support itself, whereas the lack of growth is determined by the yearly turnover and the number of graduates within the incubation program (Lose & Tengeh, 2015). Failure to sustain these factors may adversely affect the incubator's core mission.

In the same way as sustainability may present a challenge for incubators, research indicates that a lack of technological infrastructure within an incubator may submit another barrier to meeting the needs of SME clients, as proposed by Lose and Tengeh (2015). This issue is particularly pertinent as incubators are mandated to guide prospective entrepreneurs on essential elements, such as appropriate workspaces, shared office supplies and equipment, technological support services, and financial assistance for continued venture development (Ndedi, 2009).

Last but not least, it has been found that the ability of BIs to attract sponsors, generate revenue, and mobilize resources to enhance its service



delivery to incubatees is an essential indicator of effective management (Schwartz & Hornych, 2008; Lose & Tengeh, 2015). Grimaldi and Grandi (2005) observe that public BIs are typically non-profit entities, often receiving financial support from governmental bodies.

The literature on entrepreneurship devotes substantial attention to BI as a tool for assisting entrepreneurs in overcoming challenges related to firm startup and growth. However, as the aforementioned debate suggests, incubators themselves are also prone to facing various obstacles. Different scholars have addressed various difficulties. Despite an increase in investigations on BIs in recent years, the discussion remains biased, with a predominant focus on the needs and difficulties faced by entrepreneurs. Consequently, it is argued that more attention needs to be given to the challenges that BIs confront as they endeavor to support incubatees (Lose & Tengeh, 2015).

## 1.3 Research Purpose

The purpose of this thesis is to conduct a comprehensive investigation into the potential challenges that may be situated in University Business Incubators. The central objective of this research is to identify, and further analyze the factors that contribute to the emergence of these challenges, thus illustrating potential aspects of influence. This thesis aims to enhance the understanding of the intricacies of UBIs and offer valuable insights to managers, policymakers, and stakeholders on creating a supportive and collaborative environment for the growth and success of startups.

## 1.4 Research Question

- *What are possible challenges occurring within the environment of UBI's that influence the incubation process?*



## 1.5 Thesis Outline

- *Chapter 1, Introduction:* outlines the background and overall context of the field this study aims to scrutinize, consequently identifying the problem and guiding the reader into the literature gap that needs further investigation. The paper presents the research question and the purpose, to provide the reader with the significance of conducting this study.
- *Chapter 2, Methodology:* outlines the chosen methods this study will use for data collection. Among the outlined methodological choices are research philosophy; research strategizing, research methods; and ethical as well as practical considerations.
- *Chapter 3, Theoretical Framework:* depicts the theoretical framework from which the study will analyze the empirical results.
- *Chapter 4, Empirical Results:* presents the findings that have emerged from conducting semi-structured interviews and other forms of qualitative data collection.
- *Chapter 5, Analysis & Discussion:* entails the analysis of the empirical results with the aid of the theoretical framework. By utilizing the given theories, the study will provide insights and perspectives which will guide the reader in making sense of the results concerning the research context.
- *Chapter 6, Conclusion:* summarizes and concludes the analysis and provides recommendations and practical relevance. This chapter ends with suggestions for further research and research limitations.



## **2 Methodology**

*The methods and strategies used in this thesis will be detailed in the next chapter. The researchers start by exploring different research philosophies underpinning this study. Thereafter, they consider various approaches to theory development, along with methodological choices. Furthermore, the researchers also assess the strategies and data-gathering techniques.*

### **2.1 Research Philosophy & Assumptions**

The concept of research philosophy describes a set of presumptions and attitudes toward the growth of knowledge (Saunders et al., 2019). Everyone has different beliefs and assumptions that influence how we act and make decisions, further translating to the study, establishing a niche within social science philosophy. Whether we are aware of them or not, people make various assumptions at every level of an investigation (Burrell & Morgan, 2016; Saunders et al., 2019). These include but are not limited to, ontological, epistemological, and axiological assumptions.

#### *2.1.1 Ontology*

Ontology is a central concept in research methodology as it concerns assumptions about the nature of reality (Walliman, 2007). Ontological presumptions act as the foundation for research investigations, guiding the questions that may be raised and the methodologies that may be employed (Bryman & Bell, 2017). It shapes people's perspectives on the business and management environment, influencing how they choose what to investigate for various research projects (Saunders et al., 2019).

Ontology ranges from objectivism, which maintains that one objective reality can be observed and measured, to social constructivism, which contends that reality is subjective and constructed through various social interactions and cultural factors (Bryman & Bell, 2017). The objectivist approach adopts realism, which asserts that all social entities exist regardless of how we categorize or conceptualize them (Saunders et al.,



2019). This perspective implies that social agents have no control over the existence of the social world, thus viewing reality as being external to us (Walliman, 2007). Conversely, the subjectivist approach asserts that reality is formed intersubjectively through social interactions in which social agents build shared meanings and realities (Saunders et al., 2019). Social interactions are seen as an ongoing process that is continuously revised and altered. Thus, researchers must thoroughly examine different scenarios to understand how realities are generated and perceived.

Applied to the phenomenon of UBIs, the researchers posit that human institutions are inherently constituted by complex relationships, giving rise to various challenges that must be navigated. These challenges may take the form of social factors that impact the relationships and processes ingrained in UBIs. Moreover, the researchers assume that every individual possesses a unique set of experiences, expectations, and realities, which can potentially clash with those of other social actors, thereby giving rise to additional challenges in the incubation process. By focusing on personal experiences, the researchers can gain insights into how social agents interpret and respond to the environment in which they are situated, which is why this thesis deploys a subjectivist approach. By acknowledging our ontological presumptions, the researchers can ensure that the methodologies and data-collecting strategies are adequate and efficient for the research being undertaken.

### *2.1.2 Epistemology*

Epistemology aims to respond to inquiries by examining the nature and scope of knowledge and belief, the methods employed to acquire information, and the standards used to assess the veracity and validity of our beliefs (Saunders et al., 2019). It investigates how we can comprehend and justify what we know and the criteria used to determine whether or not our beliefs are supported by evidence.





Due to the diversity of epistemologies, there is a wide range of approaches to choose from (Saunders et al., 2019). Hence, it is crucial to comprehend the effects of different epistemological suppositions with regard to the specific method(s) of choice, as well as the advantages and disadvantages of the resulting study findings. Understanding and acknowledging one's epistemological assumptions is, thus, fundamental for conducting sound research (Saunders et al., 2019). Recognizing that the scientific study of objects can diverge significantly from the study of human experiences (Walliman, 2007), the researchers acknowledge that an interpretivist approach will impact this research. Thus, this advocates the need to recognize how important subjective meanings are to social interactions.

### *2.1.3 Axiology*

Axiology describes the values that guide the process of inquiry and investigation (Saunders et al., 2019). It explores the moral and ethical standards that govern research, as well as the social and political ideals that may affect the selection of research topics, methodologies, and findings. Axiology further entails identifying and analyzing the beliefs and principles that guide the researcher's perspective and approach (Saunders et al., 2019).

It is vital to be aware of the possibility of subjectivity and prejudice in the research process and adopt measures to lessen their influence. Even though it is ideal for the researchers to be as objective and impartial as possible, consciously engaging with the participants and asking them about their personal experiences results in some level of influence. This study operates on the premise that individual interviews will enable more in-depth information about the experiences and perceptions of the participants, which will further deepen the research process. This thesis will attain balance and avert substantial prejudice by consistently practicing our values.



## 2.2 Research Approach

There are three generally accepted techniques for creating and developing theories (Saunders et al., 2019). Firstly, the deductive approach, which is when the researcher formulates a hypothesis after reading academic literature and then develops a strategy to test the theory. Secondly, the inductive approach, which is when scientists start by gathering data to study a phenomenon and then formulate a hypothesis. However, instead of solely focusing on an inductive or deductive approach, researchers can use an abductive approach as a third option, combining the two reasonings (Saunders et al., 2019). The abductive approach results “[...] in the to-and-fro process of developing hypotheses (testable theories) inductively from observations, charting their implications by deduction, and testing them to refine or reject them in the light of the results” (Walliman, 2007, p. 18).

Abduction provides a way around the constraints imposed by inductive and deductive thinking, and can instantly test and evaluate new knowledge by applying it and comparing newly discovered information with existing ideas (Walliman, 2007). However, one should note that either induction or deduction tends to be dominated by the abductive technique (Saunders et al., 2019). Given the paucity of research on the challenges faced by UBIs, this study will lean slightly toward an inductive approach, which begins with particular observations and then develops broad conclusions. Using abductive reasoning the researchers can develop an interminable process, and migrate between empirical results and theory to deepen the understanding of the subject and the data gathered. Firstly, the researchers conducted a literature search, to build understanding of the concepts being examined. Relevant literature and existing research on the topic of UBIs allowed this study to refine research questions according to gaps detected. After gathering the empirical data, the researchers pendulated between the



findings and the theories to offer deeper insights about the phenomenon of UBIs.

## 2.3 Research Design

### *2.3.1 Qualitative Method*

Qualitative research aims to comprehend people's interpretations of their experiences and the relationships between them (Bryman & Bell, 2017), which align with the aim of this study. In qualitative research, words and images are frequently employed to gather data rather than statistics (Saunders et al., 2019). Nevertheless, because words and pictures can have a range of meanings, this necessitates discussion and clarification with participants. Hence, this method often entails semi-structured interviews, which allows for flexibility in the research process, and emerging questions, processes, and focus (Saunders et al., 2019).

Qualitative research is often accompanied by an interpretative philosophy, which, as already stated, serves as a basis for this thesis. It emphasizes the need for researchers to comprehend and make sense of the participants' unique and socially constructed interpretations of the phenomenon under investigation (Saunders et al., 2019). Such research is frequently referred to as naturalistic, as researchers must operate in a natural environment to build trust, involvement, access to different meanings, and in-depth learning.

### *2.3.2 Exploratory Study*

As suggested by Saunders et al., (2019, p. 186), "An exploratory study is a valuable means to ask open questions to discover what is happening and gain insights about a topic of interest". As the current research aims to comprehensively investigate potential challenges that can arise in the incubation process, this design is appropriate as the exploratory method



enables the researchers to analyze the UBI phenomena in its fundamental nature thoroughly.

For this thesis to assemble data to deploy an exploratory approach, the researchers utilized various techniques, mainly including literature searches and in-depth, semi-structured interviews with subject matter experts. Due to the exploratory nature, the interviews were set up to be semi-structured, allowing participants to guide the subsequent stages of the research by contributing their insights. The interviews themselves started with the researchers presenting the research purpose and the participants introducing themselves and describing their background leading up to their current occupation. Often, they described their academic background or work experience, alternatively, other topics related to our research context and purpose. The interviews then proceeded to explore the participants' understanding and experiences with, or in BI processes, as well as their perceptions of accurate definitions for the phenomenon of BI. The interviews typically ended in an informal manner touching upon the most relevant and important topics, along with the participant's key takeaways from the conversations. Furthermore, the adaptability and flexibility of exploratory research contribute to its advantages (Saunders et al., 2019). It requires the researchers undertaking exploratory investigations to be willing to alter their course in response to new data and insights that can arise throughout the process. This can lead to unexpected discoveries and novel insights about the phenomenon of UBIs, that might not have been feasible with more organized research methods.

## 2.4 Research Strategy

### 2.4.1 Case Study

A case study approach has the potential to yield insights through the in-depth investigation into the analysis of a phenomenon in its actual setting, leading to detailed empirical descriptions, as well as the creation



of theory (Eisenhardt, 1989; Dubois & Gadde, 2002; Eisenhardt & Graebner, 2007; Ridder et al., 2014; Yin, 2018). Undertaking case study research can be challenging due to its intensive and detailed approach, as well as the need to accurately identify, define, and gain access to an appropriate case study setting (Saunders et al., 2019). Nonetheless, this research technique is aligned with the goal of this study since it can aid in understanding what is happening and why inside the UBI context.

This thesis has utilized a single case study approach, including the case of an initiative named: Trifolium. Initiated by the Swedish government in 2009, Trifolium is a partnership between four universities and innovation offices connected to incubators in their respective regions in Sweden. This partnership was selected as the four regions within this joint effort are outside of Sweden's metropolitan areas. As such, it is a collaboration between cities, not necessarily considered developing regions. Thus, in order to better grasp the conditions under which UBIs in smaller areas can function, the researchers seek to investigate this phenomenon in more detail.

## 2.5 Sampling & Data Collection

### *2.5.1 Data Collection Method*

The most effective method for answering the study issue is determined to be semi-structured interviews. These interviews are helpful since they provide the researcher with “[...] the opportunity to ‘probe’ a response, where you want your interviewees to explain, or build on, their previous answers” (Saunders et al., 2019, p. 444). As this research adopts an interpretive mindset and seeks to understand the challenges that may influence the incubation process, such data gathering is highly relevant. Due to the flexibility of semi-structured interviews, the dialogue with the participants may veer into directions that the researchers had not initially



considered but crucial to their knowledge and aid in achieving the goals and research question (Saunders et al., 2019).

While some of the interviews consisted of in-person interviews, some had to be carried out as digital video meetings with Google Meet. Prior to the interview, the researchers ensured ethical consideration regarding permission to audio record the interviews and consent to conduct them in English, since most of the participants were not native English speakers.

### *2.5.2 Sampling Method*

Numerous sampling methods may be employed in research (Walliman, 2007). Due to the nature of this research topic, a purposive sampling approach is considered most appropriate. Purposive sampling, often called judgment sampling, entails using judgment to select the most suitable examples for answering particular research questions and pursuing specific goals (Saunders et al., 2019). Although purposive sampling does not offer a statistical representation of the target group, this kind of sampling method is appropriately applicable since this thesis is of an exploratory nature. In light of this, the criteria for selecting the cases for a purposive sample must be grounded on the study's goals and objectives (Saunders et al., 2019). Because this research aims to investigate the phenomenon of UBIs, purposive sampling is needed to illuminate the specific activities within a human institution closed to the general public.

### *2.5.3 Sample Size*

The question of sample size is ambiguous, as it has no set guidelines. Therefore, it is crucial to consider how your sample selection method logically connects to the goal and emphasis of your study (Saunders et al., 2019). The research aim and question determines what you need to discover, what will be valuable, what will have trustworthiness, and what can be done with the resources you have at your disposal (Patton, 2014).



To decide the sample size, many academics advise continuing to gather qualitative data, such as through more interviews, until data saturation is reached (Saunders et al., 2019). This is when the extra data acquired gives little to no new information or proposes new themes. While some claim saturation is necessary to determine the number of interviews needed (Guest et al., 2006), others point out that the phenomenon still needs to be researched further, and the results are still valid.

Due to the limited accessible guidance, it has been recommended that “[...] between four and 12 participants for a homogeneous group [...] (Saunders, 2019, p. 317) is appropriate. A total of eleven interviews were conducted for this thesis since indicators of data saturation were noticed quite rapidly. The researchers interviewed participants from various UBI departments and innovation offices to provide valid and trustworthy data necessary to address the research issue adequately.

#### *2.5.4 Process of Participant Acquisition*

As previously established, this study employs purposive sampling. The employment of a purposive sampling technique in this study necessitates the identification and recruitment of interviewees who can offer the most significant insights in terms of data. To this end, the researchers utilized outbound prospecting emails in order to acquire interview participants from various incubators in Sweden. The majority of the participants were primarily contacted due to their decision-making positions within their organization. As such, access to other participants also became more accessible. Furthermore, ingress was granted to other prospective interviewees who contributed significantly to the study.

Moreover, candidates from various innovation offices in the regions were identified for inclusion in the study. The selection process involved a search of their respective websites and the online database “Allabolag”, with a focus on decision-makers who could provide a comprehensive understanding of the incubation process and maximize the knowledge and



experience gleaned for the study. Furthermore, the study also utilized a referral strategy, where interviewees were asked to recommend other stakeholders or individuals who could contribute to the research. The participants contacted were instrumental in referring the researchers to other incubators and relevant personnel, thereby expanding the pool of suitable interviewees. Overall, this approach facilitated the recruitment of interviewees, offering valuable perspectives and insights, enabling the study to achieve its research objectives effectively.

Usable sets of data were produced from each interview. Table 1 below provides a summary of the participants.

Nr	Fictional name	Duration	Fictional UBI	Position
1	Hassan	30 Min	Bolag Maskinen	Business Developer/On-site manager
2	Hans	30 Min	Väst Sveriges Universitet	Innovation advisor
3	Havtor	32 Min	Väst Sveriges Universitet	CEO Innovation Office
4	Helena	40 Min	Norra Affärs Skaparen	Business Manager Incubator
5	Hanna	36 Min	Mellan Sveriges Universitet	Board Member Innovation Office
6	Gregory	39 Min	Norra Sveriges Universitet	Former Innovation Office Advisor
7	Greger	35 Min	Mellan Sveriges Universitet	Innovation Office Advisor
8	Julius	42 Min	Kustens Bolags Skapare	CEO Incubator
9	Alicia	46 Min	Mellan Sveriges Universitet	CEO Innovation Office
10	Ingrid	38 Min	Norra Affärs Skaparen	Incubation Manager
11	Wolf	37 Min	Bolagsvillan	Incubation Business Coach

**Table 1:** Summary of the participants





## 2.6 Method of Analysis

### *2.6.1 Data Fragmentation vs. Maintaining Data Integrity*

It is commonly understood in qualitative data analysis that to analyze significant volumes of non-standardized data, these data must first be coded and reorganized into analytical categories (Saunders et al., 2019). This approach frequently entails reducing and simplifying the qualitative data by summarizing its meanings. In some cases, however, it is essential to preserve integrity by examining the data without fragmenting and rearranging it (Saunders et al., 2019). As the objective of this study is to compile participants' experiences from UBIs to compare them, identify recurring patterns, and provide more generalizable findings, the focus is to fragment the data into analytical categories.

### *2.6.2 Preparing the data analysis*

Many methods are used to generate qualitative data. Regardless of the format, it is crucial to highlight the need to duplicate and transcribe all the recordings and notes to guarantee that no data are lost (Saunders et al., 2019). The process of transcribing requires considerable time; Hence, to minimize a build-up of audio recordings, and related transcription labor, the researchers transcribed directly after the interviews were conducted. Several strategies can be used to reduce the amount of personal time required for verbatim transcript interviews (Saunders et al., 2019). To manage the large volume of data, the word-for-word transcription was obtained using Google Speech-to-text and a transcription Google Chrome add-on, primarily for digital meetings.

### *2.6.3 Thematic Analysis*

Thematic analysis is a general strategy for analyzing qualitative data (Saunders et al., 2019). This technique aims to look for common themes or patterns that appear across a data set. Thus, the researchers need to categorize the collected data to identify themes and patterns relevant to the



study issue. This form of analysis provides a methodical yet adaptable and approachable way to analyze qualitative data (Braun & Clarke, 2006; Saunders et al., 2019), and can be used to analyze both small and large data sets, resulting in detailed descriptions, interpretations, and theorizing. There is no specific research philosophy associated with thematic analysis; However, the way you use it to understand the data will depend on the researcher's assumptions (Saunders et al., 2019). This study has an interpretive stance. Therefore, thematic analysis was used to examine various perceptions of different aspects of UBIs. Examples of such elements are; social dynamics, business support processes, and financial sustainability of the incubator.

Saunders et al., (2019) provide a set of guidelines for conducting a thematic analysis. The process comprises four components: [1]. Becoming familiar with the data, [2]. Coding the data, [3]. Searching for themes and recognizing relationships, [4]. Refining themes and testing propositions.

### *1. Becoming familiar with the data*

During the research project, it was essential for the researchers to immerse themselves in the collected data to get acquainted with it (Saunders et al., 2019). The act of reviewing the recorded data and contrasting it with the transcripts enhanced the researcher's understanding of the gathered data. This initial step in the process is vital as researchers can participate in the subsequent analytical steps (Saunders et al., 2019).

### *2. Coding the data*

The coding process entails symbolizing or summarizing the meaning of each data unit inside a data item, such as a transcript, by labeling it with a code (Saunders et al., 2019). This procedure was done to make any piece of data that was interesting to the researchers available for future investigations. Encoding data generally includes fragmenting the original



data and grouping elements with similar meanings to compare them to other sets of comparable data elements.

### *3. Searching for themes and recognizing relationships*

Once the researchers had properly coded the whole data collection, the quest for themes was initiated. The researchers now had lengthy codes to interpret and make sense of. To narrow down the vast list of codes into a manageable number of themes that are connected to the research topic, the researchers identified patterns and linkages among them. A theme is a large category that includes multiple codes that appear to be associated with each other and denote a significant concept to your research topic (Saunders et al., 2019). This process entailed the researchers immersing themselves in the data and making judgments about it.

### *4. Refining themes and testing propositions*

To provide a solid analytical foundation around which to build research, the themes developed had to be a part of a cohesive collection (Saunders et al., 2019). When creating the themes, the coded data was reorganized under the appropriate category or sub-theme. This assisted the researchers in determining if the coded data had meaning inside their respective themes and whether the themes had meaning within the context of the data collection. The researchers assembled themes, which were refined by reviewing them repeatedly.

## 2.7 Quality Criteria

“*Trustworthiness* or rigor of a study refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of a study” (Pilot & Beck, 2014; Connelly et al., 2016, p. 435). Although the majority of professionals acknowledge that trustworthiness is vital, disagreements about what it defines strictly have been raised in the literature (Leung, 2015; Connelly et al., 2016). Nonetheless, several scholars agree with the



criteria laid out by Lincoln and Guba (1985), including; credibility, dependability, confirmability, and transferability.

### *2.7.1 Credibility*

Among the most significant factors is the study's credibility, which is the degree to which the researcher has faith in the research results (Pilot & Beck, 2014; Connelly et al., 2016). This idea is comparable to that of validity in qualitative research, which concerns the suitability of the methods applied, the correctness of the data analyzed, and the generalizability of the conclusions (Saunders et al., 2019). Because qualitative research is built on individual experiences and diverse understandings rather than numbers, it is crucial to guarantee that the researchers accurately comprehend and interpret the provided material. As such, credibility partially depends on how trustworthy the researchers are.

### *2.7.2 Dependability*

Dependability is a term that describes the data's consistency throughout time and under varying research settings (Connelly et al., 2016). It relates to replication and durability and is equivalent to reliability in qualitative research (Saunders et al., 2019). If a study could accurately replicate an earlier research design and produce the same outcomes, it would be regarded as reliable. As research develops, the focus of interpretive research is likely to undergo change (Saunders et al., 2019). When referring to dependability in this context, it relates to documenting all changes to create a trustworthy account of the developing study topic that can be understood and assessed by others. This is continuously practiced throughout this research.

### *2.7.3 Confirmability*

Confirmability, which is a proxy for objectivity, measures how unbiased findings are (Connelly et al., 2016). Researchers must demonstrate the confirmability of their qualitative studies to show that it is impartial and



unaffected by the researchers' presumptions or prejudices. Reliable research should result in conclusions that accurately represent data gathered from participants. While achieving complete objectivity is impossible, confirmability may be accomplished by holding co-authors responsible and revising the study method with the help of peers.

#### *2.7.4 Transferability*

Transferability is the degree to which discoveries benefit people in other contexts (Polit & Beck, 2014; Connelly, 2016). This could vary depending on how the readers interpret the findings' applicability to their own circumstances. By giving the reader a thorough explanation of the research objectives, design, context, findings, and interpretations (Saunders et al., 2019), the reader can assess if the study may be applied to a different environment in which they are interested in doing research.

## 2.8 Ethical Considerations

Ethical issues will inevitably arise while developing and organizing research, requesting access to institutions and people, and when gathering, analyzing, managing, and reporting data (Saunders et al., 2019). Ethics in research refers to “[...] the standards of behavior that guide your conduct concerning the rights of those who become the subject of your work or are affected by it” (Saunders et al., 2019, pp. 252-253). For this examination, the researchers have considered different ethical factors, such as if there is any damage to the participants; whether knowledge-based consent is absent; whether a privacy invasion occurred, and; whether there is any kind of dishonesty (Bryman & Bell, 2017).

To avoid any kind of harm to the participants, such as stress or discomfort, the interviewees were briefed on the subject and informed of the research and their potential engagement. The participants were furthermore not expected to provide any highly personal information, classified material, or private corporate information; However, pertinent information that was



willingly supplied was incorporated into the research. Because this thesis aims to examine challenges within the incubation processes, this study places a lot of emphasis on individual experiences. Hence, maintaining the participants' anonymity and the confidentiality of the data was also crucial (Saunders et al., 2019). Therefore, the respondents could remain anonymous out of respect and to avoid intruding on their privacy. The desire of interviewees to maintain their anonymity is not something that should be assumed (Silverman, 2013); Therefore, the choice of whether to remain anonymous was offered.

Building trust between the participants and the researchers was another primary focus of this study since, according to Saunders et al., (2019), the honesty, impartiality, and open-mindedness of the researcher impact the quality of the research. Transparency was therefore highly regarded throughout the entire research procedure.

Lastly, as suggested by Saunders et al. (2019), your university's code of ethics, which defines what is and is not ethical, will guide how your study will be conducted. Thus, the entire study procedure was conducted while considering the GDPR laws and standards, as well as the ethical guidelines provided by Linnaeus University (2021).

## 2.9 Limitations

Many limitations were considered while the research was in progress, and some have already been addressed in the methodology chapter. However, one of the main limitations considered for this specific research, and one outlined below, is the risk of bias.

Several forms of bias need to be considered, as stated by Saunders et al. (2019). The first is *interviewer bias*, which happens when the interviewer predisposes the respondents to react to the questions in a particular manner through remarks, tone, or nonverbal conduct. Second, is *interviewee/response bias*, which can be influenced by interviewees'



perceptions of the interviewer or perceived interviewer bias. However, the cause of this bias may not necessarily be linked to the interviewer's perceptions (Saunders et al., 2019). For example, an interviewee may be willing to participate but may be hesitant to discuss specific sensitive topics that would lead to probing questions (Saunders et al., 2019). This may result in incomplete or partial information being obtained. Additionally, bias may also result from the individuals or organizational participants who agree to be interviewed, referred to as *participation bias* (Saunders et al., 2019). Some may not be willing to participate due to the time required for an interview, resulting in a biased sample from which data are collected. It is essential to be aware of these potential sources of bias to minimize their impact on the research findings (Saunders et al., 2019).

Furthermore, using a single case study technique has a potential restriction since the relatively small number of participants that are researched can make it difficult to generalize the results to other subjects (Flyvbjerg, 2011; Saunders et al., 2019). The single case study has the potential to contribute to a rather narrow scope for this study. Having a larger sample size would elaborate on the interconnectedness of external relations of an incubator that enable nationwide incubators to make use of their resources and what is needed to improve the infrastructure that makes incubators carry out their core operations.

Effective time management becomes essential in ensuring the timely completion of the study, and thus, meticulous planning and scheduling of tasks are paramount. This due to the research areas unexplored and under researched nature, as well as its multifaceted and complex conceptualization given a time frame of six months to conduct this study.

Furthermore, another significant limitation of generalization is that this study solely focuses on the Swedish context. In order to obtain a more general sense of the field of inquiry, it would be beneficial to examine



countries such as Germany, United Kingdom, USA, or China in the same manner, as these countries have higher growth in domestic products, population, and a greater level of economic development.

A potential ontological limitation of this study is the assumption that challenges in university incubation are universally present. The problem identification formulated through the selected articles may overlook gaps in the literature that accurately reflect the university incubation context in countries other than Sweden. Cultural disparities could lead to the problem being overlooked or not as prevalent in the Swedish incubation landscape.





### 3 Theoretical Framework

*The following chapter describes the theoretical framework considered for this thesis. It starts by elucidating some of the key concepts that serve as the conceptual foundation for this research. Subsequently, the researchers provide an overview of the current literature on UBIs.*

#### 3.1 Business Incubation

BI is a mechanism for economic growth that has drawn significant interest from decision-makers in recent years. BIs primary goal is to facilitate novice entrepreneurs' development by providing them with the knowledge and skills necessary to establish new ventures (Hassan, 2020). This is achieved through the provision of networking opportunities, access to qualified mentors, and links to potential investors. Previous research in the field of inquiry suggests that incubators can expedite the process of identifying partners, suppliers, and customers, ultimately resulting in faster business growth and success (Harper-Andersson & Lewis, 2018). Additionally, physical amenities such as office space and equipment are typically offered by incubators (Grimaldi & Grandi, 2005).

The concept of BI is somewhat ambiguous, which can be related to the fact that the terms are often used interchangeably (Alexandersson, 2015). Notwithstanding some differences among scholars, the many meanings of the term '*business incubation*' generally agree on what an incubator is, as well as the services it provides (Grimaldi & Grandi, 2005). SISP offers one definition, in which they describe BI as...

“[...] a dynamic process for the development of people and businesses. The incubator aids entrepreneurs with active and adapted management support, financial, technical and commercial networks, as well as a creative growth environment with associated office services” (SISP, n.d.).



Thus, SISP characterizes an incubator as a conducive milieu that provides infrastructure, networking opportunities, and business development support to knowledge-based enterprises with growth potential. Moreover, a comparable description of an incubator was provided by the European Commission (2002), which explained BI as an...

“[...] organization that accelerates and systematizes the process of creating successful enterprises by providing them with a comprehensive and integrated range of support, including: incubator space, business support services, and clustering and networking opportunities” (European Commission, 2002, p. 9).

Hence, an incubator is broadly defined as an entity that aims to assist young entrepreneurs and their ideas, by providing access to the resources and tools necessary to overcome anticipated obstacles.

As previously discussed, BIs can be categorized into four distinct types: *Business innovation centers, University Business Incubators, Independent Private Business Incubators, and Corporate Private Incubators* (Grimaldi & Grandi, 2005). The variation in services offered by incubators is attributed to the diverse needs of businesses. Therefore, Bruneel et al. (2012) posit that incubators must be flexible and amend their service portfolios accordingly. Grimaldi and Grandi (2005) expound on the justification for UBIs, which is the focus of this particular thesis. According to them, the rationale for UBIs...

“[...] lies in their capacity to reduce start-up costs for promising knowledge-based and high-tech entrepreneurial initiatives, generally small initiatives, targeting national or local niche markets, with a mid-term orientation, still requiring time, technological transfer and resources (access to technological knowledge, university laboratories and infrastructure) to develop their potentialities fully” (Grimaldi & Grandi, 2005, p. 118).

One challenge presented for UBIs is their ability to provide aspiring entrepreneurs, particularly academics, with opportunities to showcase



their expertise beyond the classroom, and eventually establish enterprises that will allow them to fully realize their entrepreneurial potential (Grimaldi & Grandi, 2005).

Carvalho and Galina (2015) underscore the ongoing debate surrounding BIs contribution to entrepreneurial ecosystems (EE). Some perspectives question their efficacy and regard them as a misuse of funds (Tavoletti, 2013; Carvalho & Galina, 2015). If BIs were solely focused on providing infrastructure, their assistance to startups might have been less extensive. Therefore, incubators need to offer both business support to accelerate learning curves, as well as networking opportunities. This approach, referred to as the “*triad model*”, emphasizes the role of incubators as a catalyst for entrepreneurship.

## 3.2 The Triad Model of Business Incubation

The BI concept involves utilizing various dimensions, such as networks, infrastructure, and business support services, which combine to form what is referred to as the business incubator. The constituents of BI are categorized into two groups: tangible and intangible resources, which are designed to facilitate and expedite the growth and development of entrepreneurial activities (Carvalho & Galina, 2015). Tangible resources, such as infrastructure, are intended to support businesses and enhance their survival rates. Conversely, intangible resources are designed to assist entrepreneurs and new ventures by furnishing them with networking opportunities and business services to mitigate the risks of start-ups being unable to succeed (Carvalho & Galina, 2015).

The triad model, as shown below, illustrates the synergy that arises from the fusion of these constituents, which work together to create an ecosystem upon which the service offerings of the BI are anchored. The interplay of these elements is a critical aspect of BI as it enables



entrepreneurs and new ventures to access the resources they require to succeed and grow in their respective industries.

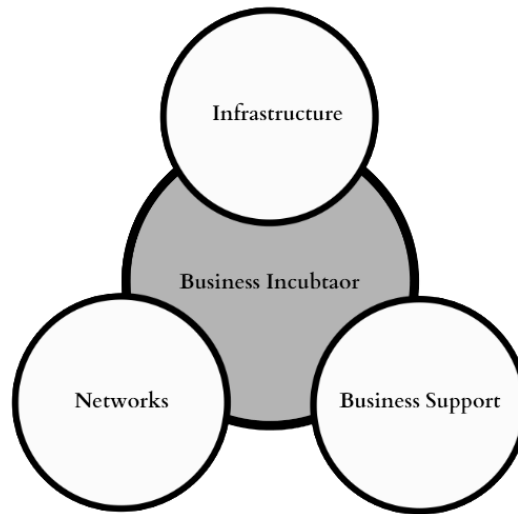


Figure 3.2.1 Exemplary Triad

### *Networks*

In recent decades, networking abilities have become an increasingly significant aspect of BI programs. This dimension of BI focuses on giving entrepreneurs and new ventures access to external networks, enabling them to reduce their dependence on personal contacts and connect with potential customers, suppliers, mentors, investors, or partners (Bøllingtoft & Ulhøi, 2005; Carvalho & Galini, 2015). Access to external networks is considered a vital factor in the success of BI programs. It is recognized that networking allows entrepreneurs and new ventures to overcome resource scarcity and access specialized resources, learning opportunities, and expertise. This facilitates faster development of companies' legitimacy in BI programs (Grimaldi & Grandi, 2005; McAdam & McAdam, 2008; Carvalho & Galini, 2015).

The establishment of networks by BIs is argued to enable entrepreneurial companies to access resources beyond their financial capacity. For example, BIs may establish networks with investors, such as business angel networks and venture capital firms, which in turn reduces the search



cost for incubatees (Bruneel et al., 2012). Moreover, start-ups may struggle to access established networks for hiring specialized expertise in specific matters. This can be supported by establishing networks by incubators with academic institutions, strategy consulting firms, or patent attorneys (Schwartz & Hornyh, 2010; Bruneel et al., 2012). The utilization of external networks by BI programs is therefore recognized as an effective strategy for providing entrepreneurs and new ventures with access to critical resources that can accelerate their growth and development.

### *Infrastructure*

Infrastructure, which constitutes tangible resources, is a fundamental component of the service offerings of BIs. This involves the provision of shared workspaces and office spaces that are available to tenants (Bruneel et al., 2012). At the core of infrastructure is the condition of essential functions, such as reception, meeting rooms, and car parking facilities. These facilities are crucial for incubatees to integrate and maximize the potential for collaboration and the free flow of exchanging ideas (Carvalho & Galini, 2015).

The provision of infrastructure is designed to enable businesses to access a shared physical space, which can be used to facilitate interaction and communication among tenants. The availability of shared spaces is critical in fostering an environment that encourages collaboration and exchanging ideas (McAdam & McAdam, 2008). Furthermore, the utilization of shared spaces is intended to reduce the costs associated with setting up and running a business, which can be a significant barrier to entry for entrepreneurs and new ventures (Carvalho & Galini, 2015).

### *Business Services*

Business support services, such as coaching and mentoring, are a crucial dimension of business incubation programs, as nascent companies lack the



experience and knowledge required to navigate the competitive landscape successfully (Grimaldi & Grandi, 2005; Carvalho & Galini, 2015).

Coaching and mentoring are defined as one-to-one support initiatives that leverage the learning and development process of incubatees. This vital element of BI programs has been shown to significantly impact the performance of incubatees (Carvalho & Galini, 2015). These services often cover both scientific and managerial areas of expertise and are essential for incubatees to make better and faster decisions, leading to improved strategies and, eventually, better firm performance (Bruneel et al., 2012). The coaching and mentoring services provided by BIs facilitate the development of critical skills and knowledge among entrepreneurs and new ventures (Carvalho & Galini, 2015). This support enables incubatees to learn from experienced mentors, gain access to valuable feedback, and receive guidance on overcoming challenges and barriers to success. As such, coaching and mentoring are critical resources for nascent companies seeking to accelerate their growth and development within a highly competitive business environment (Bruneel et al., 2012).

### 3.3 Black Box of Incubators

Despite the fact that the phenomenon of BI has received a lot of attention, few studies have actually investigated the incubation process (Hackett & Dilts, 2004; Hackett & Dilts, 2008). While there are few theoretically sound models of the incubation process, Hackett and Dilts have created a model that provides insights into the inner workings of BI (Ayatse et al., 2017).

The incubation process, as developed by Hackett and Dilts, is based on the notion of a Black Box, wherein the internal dynamics of the incubator are of primary concern, with a connection to its external environment (Ayatse et al., 2017). This model involves the selection of potential incubatees from a pool of candidates, who are then subjected to value-addition



activities in the form of selection performance, monitoring, business assistance intensity, and resource munificence. The incubation process aims to produce outcomes in the form of graduated companies, with success or failure being the final outcome (Ayatse et al., 2017). Furthermore, control variables in this model include population size, economic conditions, incubator size, and level of development. In essence, the Black Box model encompasses three key activities, which are presented as: [1] Selecting promising but weak companies for admission to the incubation program, [2] Providing monitoring and assistance to those with potential for success, and [3] Providing necessary resources to ensure that they graduate from the incubation program as financially viable and independent firms.

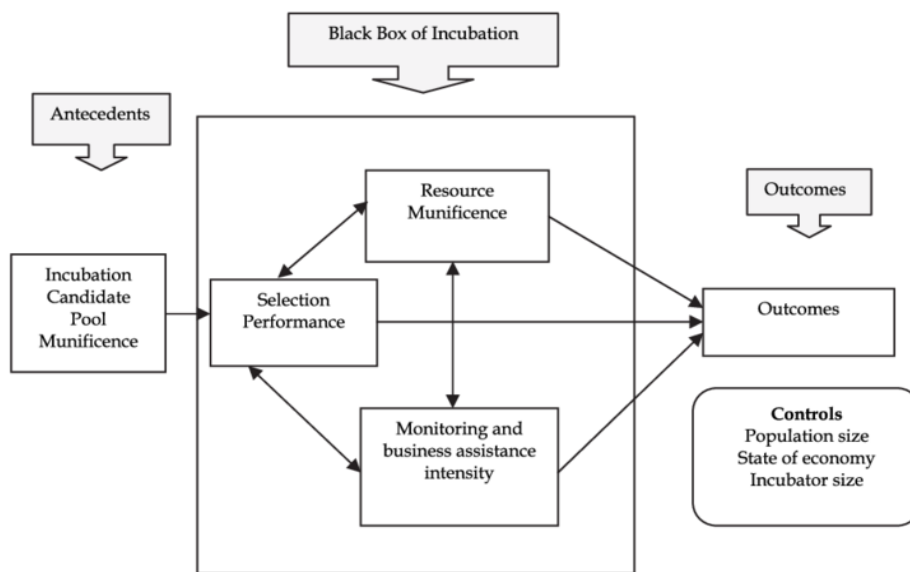


Figure 3.2.1 Illustration of the Black Box of Incubation

According to the model, the first step in the incubation process is selecting potential enterprises from a generous pool of candidates (Ayatse et al., 2017). Four variables are taken into account when selecting potential companies, and these are: managerial aspects, market aspects, product aspects, and financial aspects. Hence, prospective enterprises must be assessed in light of these traits (Ayatse et al., 2017). Monitoring and



business assistance intensity is the following stage, another value-added activity that incubators provide. According to Black Box model, this step refers to how closely an incubator watches over its incubatees and assists them as they grow their business - especially by assisting them in learning from their mistakes and minimizing the risk of failure (Ayatse et al., 2017). This is achieved by the length of time spent on assistance; how thorough the service is; and how well it is delivered. The last component is resource munificence (Ayatse et al., 2017). This is described as the relative abundance of incubator resources as determined by resource availability, resource equality, and resource utilization.

As previously mentioned, there is a lack of devoted attention toward studying the process of incubation (Hackett & Dilts, 2004; Patton et al., 2009; Warren et al., 2009; Ayatse et al., 2017). Among existing literature, authors have primarily favored various conceptualizations for incubation, such as new venture creation, resource-based view, and social network theory. While these theories have illuminated different aspects, adding variety and richness to the understanding of incubation, none of them have been entirely concerned with the process-oriented nature of an incubator. Hence, this has led to the development of the Black Box perspective of incubators (Ayatse et al., 2017). The lack of studies done on the incubation process can be viewed as problematic since previous frameworks in organizational or social theory frameworks have not sufficiently highlighted the true nature of incubators, which can be described as a social process that enables human action. Thus, what seems to be missing are underlying mechanisms that allow human action and behavior in the context of incubation (Ayatse et al., 2017).

### 3.4 Institutionalized Entrepreneurship

In the academic discourse, institutions have been defined as humanly devised constraints that arrange political, economic, and social synergy





(North, 1990). Løwe Nielsen et al., (2022) emphasize that institutions refer to socially constructed structures that affect how humans interpret and make sense of their experiences, further influencing their subsequent choices and behavior. North (1990) argues that institutions play a critical role in establishing norms, rules, constraints, and incentives that serve as governance tools for individual exchanges. As institutions influence individual behavior, entrepreneurs may eventually seek to modify the institutions that benefit their interests (Chowdhury et al., 2019). Such actors create a new system of meaning that ties the functioning of different sets of institutions together (Chowdhury et al., 2019). DiMaggio (1988, p. 14) has posited that “[...] new institutions arise when organized actors with sufficient resources identify opportunities to achieve interests that they value highly”.

The notion of institutional quality has been frequently associated in scholarly discourse with various aspects that indicate favorable conditions for economic development (Chowdhury et al., 2019). These include but are not limited to, secure property rights, a well-functioning court system, personal bankruptcy laws, resource endowment, availability of finance, availability of knowledge, and entrepreneurial capital (Chowdhury et al., 2019). These dimensions are considered essential elements of institutional quality and have been linked with positive economic outcomes in diverse settings. Scholars have noted that the quality of the institutional environment considerably impacts an entrepreneur’s attitudes, motives, and capacity to mobilize resources (Chowdhury et al., 2019). Furthermore, the institutional environment establishes the “rules of the game”, shaping the quality of entrepreneurship (North, 1990).

Within the academic literature, institutions and entrepreneurship have been extensively explored (North, 1990; Sobel, 2008; Estrin & Mickiewicz, 2011). Scholars typically assume that institutional contexts create the conditions that influence individual decision-making, and these



factors are vital in determining the quality of entrepreneurship (Sobel, 2008). The institutional framework within which an activity is performed often determines its productivity, lack thereof, or even its destructiveness. This suggests that exogenous institutional reforms have the potential to alter the quality and quantity of entrepreneurial activity by changing the decision-making environment and its implementation (Chowdhury et al., 2019). Institutions play a critical role in regulating collective actions and facilitating economic transactions by reducing uncertainty, establishing decision-making guidelines, and providing a sense of meaning to economic actors. As Nee (1998) suggests, institutions serve as an alternative mechanism for enforcing rules and supply a likely framework for coordinated actions.

According to sociological theories, entrepreneurship is intricately linked to social networks, which consist of interpersonal relationships that may enhance an entrepreneur's likelihood of success (Korsgaard et al., 2015). Nonetheless, the relationship between institutional contexts and entrepreneurial action is multifaceted. On the one hand, robust and reliable institutions mitigate uncertainty and risk for entrepreneurs (Korsgaard et al., 2015). On the other hand, deficient or inadequate institutions present both a need and an opportunity for entrepreneurs to create opportunities (Korsgaard et al., 2015). Entrepreneurs can benefit from institutions not only as sources of information, resources, and legitimacy but also as an influencing factor in their entrepreneurial activities (Korsgaard et al., 2015). The resources available within the institutions in which they are located can shape the decisions and actions of entrepreneurs. Exploring opportunities beyond their institutional boundaries can be advantageous for entrepreneurs (Korsgaard et al., 2015). By bridging different institutional contexts, entrepreneurs can tap into new resources and gain access to novel opportunities.



### 3.5 Incubator Challenges

As already touched upon, it has been proven that UBIs provide an adequate foundation for supporting businesses. Contemporary incubators are acknowledged as a key tool for the expansion of SMEs, as they supply emerging entrepreneurs with the means and resources required to develop a thriving business (Lose & Tengeh, 2015), thereby helping to support '*the nascent entrepreneurial dream*' (Nijenhuis, 2020). Although BIs have been praised for encouraging young entrepreneurs, some scholars in the field suggest that these organizations are, in certain situations, unable to adequately support the growth of new ventures (Akcmoak & Semih, 2009). Earlier research has revealed that incubators face several difficulties in the process of incubating an entrepreneur (Lose & Tengeh, 2015). Access to entrepreneurial management/skills; sustainability; evaluation of technologically based facilities, and; availability of funds and sponsorship are examples of these obstacles.

#### *Access to Entrepreneurial Management/Skills*

The attraction and retention of skilled specialists to oversee business processes has been considered one of the most significant variables in an incubator's success (Cullen et al., 2014). Without the assistance of competent and seasoned staff members, entrepreneurial endeavors may struggle to achieve profitability and provide high-quality services. According to Nieman and Nieuwenhuizen (2009), an organization's primary benefit is its capacity to sustain productivity and promote continued human resource growth. For it to be feasible for BIs to achieve their goals, it is, therefore, crucial to invest in human capital (Lose & Tengeh, 2015).

Additionally, Grimaldi and Grandi (2005) commented on this, noting that one of the primary shortcomings of BIs, and more especially UBIs, is their inability to supply prospective business owners with managerial skills. In



practice, the amenities that UBIs offer to their business tenants are primarily dependent on the incubation management team, their abilities, as well as on the network of contacts they provide to the incubating organization (Grimaldi & Grandi, 2005). Hence, access to entrepreneurial management is crucial.

Furthermore, empirical data reveals that companies are more inclined to fail if they lack key competencies, including management proficiency, entrepreneurial insight, as well as flexibility (Rimington et al., 2009; Lose & Tengeh, 2015). Despite this, many entrepreneurial endeavors frequently disregard efficiency and financial literacy issues (Morrison et al., 2019). It has been discovered that these skills are not always necessary to access incubator resources (Grimaldi & Grandi, 2005). Lalkaka (2001) maintains that management staff members' lack of entrepreneurial expertise may be one of the factors contributing to incubators' poor performance, resulting in insufficient assistance to the startup.

### *Sustainability*

It has been determined that the absence of development and sustainability is one of the main obstacles that potentially prevent an incubator from providing services and achieving its goals (Scaramuzzi, 2002; Lose & Tengeh, 2015). The incubator's failure to support itself is referred to as its lack of sustainability, while its annual turnover and the number of graduates from its incubation program are indicators of its lack of growth (Lose & Tengeh, 2015). If these elements are not maintained, the incubator's primary goal, which is to ensure that enterprises that complete the incubation program go on to operate independently and sustainably (Grimaldi & Grandi, 2005), can be negatively impacted.

### *Lack of Technology Infrastructure*

Research suggests that in addition to sustainability being a difficulty for incubators, a lack of technology infrastructure within an incubator may be another obstacle to serving the demands of SME clients (Lose & Tengeh,



2015). This matter is fundamental since it is a requirement for incubators to advise prospective business owners on crucial components, including suitable workspaces, shared office supplies and equipment, technology support services, and financial aid for ongoing business development (Ndedi, 2009). This is especially important for UBIs, as they are designed to lower startup costs for entrepreneurial initiatives which are typically small and focused on local/national markets, but still need both time, technology transfer, as well as resources, such as the availability to laboratories in the university, and infrastructure, in order to prevail (Grimaldi & Grandi, 2005).

### *Availability of Funds*

Lastly, it has been shown that a business incubator's capacity to entice sponsors, create income, and deploy resources to improve service delivery to its incubatees is a vital sign of successful management (Schwartz & Hornyk, 2008; Lose & Tengeh, 2015). Public BIs are generally non-profit organizations that frequently get funding from governmental agencies (Grimaldi & Grandi, 2005). Private BIs, on the other hand, are not eligible for public support and must rely on their own resources and finance.

The incubator is a mechanism for the policy actors to carry out their purpose (Aaboen, 2009). Reporting the incubator's results in terms of return on investment measured by the number of new companies, growth of these companies, and the number of employees, it becomes easier for policy actors to take measures against their own superior authorities. The policy actors are vital customers for the incubator since a significant share of the financing for both the incubator and incubatees comes from these policy actors. Nevertheless, it is the policy actors that have contributed to the founding of the incubators, meaning that it is the incubators that apply for funding from the policy actors, rather than the policy actors demanding incubators for services (Aaboen, 2009).



## **4 Empirical Results**

### **4.1 Overview of Empirics**

To collect primary empirical data, the utilization of semi-structured interviews was applied. The interviews comprised eleven participants with varying backgrounds in moderately sized UBIs, and University Innovation Offices. The interview participants were located in diverse geographical areas distributed across Sweden. All of the participants held their own views on definitions and the practice of BI. The interview findings are arranged using themes based on the coding structure and methods outlined in the methodological chapter.

Moreover, the quotes from the participants in the following parts have been translated from spoken to written English. While maintaining their original meaning, the researchers have removed repeats, as well as filler words, for clarification.

### **4.2 What is Business Incubation?**

Due to existing research illustrating that BI can be defined in many ways, all participants were welcome to share their personal views on what BI means. While many participants had an unequivocal definition of the concept, others were more hesitant. Nevertheless, all of the participants working in or close to UBIs in Sweden had fairly similar views on the incubation phenomenon. Greger, who has the position as an innovation advisor at Mellan Sveriges Universitet, expressed that by his definition...

“Business incubation is an environment where you get accepted. An environment that sort of lives and breathes this entrepreneurial spirit. So it's a great environment to exist as a startup, founder, and entrepreneur. [...] I think the spirit of being there is one of the key things that you guys just inspire by talking to people and working hard on fulfilling your idea and vision. But then obviously there are also more hands-on things, like the network that you get access to and also



the incubation programs, where you, in a structured way, try to provide both knowledge but also coaching and advisory” - (Greger).

Thus, it is suggested that UBIs provide an enabling environment in which young entrepreneurs are supported in various ways to flourish. While entrepreneurs participating in an incubation program benefit from this atmosphere, they also have access to a variety of networks and consulting assistance for their businesses.

Julius, the CEO at Kustens Bolags Skapare, who had a similar perspective on BI, mentioned that even though entrepreneurs are enrolled in an incubation process, many of them fail, which is completely normal. “Every startup that we engage with is extremely high risk, and we have no clue at all if you are going to succeed or not “ (Julius). However, this is also part of being incubated. Julius continued by stating that the goal of BI is to simplify the process of launching a business.

“[...] Our purpose is to fail fast, to pivot, to understand what will bring value, what won't bring value and you will have a process that is faster than it would otherwise be outside of an incubator” - (Julius).

Nevertheless, regardless of the outcome, novice entrepreneurs can expect to have someone who always has their back. Ingrid, who is the Innovation Manager at Norra Bolags Skapare, described that once an entrepreneur has been accepted into the incubation program...

“They can expect to have a partner in crime, to always bounce ideas and thoughts. [...] They get tools and they get someone that asks the questions that you want to maybe avoid sometimes. But sometimes you can also expect that this person will also maybe hold you back and kind of try to get you to focus on the right things. Whatever that is. But we do think we have an idea of what is the right thing to focus on in certain phases of the journey. And later on you can expect to get help in different ways of having external competencies and expertise, which we can support financially as well” - (Ingrid).



Thus, when putting an innovation or concept into your first company structure, the BI is the actor that helps you with the initial steps. They aim to provide entrepreneurs with all the resources they need to achieve their goals, whether it is the financial components they require or educating them on how to run a real-life business.

The interviews concluded that incubators are fundamentally a tool for facilitating the process of converting a startup into a functioning firm. This is accomplished through setting up networks, business support systems and providing a favorable environment for entrepreneurs. As Helena, the Business Manager at Norra Bolags Skapare, explained...

“It's like building a house. You can't start with the walls. If you don't have that solid ground, the walls will never stand up. I mean you can't have a flooded basement with a really nice ceiling, you can't live there”  
- (Helena).

Put differently, BI is there to help entrepreneurs build a solid ground and give them the best conditions to succeed before they proceed with their journey.

It has been demonstrated that BI is considered to be an important part of an entrepreneur's journey. However, it should not be disregarded that the incubators themselves are prone to encounter various challenges during the incubation process. All of the participants touched upon several challenges faced by BIs. The researchers found that *lack of financial sustainability; lack of business support, and; difficulties in terms of managing the entrepreneur* were the most prominent challenges. Let's explore these more thoroughly, starting with financial sustainability.

## 4.3 Lack of Financial Sustainability

The financial aspects are fundamental to any organization, as they are the means for development and the resource that is pivotal for carrying out operations. In the process of conducting interviews, the notion of





financial stability impacting the incubator's ability to carry out business support and the quality of incubator management became imminent. Different incubators emphasized this aspect differently; However, it was a frequent expression of concern regarding the functionality of the incubators. Ingrid shared some of her thoughts on how their incubator operates in accordance with their financing.

“We have basic funding that comes from the municipality and region. It covers salaries and premises. But no content. If we want to create an event, or put together an activity for the companies, we don't have the funds for it. Which means that the funding we get from Vinnova, because we are one of the excellent incubators, we can do these activities, but we cannot buy for example consultants for a specific startup, if that startup company does not meet the criteria. So the companies we work with today, which do not meet the criteria, but which could become great companies, we cannot support them in that way” - (Ingrid).

She highlighted the significance of financial stability in terms of how much, and how well-qualified human capital and ideas their incubator can acquire. This proved to be a difficulty. Furthermore, Ingrid continued to describe thereby connected challenges.

“[...] It would be great to have employees that are really competent in certain areas, but we can't have only people that are experts on certain things, because the funds wouldn't be enough. So we need to have people that know about business development, that have that expertise. I would like to have someone that is an expert within law. Now, I have one, I'm the lucky one. But she does not cover all aspects of law questions. I think that is a conflict, because the funds that we have does not cover what we actually would need” - (Ingrid).

Alicia also addressed the problem of inadequate financing by stating that “The most difficult thing is that they have no money. So it is difficult to hire people”. The participants that were interviewed were mostly supported by the public sector, municipalities and provinces, as well as



universities. In his response to this form of funding, Greger expressed some rather concerning thoughts about their ability to function properly as an incubator.

“Everyone wants more money. But it was a challenge. We felt that we had quite a small budget for what we wanted to do, and also what we felt that the effect on the municipality and region and the university that we had, with the return on investment and so on. We felt that we deserved a few more million SEK to do more things” - (Greger).

In terms of ownership structure, Greger went on to explain that this funding arrangement was most appropriate for public funding, although it had certain limitations.

“It was probably a system that had to be taken in. I do not know if that was on a yearly basis or whatever. But we still felt quite certain that we would be receiving the same funding over and over. So we had that fund that was okay, but it was limited” - (Greger).

Additionally, several respondents stated that the funding system through the public sector had put some form of constraint on the incubators' capacity to encourage and support new innovation. Several participants underscored the need for their incubatees to adhere to a set of guidelines as a requirement for receiving funding from municipalities and the EU. Gregory, a former advisor at the Innovation Office of Norra Sveriges Universitet, described this.

“It's EU-financed funds. So you have to work with the idea owners or the case based on the frameworks that exist in the EU projects, and that creates both conditions. But it creates challenges in that. If there is an idea owner or something that doesn't fit into that frame itself, you don't end up in the incubator” - (Gregory).

Gregory goes on to explain how this philosophy has affected his work in the past, particularly in terms of combining both incubating promising



startups and ideas, but also how to later attract funding to carry out adequate business support.

“Regional incubators [...], I would say that the challenge lies in the fact that you often have to work with projects. So you project your business so much that you are forced to work based on these projects, and perhaps not always from what is best for the idea owners. You have to get the ideas to fit into the format you work in. Resource allocation is the big challenge for the incubators” - (Gregory).

Helena expanded on the discussion about the guidelines required to receive public funds and expressed that their incubator has been praised as being exceptional and, therefore, they must adhere to specific criteria. She goes on to state that places like Stockholm or Gothenburg, for instance, are probably different in this regard. There are several active incubators in those areas that solely deal with startups that specialize in deep technology or medical technology, for example. But since the area where she works is not a development region in Sweden, adopting specific structures proved challenging.

“Being in Västernorrland, it is not a development region in Sweden. It's not so many people who live here, so we cannot afford to be so specific or be so narrow in the way we choose which ideas we should work with. We are a broad incubator. We cannot be so picky. We don't have all those fancy deep-tech ideas in our region. So we work with startups in different business areas [...]. So that's the problem for us” - (Helena).

Helena explains that even if the ideas coming from entrepreneurs are not deep-tech, nor med-tech, their incubator cannot afford to reject them. They are simply required to use the resources they have at their disposal. However, she communicated her worries by stating that Vinnova could find this difficult to grasp.

“That can be difficult for Vinnova to understand, or it can be difficult for the government that sees Stockholm and Gothenburg and Malmö [...]. You can easily think that this is how an incubator or a science park



should be, or should work. But the big parts of Sweden are not those development areas” - (Helena).

Although funding an incubator has been found to take many various forms, it appears to be a challenge for many incubators in Sweden’s smaller districts. Gregory expresses this clearly through the above statements, although he also commented this repeatedly by revealing his personal thoughts on the functionality of this public funding structure.

“Norra Affärs Skaparen’s challenge has been that with a three-year cycle, a five-year cycle, you need to apply for your financing all the time. Many regional incubators solve this by having their funding either owned by the universities and the municipalities, as for example in Linköping. But if you want to have proper, long-term ownership that is not affected by the municipality's coffers, I think something else may be needed” - (Gregory).

Gregory voiced concerns about the funding structure, particularly if the incubators were entirely supported by governments; However, he also provided examples of how other incubators at other universities handle similar circumstances and create a funding structure through a type of ownership that, in Gregory's opinion, is more appropriate. Especially in terms of mitigating restrictions for what ideas and companies they bring into the incubator.

Conversely, Julius describes that ownership by municipalities can result in stable funding structures that enable longevity in the planning and distribution of funds in the incubator.

“The funding resources that we do get first from our owners, and that is the municipality [...]. So they more or less fund 80% of our operations. [...] We are not sort of dependent on any other external resources as project funding or whatever, so we have a very in that sense, I would not say unique, but we are well funded in that sense. So we could easily plan 5 years ahead. Because we do know how we are funded 5 years ahead” - (Julius).



A common theme regarding the incubator's funding was that the government frequently provided it through various governmental innovation programs - one of the most known forms being through the governmental organization Vinnova. Havtor, the CEO of the Innovation office at Väst Sveriges Universitet, commented this by stating...

“[...] that it is important money that we all innovation offices in Sweden can apply for, for so-called verification funds from Vinnova and we apply and we get the frame per year, or every second year so forth. Then we can decide how to distribute them to our innovators or entrepreneurs that are coming from the university, both students and researchers” - (Havtor).

He goes on to talk about how important these kinds of funding strategies are for higher education institutions in fostering innovation at its very earliest phases.

“Without those funds, we would be very toothless actually in our support. Of course, we can bring our competence and our networks. But with those funds we can actually really, really help the innovator, the researcher or the student to verify that this is an idea worth continuing to work on” - (Havtor).

## 4.4 Access to Business Support Services

Access to adequate business support proved to be of great importance for contemporary incubators; Especially given that business support services largely constitute the incubation offering. Yet, providing business tenants with adequate support turned out to be challenging in numerous ways. Not just through managing the obstinacy of entrepreneurs, which will be covered later, but also by accumulating human capital that can offer the necessary coaching and mentoring. Lacking sufficient financial resources, as was previously discussed, an incubator may not be able to recruit individuals with the necessary qualifications to provide continuous assistance to would-be entrepreneurs.



## *Business Developers, Consultants, & Broader Competence*

Business support may take various shapes and forms. The interviews revealed that mentorship and coaching were frequently mentioned as challenges for incubators. Several of the participants expressed that due to restricted financial resources, incubators lack the resources necessary to recruit individuals with the abilities required to provide continuous assistance to young entrepreneurs.

Hassan, a Business Developer and on-site Manager at Bolagsmaskinen, offers insights about their use of business development consultants and their challenges with full-time employee hiring.

“The business developers or the consultants that we use are consultants from the south part of Sweden. They also work with other incubators. Often, it is someone we cannot hire full-time. But we can have them part-time. [...] As of today, we have about 4 hours a month with the business developer for each company” - (Hassan).

Alicia, who is the CEO of the Innovation Office at Mellan Sveriges Universitet, continued the discussion about the need to hire knowledgeable business advisors and explained that their incubator currently provides too little support to their entrepreneurs.

“I can say that today, we give too little support. I would like them to have a lot more than they have. They have business advisors for very limited hours. 4 hours a month. It's far too little. Most incubators have at least double or three times, and also more stuff on a daily basis” - (Alicia).

Nascent entrepreneurs require professional and experienced business consultants to help them begin and advance during the early stages of their ventures. Nevertheless, since the funding generally does not cover everything the incubators would like to offer, business support typically falls short regarding coaching and mentoring. This, in turn, forces the incubators to take on measures that are perceived to be semi-ideal for quality business support. Some of the ramifications that might result from



company owners' lack of time with their business advisors are further discussed by Alicia.

“They hold questions to themselves. I mean *‘I’ll see him next Friday and I’ll wait because I don’t want to waste my time’* and maybe there’s no one else there around to solve small questions” - (Alicia).

“And also that 4 hours is too little. Maybe you don’t have to have unlimited, maybe it’s okay if you have the double, but that there was some more stuff available on a daily basis for more conversational things, and also small challenges that could be very big for entrepreneurs, when you struggle and have not done the thing before. I mean *‘oh, I do not know how to solve this’* and all the energy goes to these small questions that are quite easy to solve” - (Alicia).

The number of administrative staff members at the incubation facility, who may assist entrepreneurs when they do not have business developer meetings, is another element that Alicia mentions.

“Down there right now it is only two. And that is too little, and also that Hassan has a broad experience, Elizabeth is excellent but she is not that experienced. I realized this when I was there last year. I was there even though I was working half time here. I was there all our office hours” - (Alicia).

Ingrid extended this discussion, saying that...

“[...] It would be great to have employees that are really competent in certain areas, but we can’t have only people that are experts on certain things, because the funds wouldn’t be enough. So we need to have people that know about business development, that’s their expertise” - (Ingrid).

The issue of incubators having too few business coaches who cannot cater young entrepreneurs the adequate business support they need to become successful startups was further touched upon by Wolf, who is currently a Business Coach at Bolagsvillan.



“I mean to be able to meet as many entrepreneurs as possible and also to be able to, based on their personal view, what support do we need to give this entrepreneur, because everyone has a different idea of what they need, so to say. But in our office, it's only me who does coaching and also workshops and partly the events too. So I feel a bit alone in that sense to be able to really identify what their needs are and then to provide the support that they need” - (Wolf).

More financing, he continues, would be beneficial, as this would allow them to hire at least one more coach, providing the maximum amount of assistance to aspiring entrepreneurs. Greger continued this discussion, expressing the importance of attaining quality expertise and matching competencies to the portfolio of companies being incubated.

“Trying to get the right people there and that's also challenging in Bolagsmaskinen, [...] it's not a huge business incubator as such. You know, we had eight to ten companies there and so then it's a challenge to have matching competencies and personalities I guess” - (Greger).

He goes on to discuss the challenges of standardizing support processes, particularly for business developers, as they must offer different forms of coaching and assistance based on the organization they are consulting. Moreover, Greger also emphasized how important it is to put faith in business developers and trust them to follow their instincts when offering guidance and assisting startups.

“[...] individuals and ideas, they're so varied, so it's hard to have a standard protocol to work. And obviously you cannot do that to the full extent and then there was a challenge somewhere along this grayscale from white to black, where do you position yourself in how equal for everyone should we make it and how standardized. [...] Because unless you standardize it, you cannot really say that you're a professional business. Unless you have something standardized and say this is the way we do things here. But then you cannot over-do that. So that's always a challenge, and also with these business developers. They are highly qualified and experienced people. They work 30 + years in this





area. You cannot ask them to execute a checklist all the time. They have to go with their gut feeling and their experience” - (Greger).

Hans, an Innovation advisor at Väst Sveriges Universitet, touched on this by outlining his recommendations for how incubators may work together to exchange information and skills. Because the fact is that incubation should not be the best *in* Sweden, but it should be best *for* Sweden.

“I would say that we should work more with collaboration between the competencies. [...] because now we work so good digitally. Why don't we have actual work cases working together, with the different incubators together around the case. Why not buckle up?” - (Hans).

Julius adds to this by explaining how they connect incubators if the support given is insufficient to meet the needs of the incubator tenants.

“It could be that we have cases where the sufficient resources that we do have are not the best possible resources for that startup. That could be that we have a startup for life science. [...] Of course, we do have business advisors that are highly skilled in the life science business, but still, we are not a life science incubator. [...] So then we usually use our network of other incubators around Sweden to try to sort of connect them to other incubators instead, because we don't have the sufficient resources that that startup need” - (Julius).

Julius goes on to discuss the value of networking amongst incubators.

“That is extremely important because there are a lot of incubators around in Sweden that have some specific niches or specific target groups of startups [...]. Then it could be that we offer some parts of our offering services. It could be you need some place to sit and work on [...]. Perhaps with the general business advice, we can connect to the case and then we have this specific kind of resources that the case needed, then we could get that help from other incubators of course” - (Julius).

Alicia further expressed thoughts about the internal staff's treatment of the entrepreneurs working there and how they manage supporting small businesses. She stressed the value of their presence in forging connections



with the incubators, which may indicate the level of business support provided by increasing pressure to succeed.

“I think they could be tougher on the companies during the process. I think we are too kind. We do have this half year follow up meetings and so on, but since there are few hours and also the business developers do not give frank feedback to the incubator. If they had spent more hours with the companies, they would have known certain things” - (Alicia).

As for when to offer what type of business support, Hans drew his attention to a crucial issue. He describes how the dialog between incubator and incubatee could look like in the process of strategizing business support operations.

“What kind of support should we have when? Not everything is the same the first time, because you could maybe some part of it, but not everything. Even like knowledge, you need to penetrate and you need to reflect on, also they have the use of it to utilize it” - (Hans).

Julius explains the many competencies this incubator offers and how people may specialize in various fields.

“We have business advisers with different kinds of competences. Some of them in general, some of them in specific niches like IoT or med tech or life science or clean tech or whatever. So they have specific niches of course, and then some of them are just broad general business advisers. So it depends on the case, which business advice would be most suitable for that case. It depends on the competences the startup needs” - (Julius).

## 4.5 Entrepreneurial Management

Nearly all of the participants agreed that there are a variety of issues to take into consideration when questioned about potential obstacles that may arise during the incubation of an entrepreneur. As we have already discussed, lack of financial sustainability and access to business support are two of the significant challenges confronted by incubators in various parts of Sweden. The third major challenge that was recurring during most



of the interviews was the challenge of dealing with the entrepreneur himself, and this showed itself in a variety of ways.

### *The coachable Entrepreneur*

“The coachable entrepreneur” was a topic that was touched upon by several of the participants. Among others, Hanna, a board member at the Innovation Office of Mellan Sveriges Universitet, discussed the challenges that incubators might encounter when interacting with an entrepreneur and noted that it takes an open mind and a willingness to hear other people's opinions to become a successful entrepreneur. Or, to put it another way, the entrepreneur needs to be able to withstand a certain amount of criticism. Very often, Hanna said, business owners believe they have the finest ideas and are thus not receptive to other recommendations - even if these recommendations may have enhanced the original concept.

“Some entrepreneurs are quite headstrong. They do not take the advice [...] I've been on the board of some of these companies and sometimes when you say these difficult things, you see that they get offensive. They do not want to be criticized. They don't really want the feedback”  
- (Hanna).

Recognizing that not every business idea will be successful is crucial for aspiring entrepreneurs. Customers and business partners do not purchase goods or services only to show support for an entrepreneur or to be sociable. Consumers and cooperative partners seek for goods and services that, in one way or another, meet their demands. In several instances, it was discovered that inexperienced business owners could occasionally be too eager to launch their venture and neglect to complete certain crucial steps, such as verifying the market need, because the answer they would get if they took those important steps was not necessarily the answer they were looking for.

In the same way, when discussing *the coachable entrepreneur*, Julius voiced similar concerns as Hanna. Julius continued to state that...



“It's always down to the entrepreneur to find his or her own way of doing this. But of course, you need to assess feedback from others to understand - is the path that I'm currently on the right path, or can I have a better path. And then you have to be coachable to understand that feedback from others. How would I value that feedback? What would I do with that feedback? And in some cases, you just have to change direction and that's being coachable. You have to take in consideration what others think and what advice others have” - (Julius).

Seeing that entrepreneurs are generally highly into their ideas and the methods they plan to use, this proved to be an ongoing difficulty for incubators. Although the entrepreneur's way could be the right way, it may just as well be the wrong way. Therefore, entrepreneurs must realize how crucial it is to view themselves objectively.

As aforementioned, some entrepreneurs find it difficult to take the incubator's criticism. This notion was also shared by Alicia, who explained that some of the entrepreneurs she had encountered over the years had been obstinate and not amenable to coaching.

“If the entrepreneurs sign up to be a part of it and we give them business support, they have to be nice and friendly. [...] But also to listen to advice. That does not mean that they have to do everything that we say that they should do. [...] But you have to be able to listen to advice and work hard on your idea. If you don't, there are others that we can spend our money on” - (Alicia).

Alicia goes on to state that the entrepreneurs that are open to hearing what the incubator has to offer are generally the most successful. They may not always follow the incubator's advice to the letter; However, they do consider it and adjust it to fit their own business strategy.

A majority of the participants agreed that managing people with narrow perspectives is not easy. Julius stated that in some cases, when entrepreneurs are too stubborn, it could be that it comes to the end of the



road with an entrepreneur. In other words, both parties recognize that it will be better for them both if they part ways.

“This is the way that we think that you need to execute in your startup and you are always doing the opposite. It's not working of course. Then we have to say ‘okay feel free to do whatever you want to do’. [...] But then we have to see that you cannot be incubated in that sense, because we have another way of thinking the best possible way. So it could be the end of the road” - (Julius).

Recognizing that different people have varied requirements and desire to be trained in various ways is crucial for the incubator. It is the incubator's responsibility to provide guidance to young entrepreneurs, but, as has already been established, “[...] some do not want that, or are not receptive” (Ingrid).

“If they don't want to listen, we need to address that and actually be quite straightforward and say that ‘if you don't want to have our inputs, that is fine, you don't have to be at the incubator’. [...] Otherwise, it is a waste of time for both of us” - (Ingrid).

The interviews made it evident that managing the entrepreneur might take on a variety of different shapes, and having to deal with entrepreneurs that are not coachable or receptive to criticism was one of them. Furthermore, another challenge that was recurring during many of the interviews was dealing with different team dynamics.

### *Team-dynamics*

Oftentimes, when entrepreneurs come into the incubator, they come alone, rather than in a team. In the pre-incubation phase, Ingrid states that the entrepreneurs will in fact be able to handle the work on their own. It is not always simple to put together a team, but the entrepreneurs will ultimately need to do so. Helena continues to state that...



“We see that a strong developing team around business ideas contains different people. I mean, we need different kinds of qualities, different kinds of ages, backgrounds, and skills. We need a mix” - (Helena).

The incubator should assist the entrepreneurs in realizing that a diverse team is necessary for them to expand successfully. This is essential, because those who have a common history and are of a similar age will think more similarly than those who have more varied backgrounds, and you often need individuals that think a little bit differently from yourself in order to produce really strong ideas and methods.

“[...] when you have the courage and when you have the patience to do that and to actually think two or three or four or five times again, you will actually come closer to bullseye” - (Helena).

Finding people you can rely on to work with is crucial when assembling a team. Gregory stated that “It is like a relationship sport. And that is the hardest part”. There is no handbook for creating a great team. Gregory mentioned that he had been a part of situations where academic researchers were combined with business owners and startup founders to create concepts that originated in academia. It had largely failed at times and succeeded quite well at others. He further said that they had tried to form student teams as well, but that effort had not been particularly successful. In contrast, students who had discovered one another independently had performed far better.

“It's a relationship sport and it depends on how you are, and how I am. If you and I are going to try to push an idea forward, it's a lot about how we match. There is no recipe book. It is about creating opportunities for people to meet” - (Gregory).

When discussing how to assemble a team, and how to avoid team-splits among entrepreneurs, Greger explained that he had been a part of a team-split himself during his early years as an entrepreneur.



“I was part of one myself. When I joined, we were 4 people. After a year I chose to leave, the other three continued. And now it's quite a successful startup, so it was a good idea, it was a good team. There were just a few things that we didn't see equally, so I chose to quit. That was it” - (Greger).

The issue of team-split and conflicts among young entrepreneurs was further touched upon by Hassan, who expressed concerns about this.

“This is always something that's a challenge, because it's really hard to come in as a start-up. If you do not have a team who has written some kind of shareholders agreement and are on the same level when it comes to how you will run this company, then you will have a team split” - (Hassan).

Alicia observes that disputes are practically inevitable when there are so many strong personalities together in one location, and continually dealing with this proved to be a major challenge for incubators. “You need to work with that all the time, [...] we actually had a coach who was working with the companies all the time, and managing to not have some kind of split” (Hassan).

### *Proximity, Relations & Trust*

As was previously noted, there is no handbook on how to put together a team and identify people you can trust. For the incubator, it is all about creating opportunities for individuals to interact, and this has also become more of an issue for incubators in recent years, due to the lack of proximity. Alicia touched upon this and said that...

“[...] people are a place, I mean that's a big challenge now, because people work from home or from elsewhere, or their teams consist of people from all over the world. That's a big challenge I think. I mean it is a great opportunity, but there is also a challenge. [...] years ago we tried to force them to be in office, maybe it was not that good, I mean people who are entrepreneurs, they want to do what they like” - (Alicia).



The ability to communicate effectively is crucial, both between entrepreneurs, as well as between visionaries and incubator officials. However, as Alicia pointed out, it is more difficult for the incubator to build this sort of relationship, as entrepreneurs may now operate from anywhere.

Greger agreed with Alicia that the ability of many entrepreneurs to operate from other locations makes it difficult for modern incubators to build strong relationships with their incubatees.

“A challenge I can see is trying to establish one of these great environments, but that's more on the incubator side of it. Like how do you establish that people, especially now that people have gotten used to working from home, including myself, and sometimes you're very focused on that that's something from every workplace right. Will you take the time to go and have a fika with your colleagues, yes or no? No, I'm too busy with my work. I am trying to establish a startup, so I do not have time to fika. But then also you miss out on all these benefits of doing it” - (Greger).

Continuing the discussion of proximity, Hans explained how the existence of interpersonal ties affects not just minor business concerns, but also incubatees' personal growth and how this might result in entrepreneurs failing throughout the incubation process. He emphasized the significance of getting to know the entrepreneur and raising awareness of their personal circumstances in order to help them in becoming a successful entrepreneur.

“If you can support the surroundings, the entrepreneur will have a much safer travel and also get energy from it. Because I see so many entrepreneurs that need to divorce and yeah, really hard times. But is it worth it? What's a good life? What's success?” - (Hans).

Hans continues to discuss this topic by stating that incubators should place a greater emphasis on developing a personal relationship with their incubatees, in order to build situational awareness around the private life





of the entrepreneur. This in order to boost the entrepreneur's capacity to work better.

“I realized during these years that they are missing one part, if you talk about sustainability and endurance around an entrepreneur, and this is to the social part” - (Hans).

With the incubator acting as a support system to startups and early stage venture creation, its core offerings and support mechanisms are oftentimes consisting and carried out with the means of social interactions. That has subsequently led to incubators relying on staff, incubator administration and external networks to emphasize building relationships with their incubatees to establish the trust needed to, in a transparent way, give feedback, and to act as a support for incubatees on both a professional and personal level.



## **5 Analysis & Discussion**

*In the following chapter, the findings presented in the above chapter, are analyzed with respect to the research question for this thesis. The financial viability of an incubator is covered first, as this showed to be one of the most significant challenges for incubators. Following that, the issue of insufficient business support, as well as the challenge of managing the entrepreneur are highlighted. All of the findings in this thesis are explored in the light of the selected theories.*

### **5.1 Financial Sustainability**

Contemporary incubators are viewed as a tool for accelerating and promoting entrepreneurship; However, there is a wide range of issues to consider during this process. As the researchers began to investigate UBIs and the challenges that limit their ability to perform adequate business support, as well as their core functionality, one of the major concerns was the financial well-being of the incubator. During the interviews, almost all of the participants voiced concerns about a shortage of financing.

The interviews made it evident that there are several types of funding an incubator could receive, and depending on the form of funding, the participants described thereby connected issues. State funding, which proved to be the most mundane form of incubator funding, had diverse methods of being attained. Depending on the incubator's ownership structure, it ranged from fully state-funded methods using Vinnova verification funds, or EU-funded innovation initiatives, to state funding through municipalities, or university innovation offices as mentioned by Aaboen (2009). Findings oftentimes pointed out that state financing comes with certain restrictions, one of which is that the financial support is too vague, leading to an increased inability to perform adequate business support in order to foster successful businesses.



## 5.1.1 Incubators - Wind Turbines of Entrepreneurship?

The issue of financing has previously been discussed by Tavoletti (2013) and Carvalho and Galina (2015), who pointed out that, according to some perspectives, incubators can be seen as a misuse of funds, especially if they solely focus on providing infrastructure, without the availability of high-quality business support. However, it proved difficult for incubators to assist young entrepreneurs in a comprehensive way through business services, since the financial state of the incubator often restricts them from hiring experienced business developers, and staff members who can carry out this critical function of the incubator. As such, this situation can be interpreted as a paradox. On the one hand, an incubator can be perceived as an incentive that represents a misuse of funds, if it does not exceed their supply beyond providing infrastructure. On the other hand, to achieve that, the incubator has to be adequately funded to also provide additional functions that support the learning curves and networking opportunities of its incubatees. Because the government-funded initiative Vinnova stems from tax money, the incubators applying for these grants have to account for, and verify successful entrepreneurial outcomes. Otherwise, there may be an imminent risk of them being regarded as a misuse of funds, as discussed by (Carvalho & Galina, 2015).

A concern expressed in relation to Vinnova funds are the conditions under which the funds are awarded. The results indicate that an incubator must be selective about the type of innovation and companies that are invited and accepted into the incubation program to obtain funding. For Vinnova to be able to validate the investment, which establishes the quantity and frequency of funding an incubator may receive, they have set up a framework that represents the type of projects an incubator must contain. This is due to the fact that Vinnova is a government-sponsored initiative that must account for the investments and grants made to various organizations, such as incubators, primarily because it is financed by tax money and is part of the state budget. As a result, Vinnova has established



benchmarks that, if met by the incubators, provide access to finance. Interestingly, however, the interviews revealed that although some incubators attain funding from Vinnova, this funding only covers basics, such as employee salaries and administrative costs, not content-related financing. As a consequence of this, incubators are unable to support startups properly. Findings indicate that this, in conjunction with the funding cycles of receiving funding annually, biannually or every three to five years, can make it difficult for incubators to distribute their funds across different incubator functions strategically.

According to SISP's definition of BI, which specifies that BIs should contain a creative growth environment (SISP, n.d), this can be rather challenging for incubators to achieve. In particular, given that budgetary constraints could limit incubators' flexibility to act and create an incubation program that, in their opinion, caters to the fundamental requirements of the businesses being fostered in their area. In other words, if the financial resources provided to the incubator's disposal come with restraints in terms of a predetermined framework, the incubator lacks the ability to act in a creative manner to accelerate entrepreneurial output.

Furthermore, the results made it evident that what happens inside an incubator is clearly influenced by the financial resources that are available to them. Not merely which companies can be selected for the incubation process but also what kind of competencies and business coaches that get employed in-house for adequate business support. According to the Black Box model, which views the incubator as a system for encouraging startups and creativity, the incubator's primary concern is its internal dynamics, which are also connected to its external surroundings (Ayatse et al., 2017). The financing determines the internal dynamics arising from external networks, such as Vinnova, universities, or municipalities. This suggests that an incubator's internal and external settings are intertwined and equally as important in terms of securing more investment.



Particularly in terms of managing internal dynamics in a way that fosters the development of new successful enterprises to attract more capital from external entities.

In the Black Box model approach, candidates are chosen from a pool of potential incubatees, who are then exposed to value-adding activities, including performance-based selection, monitoring, business assistance intensity, and resource munificence (Ayatse et al., 2017). According to the findings, the process of choosing new applicants is frequently influenced by the financial conditions that come with public sector support from organizations such as Vinnova or the EU. Consequently, this leads to incubators not being able to be fastidious or creative when it comes to choosing companies and innovations that may have true potential, but do not fit into the framework of the funding. This, in turn, may lead to the incubator's inability to support these companies; Thus, their potential may drain into the sand unnecessarily.

### *5.1.2 Regional Differences*

It could be determined from the interviews that a shortage of funds also contributed to insufficient business assistance intensity, which is another significant value-adding activity in the Black Box model (Ayatse et al., 2017), as the funds cannot maintain these kinds of services. Particularly due to the inability to employ applicable business expertise in-house, in order to provide the best possible business assistance. The findings indicated this as a result of the region not being as financially beneficial in terms of return on investment, if one compares it to regions with larger cities and more extensive business networks. This turned out to be a challenge because wealthier areas have more finances to support these sorts of programs and larger ecosystems of already successful businesses that are interested in becoming engaged. If not adequately strategized inside the incubator, which increases the risk for the incubator's lack of providing monitoring and assistance to companies with potential for



success, this might further lead to some locations and the active incubators therein getting stuck in a cycle of underfunding. This is problematic since the incubators then struggle to demonstrate that their program results in successful alumni companies, which in turn can determine the amount of funding they are able to secure, as discussed by Aaboen (2009). Additionally, it becomes more challenging that their government funding is framed in certain terms and conditions for how the financial means are to be utilized, to receive further funding. As the theory by Hackett & Dilts indicates, the control variables for the Black Box model to be carried out in the best possible way are population size, economic conditions, incubator size, and level of development (Ayatse et al. 2017). Findings therefore suggest that it may be probable that the economic conditions determined by funding frameworks due to regional performance aspects have the power of shaping the incubator's overall functionality, design, and efficacy in regions less populated.

Although BIs and especially samples in this study are a part of the larger university institutional environment, as well as the public sector due to their funding and ownership structure, they are their own socially constructed entity. This further affects how humans experience and make sense of their surroundings which influences their behavior and choices (Løwe Nielsen et al., 2022). The notion of institutional quality shaping the conditions for favorable economic development and output is particularly vital when it comes to incubators, as their core activity entails producing successful startups and alumni companies. Institutional quality, as previously mentioned, includes secure property rights, a well-functioning court system, personal bankruptcy laws, resource endowment, availability of finance, availability of knowledge, and entrepreneurial capital (Chowdhury et al., 2019). These characteristics are regarded as crucial components of institutional quality and have been associated with positive economic outcomes in a variety of contexts. In light of the funding of incubators, as well as its magnitude in determining how the incubation



processes are carried out, the findings from this research imply that the availability of financing is one of the major elements influencing the incubator's overall functionality. In addition, the availability of financing further affects the availability of knowledge, which is another value-adding activity within the Black Box model (Ayatse et al., 2017). This is because the scarce financial support these incubators receive limits the quantity and caliber of in-house, full-time talent they can recruit. Furthermore, this can be seen in close correlation to the notion of resource endowment (Ayatse et al., 2017), as the primary function of an incubator involves both tangible and intangible resources, including networks, shared infrastructure, and business support services in the form of coaching and mentorship.

Taking into account the triad model of incubation (Carvalho & Galina, 2015), it can be observed that two out of three components in the incubator service offering are more socially anchored. Networking and business support services are the intangible resources that require social contact between actors (Bøllingtoft & Ulhøi, 2005; Carvalho & Galini, 2015). Tangibles, like shared infrastructure, do not necessarily require social connection, although it fosters human interaction due to social actors being located in the same shared workspace. With regard to the findings of this study, the funding obtained by governmental bodies, such as Vinnova, is pivotal for incubators to stay above the surface. However, there is a drawback to it as well, since the funding also restricts the incubators' freedom to hire full-time, quality expertise to support their business tenants. This, in turn, has a substantial influence on the triad model as a whole, since poor quality business support services affects the assistance young entrepreneurs can get, which inhibits the development of meaningful relationships and thereby potentially impairing entrepreneurial output. In conclusion, an incubator's ability to obtain funding, or inability to do so, influences the institutional quality by limiting fundamental functions such as business assistance, which makes it more challenging to



establish a setting and an institution that promotes economic growth and, more crucially, effectual entrepreneurial output.

## 5.2 Insufficient Business Support

As was previously discussed, it could be inferred from the interviews that one of the most significant barriers encountered by incubators is the lack of funding they receive to perform their core functionality, which is to act as an accelerating tool that encourages novice entrepreneurs to materialize their ideas into real businesses (Hassan, 2020). Due to the fact that these incubators have a finite amount of funds and resources to work with, the capacity of the incubator to assist newly formed enterprises proved to frequently fall short.

Considering that aspiring entrepreneurs have a tendency to lack the skills and knowledge necessary to succeed in today's competitive environment, business support services are regarded as one of the most crucial aspects of business incubation programs (Grimaldi & Grandi, 2005; Carvalho & Galini, 2015). It is essential to mentor and educate these business owners, as well as to assist them in overcoming any challenges in their entrepreneurial journey. Findings suggest that some incubators lack the necessary financial resources to employ individuals with the ability to provide high-quality support to would-be entrepreneurs. Several of the participants expressed concerns about this, as they have a hard time hiring full-time business coaches and consultants that can provide continuous support. For an incubator to be successful and produce entrepreneurial outcomes, they must have access to knowledgeable and experienced business advisors (Carvalho & Galini, 2015). As of today, however, sufficient business advisory is something that samples of incubators in this study lack, and as previously mentioned, this may be attributed to the fact that they receive too little funding.





## 5.2.1 Attaining Human Capital

Looping back to previous research in the field, it was found that attracting and keeping skilled professionals to monitor different business processes is considered one of the most significant variables for an incubator to succeed (Cullen et al., 2014). Because without such assistance from seasoned professionals, would-be entrepreneurs may struggle to develop thriving businesses as effectively as they could. It was moreover expressed by Lose and Tengeh (2015), that, for it to be feasible for BIs to achieve their goals, and help to support *'the nascent entrepreneurial dream'* (Nijenhuis, 2020), it is imperative to invest in human capital. The difficulty is, how can incubators invest in human capital when they experience financial limitations that restrict them from obtaining the competence and knowledge needed? Thus, this can have an impact on the sustainability, and growth of the incubator, both of which were identified as difficulties in earlier studies (Scaramuzzi, 2002; Lose & Tengeh, 2015). Due to a lack of financial resources that impact the human capital at disposal, incubators in this study are less favored to produce large amounts of successful graduates from their programs. As a result, incubators may fail to expand. Additionally, this will have an impact on the incubator's future financial viability, determining whether the BI will be able to sustain itself through government support or not - particularly if they are unable to produce positive outcomes to obtain additional financing.

To succeed in the early phases of their entrepreneurial journey, aspiring entrepreneurs require access to business advisors and coaches (Carvalho & Galini, 2015). According to the research findings, however, incubators may not be able to provide what they would like to in terms of human capital, due to scarce funding. As a result, this prompts incubators to implement strategies that are thought of as being semi-ideal for high-quality business support. One participant, for instance, mentioned that their incubator could offer its business tenants four hours of monthly



business consulting. This proved to be far too little, as the entrepreneurs kept certain questions to themselves, since they did not want to waste their time with the consultants'. In other words, this limited time made the entrepreneurs prioritize urgent matters, rather than being able to have an ongoing dialog. The findings demonstrated that having a continuous interaction and dialog with the incubatees, that covered not only business matters but also more conversational topics, would help incubators in establishing a genuine relationship with their business tenants. Through the exchange of feedback and increased understanding of the challenges encountered by the entrepreneurs, this might result in greater trust and ultimately, business effectiveness (Bruneel et al., 2012). However, it is unlikely to establish the situational awareness, and closer connection necessary to genuinely support business tenants to a sufficient degree with a limited amount of time each month with a business developer. Consequently, proximity between incubator and tenant may prevent entrepreneurs from establishing their own decision-making processes, which might have an impact on their level of entrepreneurial quality (Sobel, 2008).

### *5.2.2 Entrepreneurial Institution*

The institutional theory suggests that social networking, which consists of interpersonal relationships, may enhance the entrepreneur's likelihood of success (Korsgaard et al., 2015), meaning that the amount of social exchange and dialogue with employees inside the incubator is vital for entrepreneurial development. Interpersonal connections and social interaction between an incubator and an entrepreneur not only provide more resource munificence in the form of valuable knowledge and access to external networks, but also serve as a strengthening element for entrepreneurial acts, and decision-making. Based on the study's findings, social networking applies not only to the dynamics between incubators and their incubatees, but also extends to the interactions among business



coaches and developers within the incubation ecosystem. The results show that the limited availability of human capital hinders the ability of incubator staff to engage in discussions and formulate effective strategies pertaining to optimal practices for the incubation process. Thus, this impediment limits the incubator's ability to give intense business help. Put differently, shaping the institution is pivotal in order to strategize which components and factors that are needed to produce successful entrepreneurial outcomes, where the funding has to act as fuel to make the incubator machine function. As the institutional theory suggests, exogenous institutional reforms have the potential to impact the quality and quantity of entrepreneurial activity by changing the decision-making environment and its implementation (Chowdhury et al., 2019). This is reflected by the findings, which indicates that the funding is too scarce to construct an adequate entrepreneurial environment.

Taking into consideration the Black Box model of incubation (Ayatse et al., 2017), there are two key value-adding activities that are lacking in the incubator offering, according to the findings. These proved to be business assistance intensity and resource munificence. According to the research, human capital is one of the challenging aspects that is most dependent on the amount of funding, as well as the factor that enables incubators to carry out their core operations. This challenge consequently affects the incubator's effectiveness in offering monitoring and assistance, as well as ensuring resources to guide companies towards graduation, and thus becoming financially viable companies. When considering the Black Box model of incubation, it appears that human capital is one factor that has a significant impact on the internal dynamics of an incubator. This further suggests that a financing shortage leads to lack of human capital, which, in turn, leads to a defect in the incubation process. To highlight the importance of human capital, one could furthermore observe the triad model of incubation, where two thirds of the business service offering consists of intangible resources (Bøllingtoft & Ulhøi, 2005; Carvalho &



Galini, 2015). Intangible resources are dependent on social interaction, where human capital serves as the main mediator for carrying out business support and networking functions (Bøllingtoft & Ulhøi, 2005; Carvalho & Galini, 2015).

## 5.3 Managing the Entrepreneur

The intent of this thesis has been to perform an extensive examination of the phenomena of BI, and in particular, BI located within a university setting. It became evident that additional study was required regarding the difficulties and barriers encountered by incubators, since it was discovered that a large portion of the literature to date has concentrated on the challenges experienced by the entrepreneurs themselves. Financial sustainability and a lack of business support were two significant obstacles that could be noticed from the interviews conducted, as shown in the above discussion. During the incubation process, managing the entrepreneur emerged as the third and final major challenge for the samples examined in this study. It was remarked by several of the participants that managing an entrepreneur is not always a simple chore to do.

### 5.3.1 *Uncoachable Entrepreneurs*

According to the triad model of BI, the primary goal of incubators is to provide nascent entrepreneurs with the tools and resources they need to start a successful business; However, in practice, it has been shown that entrepreneurs are not always open to the support and assistance offered by the incubator. Nearly all of the participants mentioned that during their years in the incubation industry, they had come across what they referred to as "*uncoachable entrepreneurs*" which proved to be a significant challenge. Entrepreneurs frequently have a clear idea of what they want, as well as what they want to accomplish; Therefore, it can be difficult to guide and direct them. In other words, they may simply be overly eager to



start their own business and become successful entrepreneurs and thus forget that it is a lengthy process that requires both time and energy.

As indicated by Carvalho and Galini (2015), coaching and mentoring are described as one-on-one support programs that are intended to support incubators learning and growth. Furthermore, in accordance with Bruneel et al. (2012), business support, in the form of coaching and mentoring, is also viewed as a crucial component of BI programs, since it can help the entrepreneur make better decisions more quickly, which in turn leads to better strategies and ultimately better company performance. One can say that the objective is fundamentally to provide aspiring entrepreneurs the opportunity to learn from seasoned mentors and have access to insightful feedback that may help them overcome various challenges along the way. However, one might ask: How can incubators offer assistance and guidance, and thereby act as a tool for accelerating entrepreneurship, if the entrepreneurs themselves are not receptive to it?

Many of the participants agreed that the entrepreneur must, of course, find his or her own method of operating. But, as a young, inexperienced entrepreneur, you must weigh the advice of others, such as business coaches, to determine whether the course you are taking is the right one or not. The findings suggested that entrepreneurs must be coachable to be able to comprehend such feedback. It is vital to remember that it's not anticipated that the entrepreneur would immediately implement the suggestions - though, it is expected that they will consider the advice and modify it to fit their business concept and operational strategy.

Furthermore, there are intrinsically complicated linkages to consider, given that an incubator is a human institution comprising several diverse actors (Chowdhury et al., 2019). Thus, in order to foster a healthy connection and ensure that it realizes its full potential, both parties - that is, the incubator and the entrepreneur being incubated - must contribute. The relationship cannot be one-sided. Hence, entrepreneurs that enter an



incubator need to be receptive and open to the incubator's suggestions. If not, the incubator can divert their attention and resources to other persons.

Returning to Carvalho and Galina's (2015) statement, there is the ongoing discussion surrounding the contribution of BI to the entrepreneurial ecosystem (EE), as some perspectives question their effectiveness and perceive them as a waste of money (Tavoletti, 2013; Carvalho & Galina, 2015). Because of this, it is even more crucial for incubators to avoid wasting their resources on uncooperative individuals, as doing so may put them in a vicious circle. It is critical for the incubator to produce successful graduates from its incubation program, since you want to create a long-lasting, expanding organization. As was previously mentioned, earlier studies have found that the incubator's efficacy has been hindered by a lack of sustainability, as well as a lack of growth (Lose & Tengeh, 2015). Therefore, choosing cooperative people to proceed with proved to be imperative, as both parties will benefit from the collaboration. The tools and resources required to start a firm are made available to the entrepreneur, and the incubator is viewed as a successful organization that creates thriving businesses, rather than as a waste of money.

### *5.3.2 Developing Proximity & Trust*

Furthermore, it can be inferred from the interviews that managing the entrepreneur can take a variety of forms. Handling and managing uncoachable business owners was one of them. Establishing proximity and trust between the entrepreneur and the incubator has shown to be another perceived obstacle. Due to the fact that people can work almost anywhere these days, and because teams can include individuals from all over the world, it is challenging for incubators to forge close relationships with their business tenants. As Korsgaard et al. (2015), indicated, entrepreneurship is intricately linked to social networks, which consist of interpersonal relationships that may enhance an entrepreneur's likelihood of success. Institutions, such as an incubator, can be advantageous to



entrepreneurs because they can act as both encouraging factors for entrepreneurial endeavors, as well as sources of knowledge, resources, and legitimacy. In other words, while institutional theory emphasizes the value of these human connections between entrepreneurs and incubators, it is in fact rather difficult for modern incubators to achieve this. Because, how can incubators foster a community where individuals may interact and share best practices, both amongst each other, but also between entrepreneurs and incubators, when so many people now prefer to work remotely?

The findings from this research suggest that the interpersonal ties between individuals affect not just minor business concerns, but also incubatees' personal growth and how this might result in entrepreneurs failing throughout the incubation process. Considering this, it is crucial for the incubator to get to know the entrepreneur and be aware of their unique circumstances to assist them in becoming thriving entrepreneurs. However, as people nowadays have the possibility to work from anywhere, the shared infrastructure that the incubator provides as a part of their value proposition (Bruneel et al., 2012), may not reach its full potential. As was previously noted, infrastructure is made available in order to provide companies access to a common physical area that may be utilized to encourage engagement and communication among tenants. Some participants claimed that a few years ago, they attempted to coerce the entrepreneurs into working in the office; However, this was a failed strategy because the entrepreneurs preferred to work according to their own schedules.

The Black Box model created by Hackett and Dilts also emphasizes the importance of the incubator's internal dynamics (Ayatse et al., 2017). As more and more people nowadays prefer to work virtually, this can actually have an adverse effect on the internal dynamics of the incubator. Owing to the institutional environment's significant influence on the entrepreneur's



attitudes, motivations, and ability to mobilize resources, this may further have an impact on the quality of entrepreneurship (Chowdhury et al., 2019). Findings indicate that effective communication between the incubator and the fostered entrepreneurs is of the highest significance. Effective communication is crucial since it can increase the chance of success for the entrepreneur and build rapport leading to a trustworthy relationship (Korsgaard et al., 2015). Additionally, open communication can help the incubator to get to know the entrepreneur and become aware of their personal circumstances, thereby giving the entrepreneur the assistance they personally require. Remember that one of the components in the Black Box model was monitoring and business assistance intensity (Ayatse et al., 2017). This stage of the incubation process refers to how carefully an incubator monitors its incubatees and aids them as they expand their businesses. Success in this phase is determined by the amount of time spent on support, how thorough the assistance is, and how effectively it is given. Due to a lack of closeness, an incubator may find it difficult to develop a deep, trusting connection with the entrepreneur and hence may not be able, nor comfortable to offer the entrepreneurs the support and transparent feedback they genuinely require.

Continuing on this discussion, it should also be remembered that these incubators do not have unlimited amounts of resources to provide, as has previously been touched upon. Due to the lack of finance, incubators in this study can only provide so many means and resources, which can make the situation even more challenging. The findings from the interviews often drew attention to the limitations of government funding, one of which being the fact that the budget is too scarce, making it harder to provide adequate business support that nurtures innovative and successful businesses.





### 5.3.3 *Team-dynamics & Conflicts*

As have been mentioned several times, managing entrepreneurs and developing solid relationships with them is not always easy. Because incubators deal with unique people with strong personalities, conflicts are almost inevitable, both between incubators and entrepreneurs, as previously touched upon, but also between entrepreneurs themselves. The issue of dealing with conflicts among entrepreneurs was frequently mentioned during the interviews, and was perceived as a major challenge for incubators to handle. Incubators need to have access to knowledgeable and experienced employees who can help young entrepreneurs realize their full potential. If this is not offered within an incubator, entrepreneurial initiatives may find it difficult to operate successfully and provide high-quality services.

Given that an incubator is a human institution made up of numerous different actors, there are inherently complicated linkages to consider (Chowdhury et al., 2019). Entrepreneurs cannot operate alone. Findings suggest that they need to have a diverse team to expand successfully. However, establishing such a team is not easy, as there is no handbook for doing so. Some of the findings indicate that relationship-building should be generated from human intuition and the process of natural selection. However, managing team dynamics and, thereby, connected conflicts would, according to the findings, be more effortless if adequate human capital could be employed. Which, as already mentioned, is complicated due to financial restrictions.

## 5.4 Summary of Analysis

This examination indicates that the incubation procedure must take into consideration a number of challenges. The researchers have visualized how the interplay between government funding and the incubation process are interconnected by constructing a handcrafted model, as illustrated



below. The model demonstrates how the internal dynamics of an incubator are dependent on external government funding and consequently how this interplay determines the incubation process and entrepreneurial outcomes. Similar to the functioning of a wind turbine, an incubator relies on financial resources to support startups and foster positive economic development for societal benefit. Just as wind serves as the essential input for a turbine, the provision of funding is crucial for the operations of an incubator. The sustained operation and ability to generate entrepreneurial outcomes necessitate securing funding. However, obtaining funding requires strategic planning of an incubation program that yields successful alumni companies aligned with the terms and conditions set forth by potential funders. This interdependence between funding acquisition and the design of an effective incubation process reflects the parallel between wind turbines relying on wind and incubators depending on financial support for their functionality and impact.

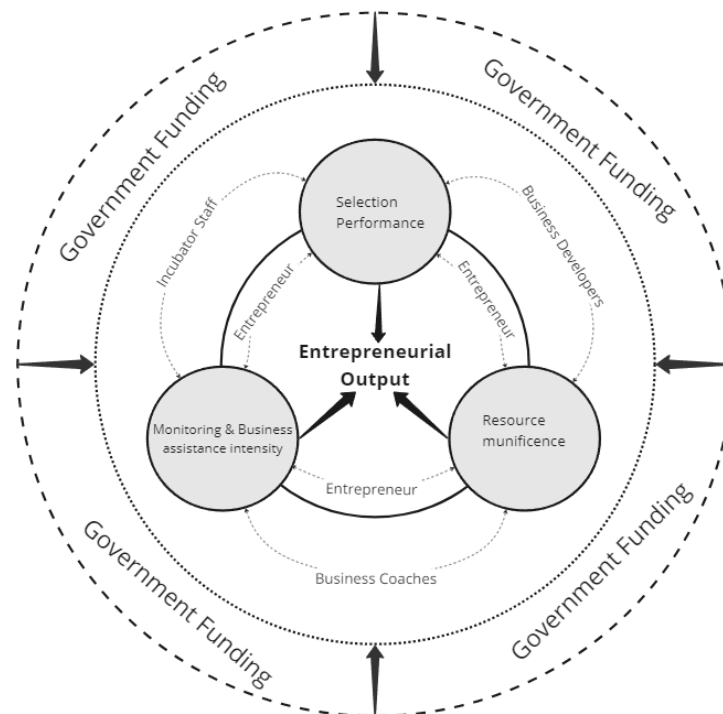


Figure 5.5.1 The wind turbine model. [Own work]



The difficulty lies in the fact that incubators are expected to create entrepreneurial output; However, the conditions are not always optimal for doing so. While an incubator, according to certain perspectives, has been perceived as an incentive that represents a misuse of funds, if it does not exceed their supply beyond providing infrastructure, it has to simultaneously be adequately funded to also provide other functions that support the learning curves and networking opportunities of its incubatees. Since the government funded initiative Vinnova stems from tax money, the incubators applying for these grants have to account for, and verify successful entrepreneurial outcomes; Otherwise, there may be an imminent risk of them being unable to pursue their core operation.

## 5.5 Theoretical Contribution

In various respects, this thesis adds to the body of knowledge already available on business incubation.

Firstly, this thesis has demonstrated and expanded upon the existing literature on BI, particularly the significance of incubators acquiring high-quality expertise. This proved to be one of the most pressing challenges for the incubator to carry out its core operations and give entrepreneurs the best possibility to build a successful company. In extant literature, this was particularly stressed by Cullen et al., (2014), who argued that the recruitment and retention of qualified experts to manage various business functions is a critical element for the success of any incubator. Accordingly, this was also strongly emphasized by Lose and Tengeh (2015), contending that investing in human capital is of utmost importance for BIs to realize their objectives.

Secondly, this thesis examined the managerial challenge of entrepreneurs being uncoachable. This correlates to recruiting managerial expertise and human capital, albeit it predominantly depends on the characteristics of the entrepreneur, which has been researched widely in published literature.



Nevertheless, this thesis has instead focused on these challenges from the perspective of the incubator.

Thirdly, the thesis has confirmed the value of, and difficulty in ensuring the financial viability of publicly financed incubators, so that they can become self-sufficient. This research demonstrates how the government funds are obtained by incubators and what opportunities, as well as restrictions come with it. Previous literature suggests that a lack of sustainability refers to the incubator's inability to support itself, whereas the lack of growth is determined by the yearly turnover and the number of graduates within the incubation program (Lose & Tengeh, 2015). This thesis has reinforced and shown via its results and analysis that failure to maintain these criteria may adversely affect the incubator's core mission. The research findings lead to the conclusion that the main challenge for incubators transcends the internal dynamics, and is more dependent on external policy actors.

This study has concentrated on issues related to the administration of the incubator, adopting the incubators perspective on developing entrepreneurs and thus its dynamics that produce new ventures. Since the vast majority of the research to date has focused on the issues faced by entrepreneurs (Lose & Tengeh, 2015), this thesis has brought to light the challenges that UBIs confront, as they endeavor to support incubatees.



## **6 Conclusion**

### **6.1 Key Findings**

The purpose of this master's thesis has been to undertake a comprehensive investigation into the potential challenges that may be situated in University Business Incubators. The central objective has been to identify and analyze the factors that contribute to the emergence of these challenges and thus illustrate potential aspects of influence. The researchers aimed to enhance the understanding of the intricacies of UBIs and offer valuable insights to managers, policymakers, and stakeholders on creating a supportive and collaborative environment for the growth and success of startups.

The findings from this study allow the researchers to demonstrate that there are indeed a number of challenges that incubators must overcome, in order to serve as an accelerator for would-be entrepreneurs. In the process of fostering aspiring entrepreneurs, the challenges connected to lack of *financial sustainability*, *access to business support* and *entrepreneurial management* all play significant roles in their interconnectedness to construct a creative and fostering BI.

The researchers can conclude that among the most pressing challenges for incubators situated within a university setting today is the lack of state funding they receive to carry out their primary function. An incubator is contingent upon financial resources to assist entrepreneurs and promote economic development for the benefit of society. Put differently, the sustained operation and ability to generate entrepreneurial results require secure financing. However, acquiring funding necessitates strategic planning of an incubation program that yields successful graduate businesses that are in accordance with the specifications provided by probable funding sources.



Moreover, restrained financial resources can prevent incubators from offering their tenants the necessary business support services they need. An incubator requires access to competent and seasoned business consultants in order to be efficient and generate successful entrepreneurial outcomes; However, as of right now, the incubator samples in this study lack this type of human capital, which, as already said, can be ascribed to the fact that they get inadequate funding. Obtaining sufficient entrepreneurial expertise is furthermore of great importance when it comes to the management of an entrepreneur, as this proved to be a rather difficult task for incubators. Entrepreneurs are driven and ambitious people who wish to achieve the nascent entrepreneurial dream.

All challenges are interconnected and depend on the amount of financial resources the incubator has to provide and distribute across its functions. One could say that the dependency between acquiring financing and designing a successful incubation process is analogous to how wind turbines depend on the wind - incubators are reliant on funds to function, and thus to have an impact.

## 6.2 Practical Implications

The results of this study have contributed to understanding how an incubator's internal dynamics are dependent on the external aspect of funding. By examining the perspective of incubators, this study has illustrated the experiences of managerial staff within incubators in regions less urbanized. The entrepreneurial ecosystem in Sweden is infamous when it comes to producing large companies and especially innovation. This study has resulted in demonstrating some of the components that contribute to the ecosystem and how the samples of incubators in this study interact with segments of the entrepreneurial ecosystem. An example of such a component is Vinnova, which makes up for bits of the infrastructure that assist the health of the ecosystem by funding incubators that aim to produce innovation. It can be argued that the way incubators in



this study obtain funding to produce an incubation program for innovating and creating companies comes with certain restrictions. In turn, these can hinder incubators that are less financially fortunate to creatively foster companies in a manner that provides adequate business support and an overall incubation program tailored to the incubatees needs. The findings suggest that a significant practical implication would be to construct a funding infrastructure for incubators that are less fortunate. This would allow incubators to establish an incubation process that fits their own framework, and match both their regional and contemporary business environment.

Below are bullet points that indicate further action toward understanding the practical implications of this study:

- Examine alternative strategies to construct funding infrastructure and frameworks.
- Changing public incubators terms and conditions so that incubators own shares in companies to become financially sustainable.
- Construct improved strategies for the incubator's ability to distribute funding across their organization in order to become more financially sustainable.

## 6.3 Future Research Implications

The suggested future research should aim to focus on how the Swedish government jointly works alongside the EU to establish grants that are aimed at fostering domestic innovation. This study has pointed out the importance of government funding and how the samples in this study rely heavily on them to survive as an organization. Further studies should aim at studying government funding using the Triple Helix model in order to grasp in what manner the Swedish government strategizes grants that nurture innovation and new venture creation. Furthermore, it would be of



great interest to elevate it a step further and examine the matter on the EU altitude, to understand how the EU commits efforts towards innovation in contrast to large economies such as the US and China.





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## 8 Appendix

### 8.1 Interview Guide

*Below, you can find the interview guide the researchers used as a starting point for prompting questions that initiated the semi-structured interview. This was used mainly as a template; However, not all questions were asked, due to the semi-structured nature.*

#### **Personal**

- Please, tell us who you are and what you are doing?
- What are you working with?
- How long have you been in business?
- How did you get involved in the incubator?

#### **University Business Incubator/Innovation office**

- What is business incubation?
- What is your process for selecting potential entrepreneurs to be incubated?
- What can an entrepreneur expect once they have been accepted?
- How do you ensure that entrepreneurs have the skills and knowledge necessary to start and grow their businesses?
  - a. When screening potential inductees, what exactly are you looking at?
- How do you help entrepreneurs transition from the incubation stage to the market?
  - b. Could you elaborate on examples in terms of challenges that typically arise within this stage of the incubation process?
- What are the main challenges you have faced while developing entrepreneurs in university business incubation?
  - a. In terms of shared infrastructure, could there be challenges in terms of sharing workspace?
  - b. In terms of business support, what are general challenges related to supporting entrepreneurs in their process?
  - c. In terms of networking abilities, could there be any challenges related to finding the right mentors, business developers or overall guidance of entrepreneurs?
- How do you ensure that the entrepreneurs you support have access to the necessary resources and support systems?
- What kind of support do you provide to entrepreneurs if they fail to launch or grow their businesses?



- How do you manage the risk of failure for the entrepreneurs in the incubator?
- How do you measure the effectiveness of the support and resources provided to entrepreneurs?
- What kind of partnerships or collaborations do you have with external organizations to support the incubator and its entrepreneurs?
  - a. Are there any challenges connected to external partnerships and collaborations in terms of the incubation process?
- What role do you see the university playing in the success of entrepreneurs in the incubator?
- How do you plan to address potential future challenges or risks associated with university business incubation?