

Up and Coming

- Challenges for high-tech firms in the start-up phase and the role of the business incubator

Jonas Archer



Master thesis at the centre for Technology, Innovation and
Knowledge

UNIVERSITY OF OSLO

Date: 26.05.2015



This wordcloud is showing the most frequent words apparent in this thesis¹.

¹ Made with a tool provided by wordle.net

© Jonas Archer

2015

Up and Coming - Challenges for high-tech firms in the start-up phase and the role of the business incubator

Jonas Archer

<http://www.duo.uio.no>

Print: Reprosentralen, Universitetet i Oslo

Abstract

Business incubators have over the years become a popular way to support entrepreneurs. This method of facilitating for entrepreneurs is also widely used in Norway. This thesis explores how business incubators support and mitigate the challenges startups and entrepreneurs face in their earlier phases of development. The thesis explores these issues through two case studies of two incubators and eight startup companies within the ICT-sector. The challenges of the startups and entrepreneurs will be viewed through the business incubator literature, and through the theory of social capital. This theoretical aspect will be the foundation of the analysis performed. The thesis argues that startups and entrepreneurs need different resources in different phases of their development. By examining the business incubators with the goal of finding out what kind of challenges the startups and entrepreneurs face, this thesis contributes to knowledge on how to facilitate for entrepreneurs and startups in Norway.

Preface

The process has been long, tiring, hard and challenging, but not without some humor and fun between the battles against the orthography and structure, the red thread, the empirical data and the theories. It has at times felt like working in mine; one does see much daylight, and you keep on hammering and hammering (on the keyboard) to try to find something of value. The process of writing this thesis would not have been possible, or at least much, much harder without the help of some important people.

I want to thank the people at Simula for taking me in and proposing the thesis theme. I want to direct a special thanks to Heidi Bruvik Sæther for putting me in contact with the first informants and helping me get the ball rolling from there. I also want to direct a special thanks to all the informants that contributed to this thesis by taking time to meet me and answer my questions. Even though it was my first time interviewing, it was not scary or difficult because of the positive attitude the informants showed me.

I also want to thank my girlfriend, Aline Håkestad for being there, and being patient in the hectic months in addition to proof reading the thesis; I did not know that my is/are mistakes were that bad. And off course I also want to thank all my friends who have been there to remind me of the life outside of school. Thanks to you I have not forgotten how to have fun, joke and laugh. I especially want to thank Marcus Gjems Theie for taking time in his hectic post-master work-life to read through the thesis and provide insightful comments. I will (hopefully) join you soon. I also want to thank my family for the supporting words, and the relaxing days not thinking about the thesis in the rural tranquility Melsomvik provides.

In addition to the people mentioned above I want to thank my supervisor, Taran Mari Thune. It has been a challenging process, but with your help through insightful and constructive comments and guidance I have a finished a product that I am very satisfied with.

Last, but not least, I want to thank all my fellow students at TIK for two wonderful years. The bad humor and all the laughs we have had have been priceless. I want to especially thank Vegard Tveito for his comments and encouragements on my thesis when it was just a work in progress.

We made it!

Table of contents:

1	Introduction	1
1.1	Norwegian policy context for entrepreneurship and incubators	3
1.2	Structure of the thesis	5
2	Literature review of business incubators	7
2.1	Literature on business incubators	7
2.1.1	Historical background	8
2.1.2	Definitions	8
2.1.3	Examples of different incubators	10
2.2	Benefits of incubators	11
2.2.1	Resources available in the business incubators	11
2.2.2	Competitive advantages and speed to the market	12
2.2.3	Experience-based knowledge	13
2.2.4	Networks and contacts	14
2.2.5	Reducing risk	16
2.3	Disagreement in the literature about the value of business incubators	17
2.4	Summary	18
3	Social capital and business incubators	20
3.1	Historical background	20
3.2	Definitions	21
3.3	Social capital and entrepreneurship	23
3.4	Social capital and the business incubators	26
3.4.1	Knowledge sharing	27
3.4.2	The incubator as a bridge or hub	28
3.4.3	Risk and uncertainty	28
3.4.4	Absorptive capacity	29
3.5	Summary and analytical framework	31
4	Methodology	33
4.1	Qualitative studies	33
4.1.1	Case study	33
4.1.2	Research question and research design	34
4.2	Data collection	35
4.2.1	Interviews	35
4.2.2	The process of the interviews	37
4.2.3	Skewed selection	39
4.3	Analysis of the data	39
4.4	Reliability and validity	40
4.4.1	Reliability	40
4.4.2	Validity	41
4.5	Ethical considerations	41
4.5.1	Bias	42
4.5.2	Anonymity	42
4.6	Summary	42
5	The incubators and startups examined	44
5.1.1	Simula Research Laboratory	44
5.1.2	Gründergarasjen	45
5.1.3	The research park	46
5.1.4	StartUpLab	47
5.2	Comparison of the two incubators	47

5.3	The eight different startups investigated.....	48
5.3.1	Comparing the eight startups	50
5.3.2	The startup phase	50
5.3.3	What they create	51
5.3.4	Utilization of resources	52
6	How the startups cope with their challenges	56
6.1	Challenges for the startups and entrepreneurs	57
6.2	Dealing with the challenges	59
6.2.1	Network resources	59
6.2.2	The milieu in the incubator	61
6.2.3	Positioning	63
6.3	The business incubators' role in coping with challenges	64
6.3.1	The layout of the business incubators	64
6.3.2	Brainstorming, help and discussion	64
6.3.3	Resources available in the incubators	65
6.3.4	Technical and scientific development of the product or idea.....	68
6.3.5	The incubator as a matchmaker and facilitator	70
6.3.6	"Bartering economy" in the business incubator	70
6.3.7	Financing	71
6.3.8	Incubators role in different phases of development	73
6.4	Summary	76
7	Key findings, implications and conclusion	77
7.1	Key findings in light of the existing literature	77
7.1.1	Different needs for different phases	79
7.1.2	The importance of a supportive milieu in the early phases development.....	80
7.1.3	Mitigating risk and uncertainty	81
7.1.4	Access to networks.....	81
7.1.5	A place to work	82
7.1.6	Access to information an experience-based knowledge.....	83
7.1.7	Finding funds and financial backing	84
7.2	Conclusion.....	85
7.3	Final remarks and further research	88
	Literature.....	92
	Appendix	98
	Appendix 1 - Interview guide Gründergarasjen.....	98
	Appendix 2 - Interview guide StartupLab	100

1 Introduction

Entrepreneurship is considered an essential part of innovation and development. How to follow up and facilitate for start-ups and entrepreneurs in a satisfactory manner has been given some attention in different parts of the innovation literature for a long time. Researchers and politicians are often in agreement that supporting entrepreneurs should be prioritized, but how this should be done in practice diverge. It is challenging to suggest one successful recipe that will work for all entrepreneurs, but almost all startups have some things in common; they need a good environment and support to start their business and build their strength to be ready for the competitive market. So this master thesis will, as a contribution to the research field, look at one possible way for entrepreneurs and startups to get off on the right foot and make their company a growing and viable one in competition with other companies in the market, through the business incubator.

In recent years entrepreneurs and start-ups have been a central theme for researchers and policy makers in Norway. Many see entrepreneurs and startup companies as key players in the economic development of Norway in the years to come. The future of Norwegian economy may be found in a new idea or a new business that has not yet seen the light of day. Therefore, many find it important to support entrepreneurs in Norway throughout the years to come. If the environment for new ideas and new businesses is organized in way that makes it hard for entrepreneurs to pursue their ideas, many of the potentially good ideas and projects can be lost or given up on in their initial phases.

Two key actors that underpin this from a political point of view are the two government parties Høyre and Fremskrittspartiet. From their political platform, it emerges that the government wants to build its policy on freedom and confidence to individuals and entrepreneurs (Høyre and Fremskrittspartiet 2013, p. 3). The government will create more room for private and volunteer initiatives. They also want to create an innovation exchange² in order to better connect entrepreneurs with private capital (Høyre and Fremskrittspartiet 2013, p. 27). They emphasize in their political program that prioritizing measures can strengthen innovation and new businesses, with emphasis on entrepreneurs and contractors (Høyre and Fremskrittspartiet 2013, p. 49). This will be achieved through, amongst other policy measures, improving access to government seed capital for entrepreneurs and startup companies.

One possible solution to support for startups and entrepreneurs are through business incubators. The use of business incubators has increased on the global level in the last decades.

² To read more about this see <http://www.innobors.no/>

This has started an academic debate on whether property-based initiatives, such as business incubators, enhance the performance of universities, corporations and economic regions (Phan, Siegel & Wright 2005, p. 166). This has led to an increased interest from policy makers and industry leaders. They want to identify best practices allowing the business incubators to be used in the best possible way to promote the universities, corporations and economic regions (Phan, Siegel & Wright 2005, p. 171).

Business incubators are an initiative that industrial and policy actors clearly want to use to create an environment that will give entrepreneurs and startups a possibility to prosper, but the question remains how? This thesis suggests, based on its key findings, that it is necessary to facilitate for entrepreneurs through different resources based on the different phases the startups and entrepreneurs are in. The different phases are for this thesis defined as:

- Early: 0-6 months
- Medium: 6-12 months
- Developed: 12-18 months
- Mature: 18-24 months

On this basis, the thesis will examine and elaborate on one possible way to support entrepreneurs and startups, through business incubators. The thesis emphasizes tenant firms make use of resources and connections available through the business incubator to create potential benefits. Prior research indicates positive effects for the entrepreneurs and startups staying in the incubator. It has been highlighted by researchers that the startups and entrepreneurs staying in an incubator have the potential to enhance innovation, commercialization of research, economic growth, job creation and technological progress (Clausen & Korneliussen 2012, Aaboen 2009, Bruneel, et al. 2011, Schwartz & Hornych 2010).

Since it is argued (See e.g. Livingstone & Guile, 2012) that the economy is becoming more and more focused on knowledge and information, makes it important for startup companies to position themselves in a way that gives them access to the knowledge and contacts they need, when they need it. To be able to attain this knowledge it is important for a firm to position itself in the correct way. Joining a business incubator could effect a startups position in a way that would grant access to more information and knowledge that could be used to promote the companies. How this happens is interesting to take a closer look at.

To get an insight in to how business incubators support entrepreneurs and startups, two business incubators and eight startup companies have been chosen as cases. The two business incubators are Gründergarasjen, which are located at IT Fornebu with connection to the

research institute Simula Research laboratory, and StartUpLab which is situated at Forskningsparken with connection to the University of Oslo. The business incubators operate in the arena of tech and ICT, and are chosen because of their appropriate conditions for this research.

Thus, this thesis is going to explore the interaction between business incubators, and entrepreneurs, and how this relationship affects entrepreneurs in their startup phase. This forms the basis for the research questions:

How does staying in a business incubator help startup companies and entrepreneurs to deal with the challenges and resource demands they face in their initial phases of development?

Before going deeper into the concept of business incubators and entrepreneurs some important policy actors will be assessed in connection with their importance to the startup environment in Norway.

1.1 Norwegian policy context for entrepreneurship and incubators

This part of the thesis will give some background and context on why working with entrepreneurs to reinforce entrepreneurial environment is relevant. Business incubators are present all over the world. Many look especially to Silicon Valley where business incubators thrive. This thesis will concern some of the business incubators in Oslo, Norway. So to get some background on the policy support connected to the startup environment in Oslo, a review of some of these initiatives will be presented.

Looking at the annual reports from Innovation Norway (2013, 2014), they clearly state that Norway needs more entrepreneurs, and a sustainable milieu that supports the entrepreneurs and startups. The environment supporting the entrepreneurs has to be improved to create good, sustainable ideas and enterprises in the long run. Innovation Norway (2013) has observed a downward trend in Norwegian industry when it comes to innovation activities. The report refers to a bifurcation of the economy, where growth in oil and gas related sectors drives prices on expertise and capital up, which leads to Norway becoming very dependent on commodity prices and gives the country less diversity in businesses (Innovation Norway 2013, p. 10). This provides strong incentives for why working with innovation and entrepreneurship should be

strengthened, both among entrepreneurs, incubators and in the industrial environments.

Innovation Norway promotes many different concrete proposals in their report. They clearly show that they want a greater focus on entrepreneurs and that they will try to promote an environment that supports innovative activities. In the report from 2013 and 2014 they mention incubators several times. Unfortunately however, the reports do not contain any specific plans on how to execute this commitment to business incubators. This suggests that they are aware that business incubators exist, and that they can be used in a potentially positive way to support entrepreneurs, though it seems a little unclear as to how this is best integrated in the startup environment.

Another actor who supports entrepreneurs and startup companies is The Norwegian Research Council. They show in their annual reports from 2013 and 2014 several initiatives focusing on entrepreneurs and startup companies, and stresses the importance of implementing these into communities and industries. Among several research programmes “Mer Entreprenørskap” (MER), SkatteFUNN and FORNY2020 is emphasized. The MER programme functions as an enabler to create a meeting place, and also the possibility to spread knowledge about entrepreneurship (Forskningsrådet 2013, p. 138). The program will strengthen the development on the research area and support research with relevance for policy. They will also try to create a venue for interaction and dialogue between scientists and stakeholders in research policy (Forskningsrådet 2013, p. 390). The SkatteFUNN initiative is a tax credit scheme that gives all Norwegian companies that have a research or development projects a right to tax deductions. Through SkatteFUNN small and medium sized enterprises can obtain 20 percent of project costs as tax deductions through the tax settlement (Forskningsrådet, 2014). The FORNY2020 program promotes the results of publicly funded research to the market. The program also provides support and funding for startup companies (Forskningsrådet, 2013).

From The Norwegian Research Council it emerges that they want to strengthen the commitment to research on entrepreneurship. They want to establish ties between research and industry to create new combinations and commercialization of research that can create sustainable businesses and industries. This also shows that entrepreneurs and startup firms are something that is valuable to pursue, but it is also here unclear how this should be done in a most prosperous and rewarding way.

The funding and some of the organization for entrepreneurship and innovation are connected to three important government institutions.

The government, Innovation Norway, and the Norwegian Research Council play central roles in the implementation of both innovation and entrepreneurship policies in Norway.

Another important actor connected to the appropriation of funds and development of projects connected to innovation and entrepreneurship in Norway is SIVA. Siva is a public enterprise owned by the Industry and Fisheries Ministry (SIVA, 2015). It is part of the public funding agencies for innovation and work closely with Innovation Norway and the Research Council to improve and support the environment connected to innovation and entrepreneurship.

Business incubators were in 2000 made into a policy instrument in Norway. There are many innovation hubs that are established with partly public ownership, but several of the business incubators are established without any external support. In 2006, 19 incubators were established across Norway, and in 2015 this number have increased to 91 incubator networks, co-working spaces and supporting hubs for entrepreneurs in Norway (SIVA 2013 and Innovasjon Norge 2015).

Nordic Entrepreneurship Monitor shows that Norway has a lot of entrepreneurs and startup companies, but too few of these turn in to viable growing businesses in the long run. National and international evaluations and studies show that companies that have been in an incubator grow faster and are more viable than the average start-ups. That is why SIVA argues that incubation will provide more viable and strong enterprises in Norway (SIVA, 2013).

The next part of this general introduction will present the structure of the thesis.

1.2 Structure of the thesis

In this section it will be shown how the thesis is structured. After the introduction chapter, a chapter concerning the literature review will follow. This chapter will start of with a historical background on business incubators before continuing to elaborate on different definitions connected to the term. Then the chapter will proceed to go through the benefits of the business incubator with emphasis on the resources available, the advantages the startups can achieve and the networks and contact they get access to. The literature introduced here is presented to give a theoretical overview of the benefits connected to staying in a business incubator. Further on the chapter continues to show how the business incubator can absorb and reduce some risk and uncertainty for the startups residing in the business incubator, and why this is important. The chapter ends with a summary concerning some of the disagreements in the literature concerning the value of business incubators and how they are utilized. The chapters' main focus is to show what a business incubator is, how it works and what kind of advantages the startups and entrepreneurs achieves from staying in one.

Chapter three focuses on the concept social capital. It starts off by giving an overview of the historical background of the concept before going through some different definitions of the

concept. After this introduction the concept will be elaborated on, first as an individual concept and then in connection with the business incubator. The theoretical concept is introduced because of its relevance to the research questions and how the framework shows the importance of social relations and informal ties amongst the entrepreneurs examined for this thesis

Chapter four describes the methodological approach of the thesis, with its main focus on the case study as the research design. The methodology chapter will also present and highlight the choices made during the process of working with this thesis. Further, the methodology is discussed in terms of reliability, validity and ethical considerations.

In chapter five the different startups and business incubators are examined. The differences between the two incubators Gründergarasjen and StartUplab are elaborated on in connection with the implication this can have for the research. All the eight different startups that were interviewed examined closer. It is also looked at how the different startups and entrepreneurs differ from each other, and the implications this can have on their stay in a business incubator.

Chapter six is the thesis' empirical analysis chapter, where the data is presented and discussed. The chapter is structured around three main themes summarized after chapter three: challenges the startups and entrepreneurs face, how startups deal with these challenges and how business incubators assist in dealing with these challenges. The chapter is structured around these three themes to answer the research question in the most appropriate manner.

Chapter seven contains a summary of the key findings in light of existing research, and a conclusion in addition to final remarks. It also contains a discussion about the implications of the findings and how they can affect the business incubator and the government agencies dealing with startups and entrepreneurs in Norway. Finally, the conclusion address the research questions by providing some direct answers and elaboration on the questions asked. The section will also contain some final remarks concerning further research and some implications of the research done in this thesis.

2 Literature review of business incubators

Business incubators and how they work is a central part of this thesis. So this chapter is a literature review including some of the central theories, concepts and the historical background connected to business incubators. The field is vast so some central papers are chosen, on the background of their relevance to this thesis, to give an overview of the literature.

2.1 Literature on business incubators

Small and medium size companies play an important role in creating jobs, economic growth and new products, such as apps, sites and software. An example of this is some of the projects that have emerged from the incubator “Y Combinator” in Silicon Valley. It is the home to many thriving businesses like Reddit, AirBnB, Dropbox and 9Gag (Y Combinator, 2014). However, new companies and entrepreneurs do not always have the best conditions to survive. The market is tough, and many companies do not make it through their initial years (Bøllingtoft, 2012, p. 304). The high risk of failing scares a lot of possible entrepreneurs from trying to enter the market. The effect of this, as mentioned, is that the market and the economy possibly misses out on a lot of jobs and value that is never created because of the hard competition (OECD, 2002). Another consequence is that the economy possibly loses out on a lot of new potential to create wealth or new innovations that could steer the economy in a positive direction. This is the case both on a local, regional, and national level (Scillitoe & Chakrabarti, 2010).

Business incubators have been seen as a solution to circumvent some of the obstacles newly founded firms and entrepreneurs face. The solution business incubators give is to try to create a supportive and sustainable environment for startups (Bøllingtoft, 2012, p. 304).

To date, most studies have focused, almost exclusively, on the incubator as the creator of value. The most recent studies attempt to formalize the role of interaction between the startups and the business incubator. Since this thesis will look at the interaction between startups and the incubator, it is important to note that an incubator offers opportunities for the creation of value, but the extent to which value is realized depends on the extent to which the incubating firm or entrepreneur exploits the opportunities presented (Hughes, Ireland, & Morgan, 2007). Firms have a great possibility to get ahead of some of its competitors, but it is up to each individual company to seize the opportunity and use the resources and networks made available to them by the business incubator.

2.1.1 Historical background

According to Aernoudt (2004, p. 127), the process of using business incubators to promote startup companies started in the US. Despite of this, the etymological roots of the concept lie in Europe (Aernoudt, 2004, s. 127). In old Greece people would go to the temple of Aesculpius, the God of medicine, and lay themselves on hides sacrificed from animals. This was supposed to give them visionary dreams, and the practice was called *incubatio*. Incubatio was generally done to obtain a vision on how to overcome diseases and illness.

Gradually the incubatio became a place where premature born infants were brought to be nurtured and cared for. The principle of the incubator is to support premature infants that require to be nurtured in controlled conditions to ensure that they are strong enough to grow and develop after they have left the incubator (Aernoudt, 2004, s. 126). Business incubators are based on the same principles. Their task is to support and assist young firms and entrepreneurs to survive through the start-up phase when they are most vulnerable, and give them the advantage they need to survive in the long run.

The first business incubators were established in the USA in the 1950s. The concept spread out through the rest of the world in different forms (business centers, science parks, innovation hubs etc.) during the 1980s (Bruneel, et al. 2011, EC 2002 and Bøllingtoft 2012, p. 305). These first business incubators offered affordable office spaces and shared resources, but the business incubators we see today offers more than that. So lets look in to the literature to see how the different authors describe business incubators.

2.1.2 Definitions

Business incubators have been around for several decades now, but there is still not a consensual definition to be found in the literature. Some of the most common definitions are put together in Table 2.1.

The definitions are set to show that there is no consensus on a definition for business incubators. That is why it is necessary to elaborate on the different definitions in the various papers to get a grip on the variety of definitions. Another important aspect concerning definitions is the focus on the move from an incubator-centered definition to an actor-centered definition.

Table 2.1³ - DIFFERENT DEFINITIONS OF BUSINESS INCUBATORS

National Business Incubation Association (NBIA, 2012):

Business incubators nurture the development of entrepreneurial companies, helping them survive and grow during the start-up period, when they are most vulnerable. These programs provide their client companies with business support services and resources tailored to young firms. The most common goals of incubation programs are creating jobs in a community, enhancing a community's entrepreneurial climate, retaining businesses in a community, building or accelerating growth in a local industry, and diversifying local economies.

European Commission (EC, 2002, p. 9):

A business incubator accelerates the process of creating successful enterprises by providing them with a range of support, including office space, business support services, and clustering and networking opportunities. Business incubators improve the survival, job creation and growth potential of new start-ups. Difference in stakeholder objectives, admission and exit strategies, the knowledge intensity, and the precise configuration of facilities and services, will distinguish one type of incubator from another.

Organization for Economic Co-operation and Development (OECD, 1997, p. 4):

Technology incubators have four main objectives: 1) economic development; 2) technology commercialization; 3) property venture/real estate development; and 4) entrepreneurship.

Job creation is a main underlying purpose of incubator support for new business formation, especially of technology-based firms. Incubators can also play an important role in strengthening co-operation between public and private actors in regional economic development. They have an outreach role, fostering entrepreneurship and training in the local community. Moreover, incubators have a symbolic role in that they allow governments to demonstrate their efforts to address problems of regional development and unemployment.

Bergek og Norrmann (2008, 4):

Generally an incubator can be viewed as a supporting environment for start-up and fledging companies.

Bøllingtoft (2012, 305):

Organizations that in one way or another help entrepreneurs develop their ideas from inception through to commercialization and the launching of a new enterprise, product or innovation.

Chan and Lau (2004, 1216):

A business incubator is there to assist entrepreneurs with business start-ups and development, and with possible involvement of the public, private and non-profit sectors.

Aaboen (2009, 657):

An incubator provides resources like space, goals, marketing, management, structure and financing to knowledge- and technology-based firms. In other words, an incubator is environment for initiation and growth of these firms.

Hughes, Ireland and Morgan (2007, 155):

A business incubator is a facility that houses young, small firms to help them develop quickly in to competitive businesses. In particular, incubators offer opportunities for collaboration.

³ Based on the table in Bruneel, et al. (2011, 111)

Hackett and Dilts (2004, p. 57) define a business incubator as a facility that provides strategic business assistance and access to formal and informal networks to firms in the early-stages of their development. The universal purpose of the incubator is to create a higher survival rate for firms in their formative years, while adding value to maximize the firms' growth potential and competitive advantage (Bøllingtoft, 2012, p. 305). This definition covers some of the most important characteristics of what the purpose of an incubator is (Bruneel, Ratinho, Clarysse, & Groen, 2011). Because of the extent and the characteristics this definition covers it will be used as the guiding definition when examining business incubators in this thesis.

The next section of this chapter will present some different examples of some different types of incubators to show how they work and how they can be different as to see why it can be difficult to find one common definition for business incubators.

2.1.3 Examples of different incubators

In this section a couple of examples of how some different business incubator's work will be reviewed to give some insight and information about how different incubators operate and function.

The incubator HotBank is managed by the investment group Softbank Venture Capital (SBVC) and is an example of a networked incubator. The incubator's managers from SBVC have their offices in the same building as the entrepreneurs. This is to ensure that the entrepreneurs have the possibility to interact informally with managers if they have any questions, or just want to chat (Hansen, Chesbrough, Nohria, & Sull, 2000, p. 76). SBVC also gives their incubated companies access to big and comprehensive portfolio of companies, which include Yahoo!, E*Trade and Buy.com, among others. For the start-up companies to be accepted to the incubator they need to be willing to give SBVC an equity stake in their venture of up to 40 % (Hansen, Chesbrough, Nohria, & Sull, 2000, pp. 76-77). Selling a part of the company is something that is often hard to do for the founders. If the startup sell an equity share of up to 40 % the entrepreneurs who started the company will soon lose the possibility to do what they want with the company. Some entrepreneurs build up companies just to sell them, while others have a stronger relationship to their idea, and want to keep the ownership of the company internally.

Another example of an incubator is one of the case studies in this thesis, StartUpLab, located in Oslo Science Park. Instead of offering connections to big corporations this incubator offers an extensive network connected to the faculty of informatics and to all the other organizations and businesses located in the science park. This ranges from programmers and computer engineers to potential investors (StartUpLab, 2012). This incubator focuses on

companies related to high-tech and ICT, and tries to provide them with an extensive network connected to these sectors. This incubator does not try to buy equity in the startups, but rather support them by renting out cheap office facilities, and involving them in their network.

It is important to note that there exist a lot of different business incubators with different goals than their incubated firms and the organization that runs the incubator. The two business incubators examined for this thesis are of the supportive kind, not the profit maximizing ones. The two business incubators investigated are freer and more long-term than a lot of other business incubators. The companies are allowed to stay in them for an over a year, in opposition to other incubation programs where the startups have three to six intensive months and financing is included. This kind of incubators was chosen because they are the most prevalent in Norway.

2.2 Benefits of incubators

For the entrepreneurs residing in an incubator it is important for them what kind of benefits they get access to, as opposed to startups and entrepreneurs that do not reside in a business incubator. The discussion on benefits and advantages and the use of business incubators are included because it is necessary to show that this is not just a theoretical concept, but also something that is being used on a more practical level. This is important because when doing the analysis in this thesis, specific, practical business incubators are going to be examined.

One of the first things startups and entrepreneurs has to address when considering joining a business incubator is what kind of incubator they want to be associated with, and what the incubator can offer them. There are, as mentioned, a lot of different types of incubators so it would be central for the firms to get an overview of what they have access to before choosing. It would amongst other aspects be positive for them to have a clear overview of what kind of goals the incubator has. In this way the entrepreneurs and startups would have an advantage when choosing what kind of incubator would be suitable to them. This is an important decision to make and many entrepreneurs do a lot of research before making their choice (FitSampler, 2014).

2.2.1 Resources available in the business incubators

A number of authors define a business incubator by which resources it offers. Aaboen (2009), Bergek & Norrmann (2008), Bøllingtoft & Ulhøi (2005), Chan & Lau (2004), Bøllingtoft (2012) and Brooks (1986) emphasize the elements listed below when characterizing business incubators:

- I. Shared office space (which is rented under more or less favorable conditions)
- II. A pool of shared services (to reduce costs)
- III. Professional business support and advice (legal, economic, strategic, mentoring etc.)
- IV. Access to networks and contacts (internal/external, informal/formal)

The authors do not necessarily agree on which of the factors are most important, but there are some form of consensus around these four points. Based on this, one can say that a business incubator consist of the activities an organization, company or government uses to facilitate start-up companies and entrepreneurs (Hackett & Dilts 2004, Bøllingtoft & Ulhøi 2005, Aaboen 2009 and Bergek & Norrmann 2008).

These authors state that development for a firm improves when startup companies is located in a business incubator. This means that the incubation is defined as the process that enables startup businesses to create competitive advantages, and value, by embedding them in a network system that provides powerful business connections (Hughes, Ireland, & Morgan, 2007, p. 155). These interpretations can be turned around to refine the definition of business incubators as; the outcome of a network model of business and industry contacts and connections that can enable value for firms through establishing and exploiting interactive ties among incubating and networked firms (Hughes, Ireland, & Morgan, 2007, p. 156). The resources listed here are important for the startups and entrepreneurs and are often a big part of the reason for why they join business incubators.

2.2.2 Competitive advantages and speed to the market

The section, concerning competitive advantage and speed to the market, is central concepts to get an overview of before commencing to the analysis. This is because this kind of advantage is something most of the entrepreneurs and startups wish to achieve through their stay in the incubator.

The entrepreneurs rely on the creation of benefits that presents them opportunities to challenge existing players in the market. This can happen in different ways. Competitive advantage is often created through the relational dimension, because it forms from social interaction and represents the assets created, shared and leveraged through relations. The different assets are the resources embedded within, and available through networks of relationships (Hughes, Ireland and Morgan 2007, p. 157). A firm will thus orient its behaviors to seek out, on the one hand, resources, and on the other hand, knowledge to create competitive advantage.

Hughes, Ireland and Morgan (2007) suggests that entrepreneurs can form competitive advantage by forging close, interactive ties, that can be used to leverage knowledge and resources which help them, not only to achieve parity with established competitors, but also develop new ways of overcoming competitive threats. This is one of the reasons why companies choose to stay in an incubator. They can achieve advantages on companies that do not use these opportunities; advantages that can help the companies survive in the market were other companies might fail.

It is important with speed to the market because the startups and entrepreneurs have no sales initially, and it is therefore important for them to examine how they can enter the market and achieve their first sale, and their first customer. The speed to the market for the startups and entrepreneurs in the incubator are an important success factor. Quick market commercialization is important for firms when they try to achieve early cash-flow, early market share, to get early internationalization and to increase the likelihood of survival (Clausen & Korneliussen 2012 and Carbonell & Rodriguez 2006). A central factor concerning speed to the market is the ability to respond to the market including its competitive environment, customer base and social milieu. To seize new opportunities and possibilities to quickly correct mistakes and unintended departures that stray from the original plans is central for startups and entrepreneurs as they are scarce in resources, especially economically, and have limited time before they must succeed in becoming a viable company in the market (Clausen & Korneliussen 2012). They can beat other firms to the market by using the knowledge and information they have gained from the incubator (Clausen & Korneliussen 2012). The speed to the market is important for managers of the incubators as well, due to the fact that a business incubator's survival depends on the success of its tenant firms. Speed to the market is also a central factor for the agencies supporting business incubators and entrepreneurs; because in order to facilitate innovation, economic growth and job creation it is important that the incubated firms and entrepreneurs get their products quickly out on the market. Therefore speed to the market is central for incubated firms, entrepreneurs, incubators managers and policy makers alike (Henard & Szymanski 2001 and Clausen & Korneliussen 2012).

2.2.3 Experience-based knowledge

In the study of Scillitoe & Chakrabarti (2010, p. 157) they focus on two specific and important types of guidance and assistance that startup companies can gain in connection with a business incubator: buyer preferences and technological know-how skills. They find the first point important based on the fact that entrepreneurs launching new ventures have a tendency to focus

too much on their own invention, product or service. This often leads the risk of running out of time and money before getting out on the market. The business incubator can infuse an understanding of buyer needs during the first stages of a product, or service development, and this can increase the potential success-rate and the competitive advantage of the entrepreneur or company (Scillitoe & Chakrabarti, 2010, p. 157). The second point is central because most new ventures are established based on a core technology or software that is created or learned by the entrepreneur(s) internally. The technology or new software created is often providing the primary source of potential competitive advantage for the company or the entrepreneur. If you combine this advantage with technological know-how, the firm or entrepreneur(s) can create the possibility to enable further development and commercialization of the firms' product or services. This can lead to the potential of financial success and value creation for the firm or entrepreneur in the long run (Scillitoe & Chakrabarti 2010, p. 157 and Lee, Lee & Pennings 2001). Business incubators can serve as a valuable source to teach young firms technological know-how skills. So Scillitoe & Chakrabarti (2010) put their emphasis on how startup companies can quickly learn technological know-how skills through business incubators. If the startup company is able to make the incubator management understand their technological needs and difficulties, then the relevant contacts that an incubator manager can provide may prove beneficial when learning technological know-how skills. Further studies suggest that business and technical assistance, as intermediaries in the development and growth of startups, provide significant value to affiliated startup companies and incubator management must have the resources available for such assistance. This is important to create a fruitful and productive relationship between the business incubator and the startup companies (Scillitoe & Chakrabarti, 2010, pp. 166-167).

2.2.4 Networks and contacts

Networks and contacts are reoccurring themes of importance in much of the literature. This thesis identifies the incubator as a network-node in the same manner as what Hansen, et al. (2000) terms "the networked incubator". This means that the incubator provides a network to its tenant firms in addition to the network they create between themselves. In the next chapter, when looking at the social capital theory, networks and how they are used play a very important role.

Rothschild and Darr (2005) elaborate on collaborative relations and networks, they focus on informal ties and if there actually exists informal ties between incubators and enterprises. The authors found clear indications that informal ties exist and are important for the actors involved

in an incubation relationship. They also point out that managers, startups and entrepreneurs in the incubator use them on a day-to-day basis. Another important aspect is highlighting the incubator's role in transforming theoretical knowledge into financial gains through such ties. They show that if a project in the incubator succeeds, the incubator gains, because it has turned knowledge into tangible resources. The incubator also turns into a symbol of something productive. There is something sterile in theoretical work and in the incubator this is connected to the reality of the industry (Rothschild & Darr, 2005, pp. 64-65). Rothschild and Darrs (2005) contribution to the business incubator literature is mainly connected to elaboration on informal ties. They try to shed some light on the question: "Are ties between incubators and the institutions as strong and meaningful as they are portrayed?" (Rothschild & Darr, 2005, p. 66). Their data points to the variety of strong meaningful ties between the incubator and a research facility. These ties were extensive and based mainly on informal contacts between parties involved. They also suggest that the informal exchange of knowledge and know-how was a part of a wider barter economy between the incubator and the research facility and between the different startups and entrepreneurs inside the business incubator (Rothschild & Darr, 2005, p. 66). The authors emphasizes that the incubator is a living example of how an active work relationship between a research university and a business incubator is a very efficient way of promoting innovation management.

Fang, Tsai and Lin (2012) and Hughes, Ireland and Morgan (2007) point out that the main objectives of networking for entrepreneurial firms are to obtain competitive advantage and acquisition of knowledge. These connected incubators have sprung up now because of the critical need for access to information, knowledge and know-how (Fang, Tsai and Lin 2012 and Hughes, Ireland and Morgan 2007). The Internet economy of today is very much a network economy in which access, ties, networks and connections can help to quickly launch businesses and speed the diffusion of new technologies (Hansen, Chesbrough, Nohria, & Sull, 2000, p. 78).

Hansen, et al. (2000) also puts their main emphasis on networks. They emphasize the phenomenon they call "the networked incubator". This is a business incubator that is connected to a big corporation and has the access to use the corporation's networks and resources to beat their competitors to the market. These kinds of business incubators are also used to gain competitive advantages for the firms that involve themselves with these. The networked incubators combine the benefits of two diverse worlds – the scale and scope of large established corporations and the entrepreneurial drive of small venture-capitalist firms. To this mix, networked incubators add enhanced network access to key business partners, making such organizations especially effective for growing start-ups in the economy (Hansen, Chesbrough,

Nohria, & Sull, 2000, p. 80). The authors believe that organizational models that exploit entrepreneurial drive and network access while persevering the benefits of scale and scope will be the most potent models for long-term success in what they refer to as “the new economy”. Semrau and Werner (2014) also find networks as a particularly important part of the resources a business incubator provides. They also found that the firms have to balance their networking. Networking is not an unlimitedly good activity to perform for a firm. At some point positive gains to be had from networking turns over, and becomes an unnecessary burden. This happens because a lot of resources, especially time, are necessary to be invested to keep up the contacts with different networks and ties. Maintaining a network of essential ties seems the best way to go about it as an entrepreneur (Semrau & Werner, 2014, p. 507).

2.2.5 Reducing risk

Risk taking involves bold actions by deliberately exposing yourself or your firm to, usually financial, uncertainty (Rauch, Wiklund, Lumpkin, & Frese, 2009). This is a vital point to elaborate on for this thesis. The actors that start up a company will always face some kind of risk and uncertainty. The business incubator can help the startups manage some of this risk and absorb some of the uncertainty. This can make it easier and more attractive to become an entrepreneur.

As an entrepreneur one works for the opportunity to assume personal risk for gain, this means that actors that separate themselves from hired employees also have to live by the uncertainty and riskiness of self-employment. Thus, the concept of risk taking is a quality that is frequently used to describe one central factor of entrepreneurship (Lumpkin & Dess, 1996). The problem with risk is that it often acts as a hindrance to entrepreneurship, a lot of possible entrepreneurs do not dare to take the risk of failing when considering to start up something of their own. This is why an environment that can absorb some of this uncertainty is needed to create a safer and more stable milieu for startups and entrepreneurs.

A point Phan, Siegel and Wright (2005) make is that incubators can absorb some of the uncertainty; venture capitalist can monitor entrepreneurial effort and through organizational learning incubators can work as a way to form knowledge-creation and commercialization of research. This can be a win-win situation for all the parties involved, the entrepreneurs get their company up and running, the researchers get their research commercialized and the investor or venture capitalist can cash out on their investments (2005, p. 180). So the business incubators can absorb some of the uncertainty and risk for the different startups and entrepreneurs for them to not risk too much when starting up their business.

Aernoudt (2004) also points out some problems connected to financing and creating sustainable business incubators. He finds that a twin strategy is needed. First it is necessary to build a dynamic business environment. An environment like this should ensure a milieu in which companies can be created, grow, innovate and think new within competitive markets. A milieu like this should also be supported by an effective innovation policy. The policy must be attractive, simple and user-friendly in how it helps to finance small businesses with risk capital. Secondly, risk-taking and an entrepreneurial spirit should be encouraged. Barriers to risk-taking should be removed at all different levels (Aernoudt, 2004, s. 134). This is something that is clearly easier said than done. Risk taking is something that is involved when you are an entrepreneur, a factor the startup companies would have to deal with continuously, as further elaborated on later in this thesis.

Brooks (1986) agrees to some of these points. He notes that it is also important to remember that incubation is the process of heightening community support for the entrepreneur. The community awareness is a central subject that drives the success of incubation. Therefore it is important that the economic development is supporting and promoting the efforts of incubators. A network designed to assist entrepreneurs and startup firms should link incubators development in a direction that supports those business relationships that appear between companies in separate locations (Brooks, 1986, p. 29). This is a big part of creating a good and sustainable incubation environment for entrepreneurs.

2.3 Disagreement in the literature about the value of business incubators

Although most of the literature discussed here agrees that business incubators are in some way positive for startups and entrepreneurs, there are some, which argue against the positive aspect of the business incubator.

Chan and Lau (2005) do not necessarily agree with the prevalent literature concerning the fact that entrepreneurs and startups perform better with a connection to a business incubator than if they did not have this connection. From their research they find that most of the entrepreneurs they speak to mention that rental subsidies are the major advantages of joining incubation programs. But their study shows that the firms they examined did not achieve these benefits. They state that the net benefit from joining the incubation programs is overestimated (Chan & Lau, 2005, p. 1225). Even when the authors look at other functions organized by the business incubators, such as marketing events, press conferences, seminars etc., the tenant firms

are generally not impressed. A lot of them point out that the activities organized are not relevant for their business development. The authors point out that the positive gains from an incubator program are only partly true in practice (Chan & Lau, 2005, p. 1225). Moreover it is also found that tenant firms in a business incubator do not gain any benefits from networking and clustering. So the potential rapid growth incubated firms supposedly achieve from being in a business incubator is not confirmed in this study (Chan & Lau, 2005, p. 1227). This is in direct opposition to the findings of, among others, Semrau and Werner (2014). They underline the claim that networking activities, such as investing time and energy in extending a network and increasing relationship quality, may facilitate access to much needed resources for entrepreneurs. Strong views presented by some of the actors in Chan and Lau's (2005) study express that the argument for having incubators is more a political show to justify government's investments, than it is using money wisely to create a better and more sustainable growing-environment for small and fledging firms.

Bøllingtoft (2012) also comes to a somewhat different conclusion than many of the other authors. She points out that incubators can be looked at as a flawed model because they take the initiative away from the entrepreneur. Therefore she suggests a model she defines as the bottom-up incubator. This incubator depends on initiatives from the entrepreneurs. Initiatives related to demonstrating commitment to the shared values and norms in the incubator are necessary to make it sustainable. She emphasizes the importance of risk for the entrepreneurs connected to the ordinary business incubators. They get used to an environment where the conditions are artificially good for entrepreneurs and startups. They may risk never getting trained, or never develop the ability, to manage and survive, outside the incubator (Bøllingtoft, 2012, p. 313).

It is interesting that Chan and Lau (2005) and Bøllingtoft (2012) concludes with different results and suggestions compared to a lot of the other research. It is important to note that the effects of staying in a business incubator are debated, and it is not necessarily an entrepreneurial aid that it is a consensus on are the best aid for entrepreneurs. Different studies in different parts of cities, regions and countries will probably create different outcomes. The different literature looked at in this chapter has different approaches to business incubators so it is natural that the results and conclusions they reach are different.

2.4 Summary

In this chapter some central papers and research concerning business incubators has been reviewed. Some central topics concerning how the business incubator works, how it is defined, in addition to the types of benefits one can expect to get from involvement with a business

incubator were shown. The papers and the research chosen in this review were selected because they are relevant to provide the basis of information for the case, analysis and discussion.

The chapter has also shown some of the disagreements and critique concerning the concept. It is important to show some of the academic debates concerning the concept of the business incubator. It is looked at in different ways and different researchers and actors see the effects of using business incubator in different ways.

3 Social capital and business incubators

The concept social capital is significant for the theoretical analysis of this thesis because of the emphasis put on social relations, collaboration and networks as central resources for entrepreneurs located in business incubators. Social capital elaborates on these themes very well, and thus makes this theory applicable to the analysis. It is a central theory connected to the use and explanation of some of the important aspects of how entrepreneurs or startups benefit and create potential competitive advantage by spending time in an incubator. This is often done through establishing connections between the startups and entrepreneurs in the incubator, and their use of the incubators' already existing network. The way the theory is going to be applied to the empirical material is by showing how the concepts of social capital and absorptive capacity are used to create and use network relationships that give the potential to promote advantages and deal with challenges for the different firms and entrepreneurs.

This chapter is therefore going to address the theoretical aspects of social capital. To get a good grasp of the concept, this chapter will start with the emergence and the historical background of the concept before diving in to the theoretical aspects, such as definitions and different concepts. After the concept of social capital has been properly examined, it is natural to look at the theory of absorptive capacity, as this is a very relevant concept in connection with social capital. The absorptive capacity theory is important because it explains the way actors grasp, and understand knowledge and information in a network. As mentioned above this is central for the analysis and it will be natural to include this theory.

When this is in place, an elaboration concerning the connection between social capital and business incubators will be performed. This is to establish why social capital theory is relevant when analyzing business incubators.

3.1 Historical background

According to Bruni and Sugden (2000) the concept of social capital has been commented on by many, they show that the eighteenth-century philosophers Hume, Smith, and Genovesi had a clear view of this concept without using the same explicit term. They put great emphasis on the importance of trust and other elements of society's economic life. These traits are today concentrated and summarized under the concept of social capital.

The concept was applied in community studies where it was used to show the central importance of the networks of strong, crosscutting personal relationships developed over time that provide the basis for trust, collaboration, cooperation, and collective action (Jacobs 1965).

The central position of the social capital theory is that networks of relationships constitute a valuable resource for the members of one or another type of solidarity or collective (Bourdieu 2002). Researchers have focused on the role of social capital as an influence not only on development on human capital, but also on the economic performance of firms. The economic performance can be enhanced by investing in social capital because of the possibilities of potential advantages that can be created through network relations (Nahapiet & Ghosal 1998, p. 243). During the 1990s the concept came to general use alongside the more established concepts of financial, real, and human capital. Unlike its companion concepts, the idea of social capital does not stem from the discipline of economics (Westlund 2006, p. 1). Bourdieu (2002) brought the concept to Europe and he was the one that popularized it alongside his better-known concept of cultural capital. Bourdieu (2002) identified that the durable obligations arising from feelings of gratitude and friendship or from the institutionally guaranteed rights derived from membership in a family, a class or another form of community was valuable for the members. The value was often in ways that was hard to put an exact economic prize on, because the value is often individual and will hence vary from firm to firm. This has led the popularization of the concept, where researchers try to show how firms and actors should position themselves to make the most of social capital.

There have also been a lot of discussions as to how one defines the concept. Various proposals have been made for a common definition, but the researchers have not found a consensus regarding a definition that has been widely accepted.

3.2 Definitions

There is as mentioned no consensus on the precise definition of social capital. So in this section different definitions will be elaborated on to show the scope of some of the various definitions. In the end a definition that suits the purpose for this thesis will be developed based on other definitions in the literature.

The definition of social capital Bourdieu used is: “*the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships mutual acquaintance and recognition*” (Bourdieu and Wacquant 1992, p. 119). Bourdieu's definition shows that his view on social capital is an individual-related resource based one. This means that he sees the individual as the important part of the network that creates social capital. He also notes that the network must be more or less institutionalized. A lot of the other researchers in the field disagree with Bourdieu on this particular aspect of his definition (Watson 2007, Granovetter 1973, Hansen, et al. 2000, Fang, Tsai and Lin 2012, Hughes, Ireland and

Morgan 2007 and Westlund 2006).

Nahapiet and Ghosal (1998, p. 243) define social capital as: *“the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit”*. This definition comprises both the network of different relationships and the assets that may be mobilized and activated through the network. The members of the network can gain privileged access to information and opportunities (Nahapiet and Ghosal 1998, 243). This definition agrees with Bourdieu on the point that it is important to include the potential and actual resources that can be accessed through networks as an important part of the definition (Nahapiet and Ghosal 1998, p. 243).

The concept of social capital has gotten a lot of important attention over the last years. An example of this the OECD report called *The Well-being of Nations: the Role of Human and Social Capital* from 2001. This report provides another important definition of the concept and shows how the concept has gotten political international recognition. The definition OECD uses in their report is: *“networks together with shared norms, values and understandings that facilitate co-operation within or among groups”* (OECD 2001, p. 41). This definition is very general and applicable to all parts of society, not only the civil society. This makes this definition highly applicable to a wide field.

In his book *Social Capital in the Knowledge Economy* (2006, p. 8), Westlund defines social capital as: *“social non-formalized networks that are created, maintained and used by the networks’ actors in order to distribute norms, values, preferences and other social attributes and characteristics, but which also emerge as a result of actors sharing some of these attributes”*. An important feature of this definition is the last part. Because the actors share some of the same attributes in question it is easy for them to participate and get something mutual out of the cooperation. It is easier because the actors has some of the same beliefs and attributes, and because they speak and perceive the same inter-organizational language. This makes it much easier for the actors to communicate and transfer knowledge between them. The concept regarding these kinds of interactions and possibilities falls under the theoretical concept of absorptive capacity. This is a concept that will be elaborated further on later in this chapter.

The last definition to be examined, is proposed by Groen, Wakkee and De Werd-Nederhof (2008, p. 63): *“the set of network relations through which actors can utilize, employ, or enjoy the benefits of capital that is controlled or owned by other actors”*. This definition is developed in the context of high-tech startups searching for excellence through entrepreneurial activities. This definition fits very well with the theme of this thesis because of its focus on high-tech entrepreneurs and startups utilization of their network and the relations with the incubator and the other firms in

the incubator.

As shown, there are a lot of different definitions and perceived content regarding the concept social capital. The last definition is best suited to the industry, which this thesis will examine, but it misses some of the scope of the other definitions. Therefore this thesis will work out a custom made definition made to suit the subject at hand. The definition is assembled from the most relevant features from the above definitions. This thesis identifies social capital as: *the set of non-formalized network relations through which actors can utilize, employ, or enjoy the benefits of capital, resources and relationships that is accessible through interactions, mutual acquaintance and co-operation, but which also emerge as a result of actors sharing some of the same attributes.* This is the definition used when discussing social capital throughout this thesis.

The next section will dive more deeply in to the aspects of the concept and show how it works and how it is used to explain different phenomenon connected to network relations.

3.3 Social capital and entrepreneurship

Now that a proper definition is set it is time to look more thoroughly at the concept of social capital and the context in which it is used.

As a set of resources rooted in relationships, social capital has the different attributes to explain how it works for the parties involved. Granovetter (1992) elaborates on two of these attributes. First he identifies structural embeddedness, which concerns the properties of a social system and of the network of relations as a whole. This term describes the impersonal communications and configurations between groups or people. The concept structural embeddedness is used to show the overall pattern of connections between actors, meaning whom you reach and how you reach them (Nahapiet & Ghosal 1998, p. 244). The second attribute he notes is that of relational embeddedness. This concept describes the kind of personal relationships people have developed with each other through a series of interactions and (in)formal meetings. This concept focuses on the relationships people have, such relationships as friendships, partnerships or companionships, which have an influence on their behavior towards each other. It is through these ongoing personal relationships that people get the social motives to share experiences, networks and contacts that can be interesting, valuable and a resource that entrepreneurs can use to create advantage and give themselves a competitive edge when entering the market. The entrepreneurs wish to use their social capital to gain some knowledge or connection that will help them promote their product or service in a way that would not be possible without the use of the relations and networks created through social capital. Social motives can create approval and prestige between the involved actors and create feedback effects

that keep enhancing the relationships (Granovetter 1992 and Nahapiet & Ghosal 1998, p. 244).

As pointed out, social capital resides in relationships, and relationships are created through frequent meetings and social exchanges. The patterns of linkages and relationships built through them are the foundation of social capital. There is a lot of strong research pointing to the fact that where parties trust each other, they are more willing to engage in cooperation and collaboration where further trust may be generated (Fukuyama 1995, Putnam 1993, Kramer & Tyler 1996). That is why the access and membership in an business incubator can be of great value to the entrepreneurs and startups when trying to build their social capital on their way to market realization. Unlike other forms of capital, social capital is controlled mostly by the actors in the relationship, and no one player has, or is capable of having, exclusive ownership rights or more power to control than any of the other players (Burt 1992).

Social capital, even though it has value in use, cannot be traded easily. It is not possible, to simply transfer friendship and companionship from one person to another. That is why to gain social capital it is necessary to put in the right amount of socializing, with the right people in the right arena. It is also important that the entrepreneurs know the arena and the actors relevant to them inhibit, so that they do not waste time on establishing relations with actors that is of no use for the startups development. But this part of the process can be hard for the entrepreneurs. It is not easy to filter out the right actors and networks to be a part of. That is why it is potentially the right move for the entrepreneurs and startups to be in contact with a business incubator. Here the networks, knowledge and information are often gathered in one place thus making it more manageable for the startups and entrepreneurs to digest. It is also important to have the capabilities to be able to absorb the relevant knowledge. This is where absorptive capacity comes in, a concept that will be discussed later in this chapter. The knowledge and network that actors hold can be very useful and valuable to each other, but there has to be some sort of link between them to utilize this value.

This link can often appear through network ties. Some of the fundamental propositions of social capital is that access to a network, provides access to resources and that social capital constitutes a valuable source of information benefits. As Nahapiet and Ghosal (1998, p. 252) points out: “whom you know affects what you know”. As an actor you need to position yourself considering what kind of information you want to get access to. Information is central when providing a basis for action, but information is often costly and difficult to gather. To reduce the cost, and ease the transfer and flow of information, social relations, often established for other reasons, can be used to constitute information channels. These channels can reduce the amount of time and investment required to acquire information and knowledge desired

(Nahapiet & Ghosal 1998, p. 252).

Burt (1992) proposes that the information benefits connected to social capital occur in three different forms: access, timing and referrals. *Access*, in this context, points to receiving valuable information and knowing who can use it. The term also identifies the role of networks in providing an efficient screening and distribution process of information for the members of the network. *Timing* of information and knowledge flows points to the ability of individual contacts to provide information personally, and sooner than it becomes available to people outside the personal network (Burt 1992). To get access to information prior to your competitors can give you a competitive advantage. This is especially important in commercially oriented research or for entrepreneurs, because speed to the market may be a crucial factor for determining success, as mentioned in the last chapter. The third form of information benefits Burt (1992) identifies is *referrals*. It is the processes providing information on available opportunities to people and actors in the network, and in this way influencing the opportunity to exchange and combine knowledge. Burt (1992) continues to note that an actor positioned in a network with a lot of information benefits, has contacts established where useful information and knowledge are likely to air. The established network is often also connected to a reliable flow, which will constantly renew itself. It takes a seasoned actor to know where to position itself a network. This is a trait that needs to be learned, but entrepreneurs often do not have the time or the resources to learn this. Time for them is valuable, so to get access to network where relevant information and knowledge are likely to air is often out of reach. But if the entrepreneur or startup uses the potential of the business incubator some of these obstacles of information gathering can be eliminated. It is not certain that moving in to a incubator will solve all the entrepreneurs problems connected to information and knowledge, but it often gives them a possibility to be at a hub where a lot of information and knowledge is centered and passes through. It will still be up to the individual entrepreneur or startup to grasp the information possible and make use of it in a way that can create an advantage for the firm. This again points to the concept of absorptive capacity. This is a needed attribute for entrepreneurs when trying to position themselves in a knowledge hub like a business incubator.

There are many different types of networks. Burt (1992), Jacobs (1965) and Granovetter (1973) all agree that in particular the sparse network, with few redundant contacts and actors, provides most information benefits. The denser network is more inefficient because it returns less information and lesser knowledge flow for the same cost as that of a sparse network. The sparse network is more beneficial to an actor because it derives from both the diversity of information and the lower cost of accessing it (Nahapiet & Ghosal 1998, p. 252).

The knowledge, information and value the actors possess in networks are often tacit, and that makes it difficult to transfer. Social capital plays an important, but multifaceted factor in these types of transfers (Westlund 2006, p. 91). Johansson (2005) points out that knowledge transfers take place through two types of processes: on the one hand deliberate, formalized transactions, networks and other club-like arrangements between actors, and on the other, unintended knowledge spillovers caused by non-formalized interactions. In both these two types of processes, social links, and the norms and values associated with them, all play an important role. This is because social relations facilitate knowledge transfer while absence of relations or bad relations does not (Westlund 2006, p. 91).

The next part of this thesis is examining the connection between social capital and the business incubator. This is an important connection that is necessary to elaborate on to show how the two work together, and how this influences the entrepreneurs and startups that are housed in a business incubator.

3.4 Social capital and the business incubators

Since business incubators are a central part of this thesis, this part of the chapter will address the relationship between social capital and business incubators, and why this relationship is important. This part of the chapter will also include some important features connected to knowledge transfer in the business incubator and an elaboration and explanation of how the incubator works as a bridge or knowledge hub. In addition to these features it will also contain a section connected to uncertainty and risk.

Startups and entrepreneurs often find it difficult to create value because of their restricted access to resources, knowledge, information and social capital. The liabilities on these factors make the firms and entrepreneurs vulnerable to market conditions and competition, because these attributes are typical characteristics of modern day market environments (Hughes, Ireland and Morgan 2007, p. 155). This is why entrepreneurs and startups tend to turn to business incubators. Incubation programs provide opportunities for entrepreneurs and firms to form social relations and gain access to resources by stimulating their resource mobilization and knowledge flow (Hansen, et al. 2000). Hughes, Ireland and Morgan (2007, p. 155) suggest that when incubating firms develop strong interaction within the network provided, they generate social capital. This can create substantial value, which again can increase performance for the entrepreneur or firm through the creation of a competitive advantage that can put them in front when entering the market. Fang, Tsai and Lin (2012) show how different tenants make different use of the incubator's position by utilizing their relationship with the incubator and the social

capital generated from such relationships for effective learning. The pursuit of a truly strong network position is, as mentioned earlier, very difficult for the entrepreneurs and startups in the early phases of the company's activities. That is why building and maintaining effective and strong relationships with those already in beneficial positions is often more realistic and promising (Fang, Tsai & Lin 2012, p. 94). This connection can for example be made with a startup company that have gone through the first phases of incubation, and are one step ahead in the process. They have just experienced the first steps and are aware of the pitfalls to avoid. This can be a very valuable resource for firms and entrepreneurs just starting up. The business incubator makes a potential very good arena for providing these linkages between actors in the incubator.

3.4.1 Knowledge sharing

The actors involve themselves in interactions with other firms and the strategic network provided by the incubator to acquire knowledge (Hughes, Ireland & Morgan 2007, p. 158). Access to knowledge comes from interaction, discussions and dialogues between actors in a network. It is very difficult to pool this kind of knowledge because of its intangible and asymmetric properties and depends on interpretation. So to get access to knowledge it is important for firms to position themselves close to where knowledge sharing is frequent. Knowledge sharing is the basic reason for firms to concentrate and congregate themselves together. An incubator's network provides excellent opportunity in this regard, but it can only be realized through extensive firm behavior in strategic network involvement (Hughes, Ireland & Morgan 2007, p. 158). It is still necessary for the entrepreneur or startup to be active when trying to realize their potential. Passivity will ruin the possibilities granted by the network in the incubator. That is why it is important for the startup firms and entrepreneurs to be active when staying in a business incubator, especially in the initial phases of development.

Social capital theory shows that building interactive relationships in networks influences a firm's performance by varying the conditions necessary for knowledge sharing and value creation. The concept suggests that incubating firms should pursue a relational strategy in which they focus on using network activities to create and instigate beneficial relationships with other firms (Hughes, Ireland & Morgan 2007, p. 159). Social capital develops when the ties among firms or entrepreneurs are interactive and strategically important, this often happens when incubating firms utilize resource pooling activities and strategic network involvement.

3.4.2 The incubator as a bridge or hub

An important factor, when considering the network in an incubator, is that the incubator, rather than any single tenant, very often has a lot of knowledge about the overall situation and distribution of embedded knowledge within the incubation network (Fang, Tsai & Lin 2012, p. 92). So while the interactions concerned with the exchange of information and knowledge inside the network can be free and democratic, the incubator often has the best overview of the information and knowledge available. Because of this, it is often referred to as a bridge or orchestrating hub (Burt 1992 and Dhanaraj & Parkhe 2006). So for the entrepreneurs and startups it is advantageous and beneficial to build high-quality relationships with their incubators. This has a good chance of improving both the quality and the quantity of interaction, and the willingness and capability of incubators to transfer knowledge from direct or indirect sources from their extended network (Fang, Tsai and Lin 2012, p. 95). Having a high-quality relationship with the incubator helps to construct a shared environment for knowledge creation and learning that attracts both incubators and the entrepreneurs to participate in collective contribution and actively share what they know (von Krogh, Ichijo & Nonaka 2000). The business incubator can also take the part as a facilitator and connect different actors inside the incubator with each other. The management of a business incubator will always be aware of its tenants, and a good business incubator should also be aware of their immediate needs. This should make the business incubator facilitate collaborations between actors where this could be of mutual benefit.

3.4.3 Risk and uncertainty

As a countervailing force to knowledge sharing in an incubator is the fact that firms tend to be cautious and conservative of releasing their ideas and resources, and in sharing their knowledge for unknown returns. Conditions like these tend to spark concerns that may inhibit logical behavior. This means that the collaboration in an incubator can create something of a paradox that is caused by its inherent uncertainty (Fang, Tsai & Lin 2012, p. 160).

It is easy to tell firms that it is beneficial for them to interact continuously, but firms tends to be wary of the uncertainty of outcomes or risks involved, and this will often constrain their interactions. Another countervailing force is connected to prior external connections. Connections from outside the incubator network may demotivate an incubating firm's networking activities inside the incubator, thus limiting interaction and likely diminishing the potential value and social capital they create from opportunities made available by the incubator. In doing so, the firm denies itself the possibility to realize these opportunities, and hence suffer a strategic cost (Fang, Tsai & Lin 2012, p. 156). These forces can be hard to overcome, but if the

entrepreneur or startup looks to other firms collaborating in the incubator, they will probably find that by collaborating, they can create value and increase performance through the creation of advantages that they are missing out on. This is what underpins networked incubators. Even if it is not wrong to ignore the implicit social network within an incubator, it is wrong to ignore the possibility and the opportunity. Evidence suggests that developing social capital and actively seizing network opportunities is a pathway to competitive advantage, a feat that is very important for startups and entrepreneurs. It also represents unethical activity as disadvantaged firms in need of the facilities and opportunities offered by the incubator are prevented from realizing these possibilities (Fang, Tsai & Lin 2012, p. 156). Not to partake in the network provided by the incubator means that the firm or entrepreneur is denying itself the very opportunity behind incubation in the first place; the means to overcome its liabilities of newness. It is the possibilities created by staying in an incubator that is important for the entrepreneurs or startups. They get a unique opportunity to use the network to position them in a way that will give a potential advantage. If the startup is not interested in using the business incubator for its potential then it is tempting to suggest that someone else should get their spot.

As mentioned several times previously in this chapter, absorptive capacity is considered necessary for entrepreneurs and startups when positioning themselves in a hub where knowledge and information is shared. The next section is therefore going to elaborate on the concept of absorptive capacity as one of the steps in building the theoretical framework.

3.4.4 Absorptive capacity

To make use of social capital through the information and knowledge that is flowing across different networks, the actors have to be able to distinguish and absorb the information that is relevant to them. Without the ability to filter out what is important, social capital would be a lot less valuable, and a lot harder to transform into something of value and advantage for the actors. To filter out what kind of information is relevant and who possesses this information, it is necessary with some distinctive prior knowledge. This kind of knowledge is termed absorptive capacity.

Cohen and Levithal (1990, p. 128) further elaborate on this point, and argue that the ability to evaluate and utilize outside knowledge is largely a function of the level of prior related knowledge. At the basic level, this prior knowledge includes basic skills or even a shared language, but more complex knowledge can also be necessary, like knowledge of the most recent scientific or technological developments in a given field. This gives actors with prior related knowledge an ability to recognize the value of new information, assimilate it, and apply it to

commercial ends. So the absorptive capacity of the firms helps them to acquire and transform relevant information to possible competitive advantages and deal with challenges they face (Cohen & Levithal 1990, p. 128).

Cohen and Levithal (1990) argue that learning capabilities typically constitutes the prior knowledge that permits individuals to acquire related problem-solving capabilities. They continue to point out that problem solving and learning capabilities are so similar that there is little reason to differentiate their modes of development. The difference often comes connected to what is learned. Learning capabilities involve the development of the capacity to assimilate existing knowledge, while problem-solving skills represent a way to create new knowledge. The necessary preconditions for successful learning do not differ from the preconditions required from problem solving, and in turn, for the creative process (Cohen & Levithal 1990, p. 129). The prior possession of relevant knowledge and skill is what gives rise to creativity, and this is permitting and forming the sorts of associations and linkages that may never have been considered before. This is a very important feat for entrepreneurs trying to get ahead in a very competitive market. The part played by the entrepreneurs in a business incubator is not only passive recipients, but also active in the process of knowledge creation and creativity. So the learning capabilities and skills connected to problem solving will be very relevant for entrepreneurs and startups staying in a business incubator.

Interactions between actors who each possess different knowledge structures will augment each other's capacity for making novel linkages and innovating, beyond what any one individual actor could achieve by him or herself. And it is not just technological knowledge; it also includes awareness of where useful knowledge and expertise resides within an expanded network. This sort of knowledge can address information concerning who knows what, who can help with what problem, or who can exploit or use this information (Cohen & Levithal 1990, p. 133). This refers to a point made earlier in this chapter, that where and how you position yourselves in the network is important for the relevant information and knowledge outcomes. This is especially important when trying to gain the optimal use of a business incubator's network. Nelson and Winter (2009) elaborate further on this point and suggests that much of the detailed knowledge and objectives of organizational routines and objectives that permit a firm and its R&D lab to function is tacit. The same can be said about networks, a lot of the information that flows through the network is tacit. That is why it is important for actors that want to position themselves in a beneficial manner to be aware of the need for absorptive capacity to be able to pick up on tacit knowledge.

Findings by Lane and Lubatkin (1998, p. 474) suggests that a firm devotes at least as

much attention to managing its networks and knowledge- and information-flows as it does managing its physical assets. As competition becomes more information- and knowledge-based, a startup or entrepreneur must develop a thorough understanding of its own knowledge, the process by which it converts knowledge to capabilities and commercial assets, and the capacity of those capabilities to meet its demand from the environment. Without this kind of self-awareness, an entrepreneur or startup will be slow to react to the market forces that inevitably erode the combined strategic value of its set of capabilities. This is an important feat for entrepreneurs, because they need all the help they can get to position themselves correctly in terms of absorbing the information and knowledge that can get them in favorable positions. This again can create the possibility of competitive advantages when in direct competition with other actors and help them deal with the challenges they face.

3.5 Summary and analytical framework

This chapter has laid the groundwork for the theoretical aspects of this thesis. The purpose has been to get a definition of social capital in place, and to show why social capital and absorptive capacity are important concepts when this thesis continues towards the analysis, and in the end to answer the research question. The concept of social capital demonstrates how potential competitive advantage and value is created for the firms staying in a business incubator and by taking an active part in the network provided. The concept of social capital also supports the discussion on how the concept can be used as a positive outcome of networking relationships. Absorptive capacity is, on the other hand, going to show how the actors are screening and find out what kind of knowledge is relevant for them and how they should position themselves in the network to obtain this knowledge and information. Absorptive capacity will also be used to show what kind of prerequisites the entrepreneurs and startups need to have in place to be able to maximize their benefits from networking.

The two former chapters have told a lot about business incubators, entrepreneurs and social capital. The hypothesis for this thesis, based on the literature reviewed, would suggest that in most cases business incubators will help startups and entrepreneurs to develop their product, company or idea in a more viable way than if they had not been affiliated with the incubator.

The previous chapters has also provided a theoretical background, and sketched out three main topics that will be addressed in the empirical analysis. The first one is the challenge the startups and entrepreneurs face in their earliest phases. They need resources, knowledge, a way to manage risk and uncertainty, financial aid and a way to utilize their possibilities. The second topic is connected to how they handle these problems and challenges by using social

capital. They use network connections to develop their company through the demanding initial phases of the startup period. This is not necessarily easy for one actor to do by itself, and this is where the business incubators come in. The third topic is linked to how the business incubators work as a way to institutionalize some of the network benefits and help the startups and entrepreneurs cope with these common challenges. The business incubator also provides an institutionalized procedure to create social capital that again can be accumulated to create risk reduction, knowledge sharing, possibilities and collaborations for the startups. It is worth noting that these benefits are just possibilities that create potential for the different startups and entrepreneurs. It is up to each company to use the resources and capital available in a way that is most suitable for the development of the company. The three topics from the two previous chapters are summarized in figure 3.1.

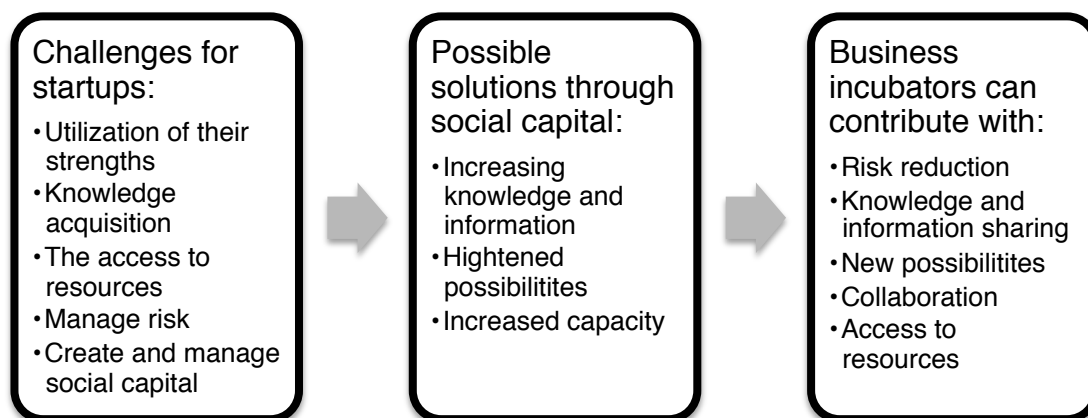


Figure 3.1

In chapter five and six this will be addressed empirically. But first, the methodology of the empirical study will be described.

4 Methodology

This chapter will justify and present the different choices made during the research design, the choice of research objects and how the data was collected and analyzed. This is done to provide the research with the transparency needed to strengthen the reliability of its findings. The chapter will begin with an introduction of the qualitative study approach, including case study, to give a brief overview of this methodology before showing how this approach was chosen as the proper design for this research. Then the different cases will be examined further, before showing how the data was gathered. Towards the end of the chapter, the processes of the analysis will be looked at before concluding with a discussion concerning validity, reliability and ethical issues concerning this research.

4.1 Qualitative studies

When doing a qualitative study the goal is to examine and account for a social phenomenon. The phenomenon examined is often not quantifiable, unlike quantitative research. This kind of research concerns itself to a greater extent with observations that can be measured with numbers, and can be used to make general assumptions of for example social processes or how the society is shaped and how it is developing. The general assumptions made are on a macro-level, and can show some of the general trends in society. Research performed on a micro-level, through qualitative research methods, can show how actors might break with the common behavior in a society, or in a group. This can unveil very interesting information, and is therefore a research design that can be well worth following to discover a phenomenon that violates the common and “normal” processes and phenomenon in society (Winchester & Rofe, 2010). These are questions that often start with *why* or *how*, and seek to examine question that are necessary to get in-depth information and knowledge about a social phenomenon (Yin, 2009). An example of one of the qualitative studies is the case study. This is the method utilized in this thesis.

4.1.1 Case study

The methodology of the case study approach is defined in different ways by different authors. Yin (2009, p. 18) defines the case study as: *“an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”*. This shows that one would use the case study method because one want to understand a real-life phenomenon in depth, but such understandings encompasses important contextual conditions. The logic of this design then helps to continue to distinguish

case studies from other research methods (Yin, 2009). Baxter (2010, p. 8) has a slightly different definition of the case study. He defines case study as: "*the study of a single instance or small number of instances of a phenomenon in order to explore in-depth nuances of the phenomenon and the contextual influences on and explanations of that phenomenon*". This shows that some of the purpose with case studies is to develop a thorough understanding of what one wishes to examine. According to both Baxter (2010) and Yin (2009) this is achieved by going in depth, and through recognizing the complexity of the case you are studying.

Given this thesis' theme and research question this type of methodology was the most relevant to use. The thesis is going to uncover and examine factors that show how staying in a business incubator effects startups and how business incubators in general influence and create potential for dealing with challenges for its tenant firms. To examine the social processes behind this, a method that can uncover complex social processes was ideal.

4.1.2 Research question and research design

The theme of the thesis was set early in the process, while the research questions has been worked on continuously, and was not formulated precisely before March. Defining the research question is one of the most important steps in a research process so using sufficient time to do this is important according to Yin (2009, p. 10). Different versions of the research questions were worked on continuously to be able to be flexible and follow up on new directions the thesis took during the collection of the empirical data, and when working with the literature. The flexibility created possibilities to be dynamic, and not locked in concerning the development of the research question.

This gave the thesis a nonlinear research design, and the process was dynamic and developed over different phases, as new theory and empirical data was introduced. It has been important to work with the research design and the research question continuously in order to stay rational and critical in the pursuit of answering the research question.

The research question is often considered important when choosing the method for the research project (Yin, 2009), and even though the research question for this thesis was not set before later in the process, the outline of it was sufficiently specific to understand and decide that the case study approach was the appropriate methodology. This was because it was clear from the beginning that the research question had to be a *how* question. This was because the thesis wants to explain how something works and how this affects a process. *How* and *why* questions are more explanatory and are likely to lead to case studies. This is because these kinds of questions deal with operational links needing to be examined deeper and often over time,

rather than mere frequencies or incidents (Yin 2009, p. 9). Following the data selection, and coding of the data, it became clear that the research question had to be concretized and sharpened in a way that the data that emerged would create the best possible explanatory power.

Based on the relevant theories and empirical data examined in this thesis the research question was developed with the intention of contributing to the understanding of business incubators as a resource for entrepreneurs and startups when dealing with the challenges they face in the initial phases of development. The focus and scope of the research question and the nature of this thesis made a double case study approach well suited.

4.2 Data collection

In qualitative research, several different methods are used to collect empirical data. In a case study, it is, according to Yin (2009) an advantage to collect data from multiple sources connected to the same phenomenon, he mentions six different sources to acquire data; documentation, archival records, interviews, observation (direct and participatory) and physical artifacts (Yin 2009, pp. 101-113). To acquire the knowledge to answer the research question, only one source of data gathering has been used, the interview. This is because to answer the research question it was evaluated as unfit to use any other methods. This meaning that it was thought that to use any other methods would not help shed any more light on the subject than interviews. Textual analysis was not applicable because there simply were no available documents of interest that would possibly enrich the data gathered. Observation (direct or participatory) was also assessed as a possible method to gather empirical data, but this was also dismissed as a method that would most likely not produce any valuable data. It is possible to observe, from outside, how some central processes work, but it is hard to determine the effect, potential and importance this has, especially in an office environment where most of what is going on happens in front of the computer, in meetings or through informal encounters. Physical artifacts and archival records have not been assessed as possibilities to enrich this thesis with information because their contribution to a data collection would not be suiting for this thesis. There plainly are no artifacts or archives to be looked at for information concerning this research.

4.2.1 Interviews

This method of gathering information and data for a case study is one of the most important according to Yin (2009). Interviews are likely to provide full and comprehensive information from the interviewees about the views and perspectives they have on themes related to the research question. This method therefore provides a good basis for gaining insight into different

understandings of a phenomenon (Thagaard, 2009). To get insight and information about how different business incubators work and how they affect their tenant firms, this methodology was chosen because it was considered appropriate to gain access to knowledge on these subjects. Interviews in qualitative research can be performed in many different ways. In a case study the interviews will be guided conversations rather than structured queries (Yin 2009, p. 106). So even though you, as a researcher, will be pursuing a consistent line of inquiry, the actual questions asked are likely more fluid than rigid (Rubin & Rubin, 2011). This is why I chose the semi-structured form when conducting my interviews. This made it possible for the interviews to have some overarching topics that were set, and let the rest of the interview be fluid and dynamic. This also made it possible to always let the questions and topics discussed center around the most important themes of the thesis and the research question, while being flexible enough to follow up on emerging issues that arose. This form of interviewing is the opposite of the structured interview. This is the kind of interview where the informant answers concrete questions in the order the questions are set in advance (Thagaard, 2009).

Two interview guides (appendix 1 and 2) was constructed for the interviews (Dunn, 2010, p. 104). The two guides provided the list of thematic questions addressing the business incubators, specific resources available, the utilization of these resources, future development of the startup, the process that the startups are in at the moment and what goals the different startups have connected to their stay in the business incubator. The two different guides were constructed slightly different to match up to the differences of the two business incubators examined in this thesis.

A so-called pyramid structure was used to organize the questions of the interviews. This means that the more abstract and complicated questions are asked in the end of the interview (Dunn, 2010, p. 108). Thus, the interviews started with the easy-to-answer question about the name of the company, how many that work with the project, a brief description of the product or idea and which phase the startup currently is in. This is done to make the informants accustomed to the interview situation before they are asked questions that require deeper reflections (Dunn, 2010, p. 108). After these questions were answered, the interview moved further on to addressing more specific and in-depth questions about resources, the incubator, goals and challenges.

All the interviews conducted were audio-recorded with permission from the informants, and there was no extensive note taking during the interviews. This was carried out to not disturb the free flow of the conversation, and to show to the informant that she or he had my full attention during the interview, and this also gave me the possibility to be critical and attentive

(Dunn, 2010, p. 119). However, some note taking was performed when it seemed appropriate. This was especially when there were questions or topics that I wanted to further follow-up on later in the interview or topics or questions that I was noting to myself to use for later interviews. To take note like this was a part of a “critical inner dialogue” in which I constantly analyzed what was being said and the information I was presented with to formulate follow-up questions (Dunn, 2010, p. 116). This kind of critical inner dialogue is had to always be aware of whether you understand what the informant is saying, and not let things pass by you that you do not understand in the hope of making sense of it later (Dunn, 2010, p. 116). If something came up during an interview that I did not understand, I stayed with the topic, and asked follow-up questions to be sure I had the true meaning of what the informant was trying to illustrate. The advantage of face-to-face interviews, like the ones conducted for this thesis, is the possibilities of detecting misplaced questions, misunderstandings concerning different topics or expressions, any non-verbal cues and incongruence. The different interviews were conducted at the two different business incubators premises, and the duration of the interviews was between 30 minutes and one hour, something that was controlled by the interview process and how much information the different informants wished to share. I have used all eight interviews as source material in this thesis.

None of the informants wished to stay anonymous, and they were willing to answer follow-up emails concerning citation checks and clarification of different issues and topics.

To sum up, it is easy to argue that the approach of face-to-face interviews and the use of follow-up questions and clarifications provided me with more data and information suitable to answer my research question than if I had used another methodology or a more quantitative approach.

4.2.2 The process of the interviews

When choosing informants in qualitative studies characteristics or qualifications that are strategic in relation to the research question and the theoretical perspectives of the study is often emphasized, this is the so called strategic selection (Thagaard, 2009, p. 55). To be able to answer this thesis’ research question in a satisfying manner it was viewed as relevant to seek out informants that had in-depth and thorough knowledge about how it is to be a tenant in a business incubator, how this affects a startup firm and what a startup achieves in terms of development and progress by staying in a business incubator. To get access to the relevant informants can be a demanding and time consuming process, this was no exception for me.

I had one contact in one of the business incubators that helped me get in touch with my

first interview subjects. My contact had a better overview of the different startups and entrepreneurs that stayed in the business than me, so for the first three interviews she put me in contact with the startups that she rated as relevant for my research. The three informants my contact had chosen for me provided me with a lot of relevant and important information. During these three interviews I used the so-called snowball method (Thagaard, 2009). This method involves asking the contacts already established if they could put the researcher in contact with other actors with the same properties and knowledge that they have. This worked out well, and they suggested five other companies that they thought would provide relevant information for my research. I contacted these five startups by email several times. In the emails I presented the thesis theme and objective, why it was important with the informants' contributions, the interviews' duration as well as the possibility of anonymity, but I only got three replies. One that did not have time at the moment, and another that told me that he was not with the company from the time the company was established, and hence could not tell me anything of importance concerning the business incubator or the startup phase of the company. He told me that he would try to get a hold of someone else in the company that could answer my questions, but I did not hear anything, and after a couple of reminders I gave them up as informants. The last startup that answered was interested, and we scheduled an interview. This interview also gave a lot of relevant information, and I tried using the snowball method again. Unfortunately the interviewee only came up with the same possible informants that I had already tried contacting. I sent them another email, but still did not get an answer. This revealed a weakness with the snowball method. The method often gives you access to people in the same network or milieu, this made it hard for me to expand my search for informants in this environment (Thagaard, 2009). After this realization I understood I had to try to counteract this, and contacted another business incubator. The manager of this incubator told me that he could not work as my contact as he had too much to do, but he urged me to contact the startups and entrepreneurs in the incubator myself. Altogether I sent out emails to 15 different startup companies, I got nine answers; whereas two had moved out of the incubator, one had moved abroad and two did not have time. The remaining four companies were willing and able to do the interviews, and they were scheduled accordingly. This gave me a sample size of eight companies in addition to two companies that I had email contact with, but that did not provide any information of interest.

When looking over the information I had attained through these interviews I was satisfied with my data collection, and continued on to the analysis of the data.

4.2.3 Skewed selection

The selection I ended up with containing eight different companies may be skewed towards a certain types of entrepreneurs and startups. This may have happened because the eight startups and entrepreneurs I got to interview were the ones that answered my emails, and that I got in touch with through my contact. The startups that answered my emails and had the time to do interviews could be identified as the more outgoing and confident companies. These are probably the ones that may have gotten through the earliest critical phases of the startup periods, and are now confident they will survive as a company. The startups that answered, but told me that they did not have time to do the interviews, may have been in a critical phase of their development where they needed to stay focused on the tasks at hand to survive their next phase. To interview companies like this would have been very interesting, but unfortunately this was not possible for the data collected for this research. Whatever the reasons for the companies that did not answer the emails I sent, it would have been interesting to examine and see if they differed from the companies that were interviewed in any substantial way. These are of course just considerations and speculations from my part, but it is still important to note that this may have skewed the selection towards the more outgoing and confident companies.

4.3 Analysis of the data

After completing the interviews I started the work of processing the collected data. The analysis starts already during the transcription of the interviews (Punch, 2013), so there was never any doubt that I was going to do the transcriptions myself. I looked at this as a necessity to get to know the data properly. I used a program called Transcriptions to transcribe the interviews. This program has the advantage that one can rewind a given number of seconds back and forth with a single keystroke. This made it much easier for me to make sure that I did not lose any details or information while transcribing.

After the transcriptions I worked with the data through coding and categorizing. First I coded everything manually with different color markers on paper, before using the software Nvivo to systematically code all the data in to different nodes. The Nvivo software is specially developed for qualitative analysis, and makes it easier and more manageable to categorize information and data. The different nodes I chose to categorize my data in appeared naturally after working with the information for a while. The main nodes were network, the milieu, resources, financing, the incubator and phases. There were a lot of sub-nodes connected to these five, but these were the ones that I found the most important when working with the material through a function in Nvivo that shows how many times I connected some information in the

data to the different nodes. The main nodes helped me get a good overview of the data and how to use it in the research.

4.4 Reliability and validity

Qualitative research is often rated based on these two concepts. They are important to always keep in mind when doing a research projects to make sure that verifiability and transparency are always present, and easy to grasp for the readers of the research at hand.

4.4.1 Reliability

The reliability of a study concerns the consistency and repeatability of a research project (Yin, 2009). It also includes the impression regarding if the research has been executed in a way that is reliable and trustworthy. The question considering how good the data achieved from the research is very important, and it is central for the researcher to reflect over the context and environment the data was collected in. This is because it is important to be able to explain and clarify the relation between the informants, and how their experiences can shape and influence the results. Through these measures the research is made transparent (Thagaard, 2009). The findings I have made in my collection of data should be repeatable, given the same access as I have gained to the different informants.

Reliability is a more complicated issue in qualitative, than quantitative research. Qualitative results mainly consist of experiences, opinions and interpretations, and these are factors that may change over time. The different startups that I interviewed for this thesis will probably never be in the exact same phase or position as when I interviewed them. Their companies will evolve, and this will probably result in the fact that the information produced will not be same as when I interviewed them. This makes it even more important to do a critical evaluation of the procedures and results when gathering and working with the empirical data. Nevertheless, I have tried to outline, as clearly as possible, how the interviews were conducted, transcribed and analyzed to strengthen the reliability as much as possible.

In relation to the interviews I have reflected on the selection of informants and the relations to these. The shape and execution of the interviews has been described as well as unforeseen events that happened during the process of the interviews. It is important for the reliability to make it clear when the empirical data is presented, and when the researchers make her or his own interpretations (Thagaard, 2009). So when I present the information and data, I have tried to be clear on when I recite the primary data, and when I do my own interpretations and evaluations.

4.4.2 Validity

When a researcher performs a research project based on the qualitative method it is important to be aware of the potential threats to validity. The term validity refers to the correspondence between the gathered data and reality. Does the study measure what it intends to measure, and does it reflect the reality in a satisfying manner? The validity of a research project refers to the authenticity of the interpretations the researcher has arrived at, and how the analysis has given the basis for the conclusions made by the researcher (Thagaard, 2009).

The overall validity of the research is centered on creating coherence throughout the study between what the researcher intends to examine and the strategies deployed to collect the data and examine the social phenomenon. According to Thargaard (2009), a researcher can strengthen the validity in a research by being critical when assessing the process behind the analysis. On this basis it is, also here, important with transparency to make it easy for the reader to understand the interpretations made by the researcher. There is also the respect of internal and external validity. The former refers to if the study is representative of the reality, and the latter concerns whether one can generalize from the study or not.

In the section above, I went through how I processed and analyzed the collected material. This process makes the researcher influences and interpretations a part of the data. Based on this an important point has been to describe the different processes, choices and evaluation performed when I obtained the data. The use of an audio recorder in the interviews contributed to strengthen the validity of my conclusions because the recordings made it possible to go through the material several times, and hence the information gained from the data is more precise. All through the process I have tried to be reflexive and critical of my own choices and actions connected to the gathering of the data. The reflexivity that I have tried to obtain during the data gathering process has been a part of ensuring reliability and validity for the research project (Dowling, 2010). I further consider that the overall information from the interviews gives a nuanced picture of the startups and their connection with the business incubators.

4.5 Ethical considerations

All research methods necessarily involve ethical considerations. All the different parts of a research project, from research topic to the relation to informants, involve ethical question connected to how the researcher ought to behave (Dowling, 2010). Research ethics is generally defined as being about the conduct and behavior of the researcher and their responsibilities and obligations to those involved in the research. The most important ethical issues that arose during this research were connected to bias and anonymity.

4.5.1 Bias

When doing a case study, researchers are especially prone to bias. The main concern when doing a case study is the risk of using the research to confirm preconceived positions. This issue often arises due to the need of understanding a case before studying it. When choosing a representative case it may undesirably guide the findings towards supportive evidence (Yin, 2009, p. 76). To avoid this sort of preliminary bias it is important to be open to contrary findings. So when I performed this research I was sure to look up literature that was contrary to what I thought I was going to find of information from the informants. This is why I have included a part in the literature chapter called *disagreements in the literature*. I have also discussed possible contrary findings with my supervisor to test my tolerance and challenge my possible bias.

4.5.2 Anonymity

Qualitative methods often involve invading someone's privacy, in this case, it was more a question of a company's privacy than a private person. So by using the companies name when addressing the informants, the person behind the interviews was automatically anonymized. The respondents were also anonymized to make sure that this research would not bring liability upon them. The informants all gave their informed consent prior to the interviews and were offered the opportunity of a citation check to make sure they agreed on how their answers were presented (Dowling, 2010).

4.6 Summary

In this chapter I have explained and accounted for my choices and strategies regarding the collection of the empirical data. I have shown why the case study approach was a suiting methodology, and how the different interviews I have conducted have created a nuanced and different basis for my analysis and discussion. I have tried to give a detailed description of the process of choosing informants, interviewing and how the data was processed and worked with subsequently through the transcriptions and analysis. My goal has been to make the research transparent, and show that I have been critical and reflexive to my own work. In addition to this I have tried to show the importance of reliability, validity, bias and anonymity and how this has influenced my research.

I have through the whole research process, and when working with the methodology, had in mind critical reflexivity and strived to keep the highest ethical standards possible. This has especially involved a focus on the well-being of the informants by emphasizing informed

consent, avoiding plagiarism or falsifying information, and understanding the limitations of this research (Yin, 2009, pp. 76-77).

5 The incubators and startups examined

In this part of the thesis the cases and informants for this research will be introduced. This chapter will give a presentation of the two business incubators examined for this thesis; Gründergarasjen and StartUpLab, and the different startups interviewed.

There are different types of incubators that have different objectives and are related to different institutions or corporations. The incubators often have different goals, different incubation times and are suited for different industries. The kind of business incubators looked at in this thesis is connected to the high-tech and ICT-industry. These incubators are chosen because, to answer the research question, it is necessary to look at some established incubator with extended networks.

Of the two incubators examined in this thesis, one is connected to a private research institution called Simula Research Laboratory, and the other is connected to a research park with close proximity to a University. The two different business incubators, Gründergarasjen and StartUpLab, are in many ways organized in a similar fashion, but have some individual differences in terms of what they offer and how they are structured.

5.1.1 Simula Research Laboratory

Simula Research Laboratory AS was established in 2001 and is located at IT Fornebu. The company is organized as a privately owned corporation where the largest shareholder is the Norwegian government through the Ministry of Education and Research (Academic Positions, 2013).

Simula is a research institution working on basic research in information and communications technology (ICT). They combine a future-oriented vision towards the training of personnel and students in addition to the development of market-oriented commercial applications. Basic research takes place mainly in communications technology, scientific computing, software engineering and system and software development. The research focuses on fundamental scientific problems with a large potential for application in society (Kunnskapsdepartementet, 2008).

Simula Research Laboratory believes the company is very strong when it comes to research and education, but that it is lacking some when it comes to innovation. They have tried a few different measures to strengthen the innovation in the organization, but without any notable results. It has been used a fair amount of time examining how to manage innovation better in-house. The CEO points out that that at the time when they were assessing this, they

had close to 400 researchers employed, but only three to four entrepreneurs. This was before they started their incubator project (Kapital, 2014). This balance between entrepreneurs and researchers did not promote innovation in the company, and the management wanted to do something about this. They wanted to get more entrepreneurs into the premises where Simula resides to create a more dynamic working environment, and the solution was the project Gründergarasjen (Kapital, 2014). The managing director also believed that the environment for entrepreneurs in Norway is not particularly good. He stated that the founders of startups quickly end up having to sell off parts of their company, or their idea, early in the process to fund further development. This can cause the founders to lose the feeling of ownership of their business or idea, which does not create incentives to work further with the project, and this, can quickly cause the entrepreneurs to lose their passion for their idea (Kapital, 2014). Therefore Simula opted that Gründergarasjen should be a place where entrepreneurs can sit and work, with access to central resources, with the development of their idea or business for free, for up to one year.

In summary one can say that Simula Research Laboratory wants to improve its ability to innovate by facilitating entrepreneurs within their company. The company wants to get entrepreneurs into the same premises as scientists to see if they can create a fertile dynamic that can lead to innovation and commercialization.

5.1.2 Gründergarasjen

Gründergarasjen is one of several similar initiatives that have emerged in the past ten years. It is a type of business incubator that provides its residents with a free office space, free Wifi, lockers, coffee, tea, and snacks. And also desks, chairs, space dividers, sofas, meeting rooms, printers, monitors, keyboards, mice, and other necessary equipment (Gründergarasjen, 2013). Such projects have been called entrepreneurial collectives or incubators, and have become important for creating a viable environment for entrepreneurial companies. Ketil Lundgaard, director of entrepreneurship and international business at Innovation Norway explains the success of such collectives: "It is basically very lonely being an entrepreneur. These [incubators] create a natural community, attracting investors and are important meeting places for inspiration and networking" (Stangeby, 2014). The project is a free service for entrepreneurs in tech and ICT who need office space and guidance in IT, intellectual property rights and legal issues related to their business. They also get access to extended networks, both with Simula and the other entrepreneurs and startups sitting in the business incubator (Simula Research Laboratory, 2012). The companies sit collectively in an open office space that provides opportunities for

knowledge- and information-flows between companies. The screening process to get accepted in the incubator is not very strict. The entrepreneurs have to fulfill some basic requirements to be assessed before they are allowed to join these consist of the following:

- They need to be a company working with a product in tech or ICT, not a service.
- They need to be in the startup phase.
- They cannot have a high, established income, big investments or big customer deals.
- They have to use the space on a weekly basis.

Simula's goal is to create opportunities for collaboration and synergies between entrepreneurs who sits within in this community (Gründergarasjen, 2013). After the first year, Simula evaluates entrepreneurs and further cooperation is considered. This cooperation can either contain investment from Simula, or other form of support for further development. They also give some of the entrepreneurs and startups extensions for over one year if they see potential in the company. There are around 40 registered entrepreneurs and startups in Gründergarasjen. Gründergarasjen is managed through a part of Simula Research Laboratory called Simula Innovation. Here one of the Innovation coordinators has the overall responsibility for the incubator as one of her tasks (Gründergarasjen, 2013).

5.1.3 The research park

When the research park was established in 1985, there were no similar facilities in Norway. The idea was to help and contribute so that research-based results increasingly got commercialized. A research park should be a tool to strengthen cooperation between industry and research. The idea that business and industry on the one hand and research on the other, should cooperate, was a new way of thinking about innovation (Oslo Tech, 2014).

The Research Park has the University Hospital and research institutes as nearest neighbors and tenants. 200 companies and 2,000 people have their workplace in the research park, and the facilities are run by Oslo Tech AS (Oslo Tech, 2014).

Oslo Tech holds courses in entrepreneurship for entrepreneurs and companies in early growth through the program and network Build2Grow (Oslo Tech, 2014). They organize intellectual services, conferences and networking that provides opportunities for knowledge and information flow in the park. Oslo Tech has initiated activities and networks to increase innovation and value creation in Oslo. Network activities, courses and events provide access to industry knowledge, partnership opportunities, experiences and investors (Oslo Tech, 2014).

Oslo Tech is also behind the incubator StartUpLab.

5.1.4 StartUpLab

StartUpLab is an open office environment with room for 140 people, inspired by incubator environments on the US West Coast. The project was initiated because Oslo Tech argued that growth companies and small startups have the benefit of working near others who are in the same industry.

The business incubator provides its members with 24 hour access to the building, free meeting rooms, high speed internet access, free coffee, a kitchen space, access to printers and free legal advice, accounting advice at fixed low prices and free IPR-guidance, flexible office spaces, social areas, a cinema, a café, a pub and various activities like table tennis and foosball. The members of the business incubator become a part of an extensive network of current and former entrepreneurs. They currently house 70 technology startups, ranging from high profile companies like Point Carbon, Opera, Hugin, Funcom and Northzone, to first-time entrepreneurs (StartupLab , 2015).

In addition to the network the entrepreneurs provide, they also get, both directly and indirectly through the managers of the incubator, access to a local and global network that the incubator manage. The incubator also manages its own angel fund, the StartupLab Founders Fund. StartupLab specializes as active owners in the very first stage of some of the companies' lifecycles. They invest in the range of NOK 100K to 300K, and typically take 5-15% of the equity (StartupLab , 2015).

One of the differences between StartUpLab and Gründergarasjen is that StartUpLab is not free, and the startups have to pay a monthly fee to stay in the incubator.

5.2 Comparison of the two incubators

The two business incubators are different in some fundamental ways. The impact this has may initially not be clear between the individual entrepreneurs from the two business incubators. One can for example assume that entrepreneurs with poorer economy or who are earlier in their startup phase will apply to the incubator that is free. This may create differences between the entrepreneurs and startups coming from the two different incubators.

Another difference that is worth noting is the fact that the entrepreneurs at StartUpLab do not have a time limit, opposed to the one-year limit in Gründergarasjen. As long as the startups pay the rent at StartUpLab, they can in theory stay there for as long as they want. This is not necessarily exclusively good since then they lack the pressure to work efficiently with their project to get as much as possible done within the time limit. If they know they can sit in the

incubator for as long as they want, and the company has the economy to pay the rent this could slow down the development for the earliest phases of their project.

A third difference that is worth noting is the management of the incubators.

Gründergarasjen does not have fulltime managers working only with the incubator, but only has one employee working part time with the management of the incubator. StartUpLab has a whole staff of people, a management including six people with a lot of expertise from the startup environment, including the founder of WiMP and one of the people that worked with Opera Software in its early stages. They also have a day-to-day manager that runs the lab. This can also have a great influence on the entrepreneurs residing in the incubator. In StartUpLab the entrepreneurs have a lot more possibilities to receive help and guidance from people with experience from the startup environment, people that have been in the business a long time. This can potentially tip the scale in the favor of success for some companies.

5.3 The eight different startups investigated

In this part of the chapter the startup firms will be investigated more thoroughly to create a more complete picture of their similarities and differences, and how this affect their position and time spent in the business incubator. To get an overview of which company belongs to which business incubator and what they do, see table 6.1.

Table 6.1 - Overview of the different startups

GRÜNDERGARASJEN:	STARTUPLAB:
<p data-bbox="386 362 555 394">Orwapp AS:</p> <p data-bbox="181 434 735 539">Is a company that has created a time accounting app, an app to bring deviation commissioned for craftsmen when doing a job and something unforeseen happens.</p>	<p data-bbox="1038 362 1182 394">YayMedia:</p> <p data-bbox="823 434 1398 674">The company operates an image service where they mainly supply Illustration photos. The company is the intermediary between photographers and those who want the pictures. They focus on the use of images on the Internet through a streaming solution, where instead of downloading and uploading to where you are going to use the images, the company hosts fixes all the technical solutions.</p>
<p data-bbox="368 710 572 741">FitSampler AS:</p> <p data-bbox="181 781 703 860">The product Fitsampler AS is developing a chest strap to measure lactic threshold and VO2max in addition to pulse when training.</p>	<p data-bbox="999 710 1225 741">Startup Norway:</p> <p data-bbox="823 781 1398 938">A company that are working towards building up and improving the entrepreneurial environment in Norway. They organize initiatives that they believe are missing, and acts as an organization that tries to strengthen the startup environment through various measures.</p>
<p data-bbox="432 952 510 983">pAID:</p> <p data-bbox="181 1023 746 1234">This is a sort of a Paypal for donations. It is a solution that works in a way that the user implements it on websites, and from there you can enter an additional amount for donations to preselected charities. You choose the distributor of the money you want to donate. This is with a desire to take aid back to the individual.</p>	<p data-bbox="1046 952 1177 983">AbiliMee:</p> <p data-bbox="823 1023 1398 1263">Is a company that is making a simple app that will help people produce more and better ideas. They are creating a platform where people should be able to share the idea with a community they trust through a virtual network. You bring in actors and establish a dialogue with a safe environment that you control, and from there you develop the idea with the feedback necessary.</p>
<p data-bbox="320 1299 624 1330">World Wide Narrative:</p> <p data-bbox="181 1370 746 1610">The company is working with a project called Story Camp. This is to be a tool for youth, focusing on social health. The company shall through Story Camp help children and young people create videos and video-stories about themselves, which they can share with caseworker, doctors, relatives, nurses etc. And this creates new ways for them to express themselves.</p>	<p data-bbox="1046 1299 1182 1330">Stay.com:</p> <p data-bbox="823 1370 1398 1503">Is a travel service that provides an app and a website where you can create your own guides and cherry pick from those guides. You can share you guides with your friends and make everything available offline.</p>

5.3.1 Comparing the eight startups

There are some crucial differences between the startups in the business incubators, which make what they wish to achieve from their stay in the incubator, vary greatly. So before outlining the empirical data analysis, these differences will be examined further.

5.3.2 The startup phase

Most of the startups founded their businesses sometime after 2012. These companies have therefore only been operating for a maximum of three years. This puts most of them in the early phases of starting up a company. In the initial years it is vital to get financing to be able to develop the project from the idea stage, towards product launch and then create a sustainable economy in the company. It is also important to build networks in the early phases of the development to get access to the relevant knowledge, information and people that can help promote the project. Orwapp AS, pAID, AbiliMe and Startup Norway fits in this category. They are networking, and are trying to find financial supporters and investors to further develop their projects. They need the business incubator, and the resources they get access to through it, to help them effectually develop their project (AbiliMe, 2014, Orwapp, 2014, Paid, 2014 and StartupNorway, 2014).

The companies FitSampler AS, World Wide Narrative, YayMedia and Stay.com are past the initial phases of development, and are to different degrees financed and have created an extensive network. They now need an environment to work on and develop their project further. These companies use the business incubator they reside in to keep a close proximity to the pulse of the startup-environment, and to have the resources offered by the business incubator in the immediate vicinity.

YayMedia and Stay.com started up respectively in 2008 and 2004. They are well out of the startup economy and have started the internationalization phase of their companies. Even though they are through with the initial phases of starting up a company, both companies expresses that they still have access to the resources offered to them by the business incubator. This is in order to get in touch with actors that can potentially help them in them with their further development (Stay.com, 2014 and YayMedia, 2014).

FitSampler AS and World Wide Narrative argue that they just need a suitable environment to work in. They need a calm working atmosphere, and argue that they have to focus on their project without too many distractions. The business incubator provides them with a good environment to work, were they can choose to withdraw and not take part in the social

activities that take place, but still have the opportunity to be a part of the startup environment if they wish (WorldWideNarrative, 2014 and FitSampler, 2014).

5.3.3 What they create

All of the different companies are in the ICT- or tech-sector, as this is a prerequisite for staying in the business incubators. This means that they produce something connected to software or hardware. The business incubators have restricted their tenant firms to be exclusively in this sector. Because all the firms are in the same sector and business they can benefit greatly from each other and the other startups in the incubator. They can help each other with similar problems connected to the technology of their products.

Orwapp AS, AbiliMe and Stay.com are creating different kinds of apps, which makes it possible for these companies to exchange ideas and potentially help each other to deal with technical difficulties connected to creating and launching an app. The apps themselves are very different, but the process behind creating and launching an app can be similar (Orwapp 2014, AbiliMe 2014 and Stay.com 2014). YayMedia and pAID are creating web based services, where creating and maintaining extensive websites is an important part of what they do.

The three remaining companies are different from the others outlined. FitSampler AS creates both software and hardware. The hardware part of the production makes them almost unique in this context. There are not a lot of other companies in the business incubators that make the hardware themselves. Since they are on their own in making the hardware in the business incubator they reside in, they must rely on connections and networks outside of the incubator and connections the business incubator can get them in touch with (FitSampler, 2014).

World Wide Narrative is creating an interactive tool that is influenced by social media. This is clearly connected to the ICT-sector, but they are focusing on social entrepreneurship because their product is aimed at helping youth with social health problems. Since most of the other companies are aimed at another customer segment it can be harder for world Wide Narrative to find someone to directly get help from when they are developing their project. There are other business incubators that are more directed towards social entrepreneurship, but World Wide Narrative chose to sit in an ICT-related incubator to get help with the technicalities when creating their product (WorldWideNarrative, 2014).

Startup Norway is also different from many of the other companies in the business incubators. Most of the startups sitting in the incubators are creating a product, even if it is an app or some kind of software, it still needs to follow the developmental process of a product from the initial developmental phases to launch. Startup Norway is not developing a product.

They are offering services to the startup community in general, and their goal is to provide services and arranging events that strengthen the startup environment in Norway (StartupNorway, 2014). This makes them different from the other companies in the business incubator. They are not working towards one specific developmental process, as with a product; they are working on several events and other initiatives at the same time. This makes the technical help they can access in a business incubator redundant. However, since they are working towards a better startup community, or ecosystem as they call it, in general, it is important for them to be placed in close proximity to the startup environment and be where the startups reside in order to not lose the overview and insight of what is going on in the milieu. They can help other entrepreneurs get in touch with actors that can potentially help them with the development of their product. The company Startup Norway are themselves looking for mentors, someone that can help them with the development of the company. In the business incubator, Startup Norway has the opportunity to be in touch with former entrepreneurs that have started up successful businesses. Further, the business incubator also has visitors from the business sector, which can potentially function as mentors for startup firms (StartupNorway, 2014).

5.3.4 Utilization of resources

Since the different startups are in different phases of their development it is natural that what they need from the business incubator varies among them.

As mentioned, Startup Norway is mainly looking for mentors and customers to develop their firm into an economically steady company. Orwapp AS and World Wide Narrative are enjoying being a part of a vibrant environment and the possibility to have a place to work. They need investors and financial backers and wishes for the business incubator to function as connection between the startup and someone that will financially support their project. World Wide Narrative are especially eager to get in contact with potential customers, and use the network provided by the incubator to try to get in contact with the right actors. pAID are in the earliest phases of the startup period and are looking to build its network, and get in touch with likeminded actors in the incubator and in the startup environment to develop the idea. They use the shared office space that they rent for free, as well as the services, business support and advice (legal, economic, strategic, mentoring, etc.) the incubator offers. They also have access to networks and contacts that are of great value when they are developing the project from the earliest phase to a more stable and viable company. FitSampler AS has progressed further, and mainly uses the business incubator as a place to work. They praise the environment as something

that was very important to them when they started up, and this has made them stay in the business incubator. And in addition to a place to work, they are still closely connected to the startup environment evolving in the business incubator. YayMedia are out of the earliest phases of the development, but still emphasize that the networks and the milieu in the incubator are the most important resources for them, in their next step, the internationalization phase. AbiliMe is using the network in the incubator to test its minimal variable product, and see if its baseline projections are correct. They are trying to find out if their idea is something that people will use. Their next step will be commercialization, and in this regard they need a pilot customer, and they hope that the incubator can help them get in touch with one. Stay.com is mostly done with their startup period and their time in the incubator. They are moving out to get more privacy and continue as a viable firm with a healthy economy and a satisfied customer base. But they still want to keep in touch with the startup environment, therefore the new offices the startup is moving in to is on the same premises as the business incubator. They want to continue to be able to utilize the advantages a company gets from staying in a business incubator.

To get an in-depth view of the different startups and entrepreneurs concerning what phase they are in, and of their financial situation see table 6.2.

Table 6.2 - Phase and financial situation

COMPANY:	PHASE:	FINANCE:
Orwapp AS Startup date: 01.04.2014	They have recently gotten their first customer and have made a pilot of their product. The next phases are about building out the app, and create a prototype for testing. Are still networking.	Have gotten some financing through their first customer. They have also, with the help from the officials at Gründergarasjen, applied for some VRI-funds.
FitSampler AS Startup date: 10.10.2013	They run two parallel races, one concerning the technology and the other concerning the market verification to get a good understanding of the market. They have started off selling regular pulse belts to the market to get in dialog with important actors. They have a prototype and are also working to establish collaboration with sports clubs, to implement their product there. They are done with their basic networking.	Have gotten help to apply for VRI-funds through the business incubator where they have been granted 200 000 NOK. They have been in dialog with the business incubator concerning a possible investment from their fund. This will be resolved shortly. Because of this possible investment they have been granted a longer stay in the business incubator than the regular 12 months.
pAID Startup date: Less than one year old.	The product is still a work in progress. They are trying to establish contact and possible collaborations with different internet stores. Still networking.	No problem with financing yet because the company has very low expenditures. The company is trying to generate some capital before it has to leave the incubator.
World Wide Narrative Startup date: 16.12.2012	They have started to develop their product and have been testing their hypotheses in collaboration with potential customers. They are in negotiation about a pilot project. Have still not made the product. Done with the networking.	They got some support from Innovation Norway to do market analysis in the early phases. They are also in the process of applying for dissemination grants with help from the incubator. They still press that they need a big customer project to get properly on their feet.
YayMedia Startup date: 02.01.2008	They are in the internationalization phase. They have a finished product, income and investors. They are now trying to grow outside of Norway by establishing some connections in San Francisco. One of the employees in the company are staying in San Francisco to make the right contacts and create a network.	They have investors and are already properly financed. They are moving out of the startup economy and in to the economy of a real firm.
AbiliMe Startup date: 01.04.2014	They company are in a very early phase. They have created some concept sketches and wireframes for how the software should work. They keep on creating user stories and keep a parallel run to obtain pilot customers and pilot users. They are now in the process of adding the finishing touches on a minimum viable product development. Commercialization is an important next step. The company is still networking.	They got 300 000 NOK from Innovation Norway to declare the first phase, and have financed the rest themselves through funds obtained from earlier startups the founders have sold with profit.

Stay.Com	Do not really consider themselves as a startup anymore, but still stay close to the milieu of the incubator. They launched their app on the market in 2012.	Out of the startup economy and are running as a "normal" company with income and investments.
Startup date:		
03.02.2004		

Startup Norway	They still consider themselves as a startup, even though they have been working for a couple of years with events and other networking happenings.	They still have a startup economy in the company were they finance themselves from 1-3 months at a time. They do not want investors only to be paid for by the projects they run for customers.
Startup date:		
01.10.2012		

This table shows the variation between the different startup companies. They are in different phases of their development. This indicates that they need different resources to continue their progress and evolve as a company. They share some common traits as startup companies, but their different place in the startup phase makes them individual and different, something that needs to be considered when the business incubators facilitate for the startups.

6 How the startups cope with their challenges

Now that the different startups and incubators have been described, this chapter will concern the empirical findings connected to how startups utilize incubators, and the analysis of the data with the goal of elaborating on the research question:

How does staying in a business incubator help startup companies and entrepreneurs to deal with the challenges and resource demands they face in their initial phases of development?

Learning is a critical aspect for entrepreneurial firms. And the entrepreneurs need to be able to convert the knowledge and information they gain into advantages and value for their firm. So for the entrepreneurs, the incubation programs constitute a fundamental role in providing a shared setting within which personnel of the incubated entrepreneurial firms and of the incubator interact in order to mobilize resources in various forms (Grimaldi & Grandi, 2005). In the incubation program the entrepreneurs and startups get access to an environment made up of other entrepreneurs and startups. They also get the privilege to use, and take part in well-developed technological infrastructure, arrangements that often concern some aspects of the future for a startup (marketing, financing, organization, applications etc.), a shared office space and access to professional business support and well-established networks. All of this gives the entrepreneurs potential advantages when joining an incubation program. But the big question is how they use these resources and opportunities in a way that gets them out of the startup phase and in to the market as a competitive company? And what do the startups and entrepreneurs regard as positive aspects of staying in an incubator? Is there a clear consensus between the different entrepreneurs?

This chapter will examine some central aspects connecting the business incubator to the entrepreneur, and why this relationship is interesting. It will also be shown how the different startups and entrepreneurs' value, and benefit from the social relations, resources, environment and network made available to them. The chapter will be divided into three main parts based on figure 3.1 from the analytical framework worked out from chapter two and three:

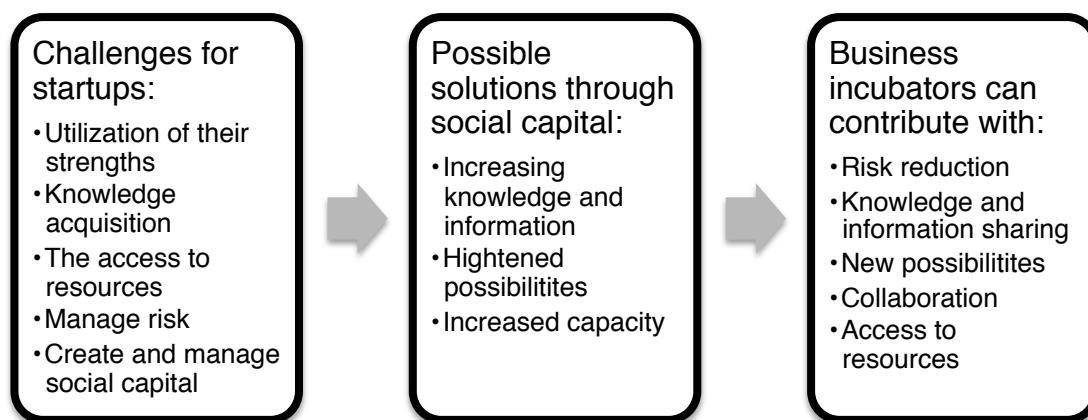


Figure 3.1

The first part of this chapter will consider what kind of challenges the different startups face, the second part will emphasize how they deal with these challenges, with special emphasis on social capital, and the last part will consider how the business incubators can help contribute in dealing with these challenges. This is the natural order of presenting the empirical data to give a clear basis for the analysis and discussion to answer the research question.

6.1 Challenges for the startups and entrepreneurs

Before the different startups and entrepreneurs joined the business they were faced with different challenges that influenced the development of their firms. Many of the informants state that they joined the different business incubators to deal with these challenges.

When starting up a business it is important to have an able place to work with the project, and to get access to all the basic resources a startup need. Some startups can work from home, but most of the startups and entrepreneurs interviewed wanted something more from the place they work than a desk in their living room. A place to go to and work, helps the entrepreneurs to distinguish between leisure and work to a greater extent than if work and leisure is at the same premises. There are also many who have families and children in the house that can create an uneasy working atmosphere for entrepreneurs (Orwapp, 2014). This can create a challenge for getting the necessary work done. The startups also have financial restraints in their early phases of their development, and to stay in the business incubators is often cheap, or even free. This is part of the reason why many chose to stay in a business incubator instead of renting an office space. The companies also state that they need a basic set of services connected to

accounting and other bureaucratic features. To get all the bureaucratic resources in place can be a time consuming activity that draw the attention away from working with the project. Many of the startups and entrepreneurs experienced time-consuming activities of bureaucracy when they started to work with their project (AbiliMe, 2014 and YayMedia, 2014).

Many also emphasize the milieu as a central factor for coping with challenges they face in their early phases of development. It is challenging for the different startups to develop when they do not have a milieu around them for support, interaction and brainstorming (StartupNorway, 2014, Orwapp, 2014, YayMedia, 2014 and Stay.com, 2014). The different startups value and highlight different aspects of what the milieu can provide. Fitsampler AS value the necessity of meeting actors that are not averse to risk, and highlights how this have helped their startup to create collaboration and fruitful cooperation when working with their project. The entrepreneurs from pAID and Orwapp experienced a lot of different challenges connected to the lack of a community and environment before they joined the business incubator. They mention explicitly the challenge it is to not have other entrepreneurs and actors in the same sector or business to discuss problems and development with. It is challenging to find actors that are suitable for user testing that are in the same business and within the budget of a startup company. The representative from pAID and Orwapp also points out how much harder it was to develop the startup without the guidance from more seasoned entrepreneurs. The help the entrepreneurs need with their projects is diverse, but a common feature that emerged during the interviews was the ability to get support and guidance when working with the technical and scientific part of the projects.

The entrepreneurs need knowledge and information in order to make the appropriate decisions concerning their projects. To gain the relevant knowledge the companies need to have the proper relations that can provide them with the right information at the right time. To gain these relations can be a challenge for the entrepreneurs and startups. They need to achieve the right contacts and relations through a proper network. This is a concern stressed by a lot of the informants interviewed (Orwapp, 2014, YayMedia, 2014, Paid, 2014 and AbiliMe, 2014).

The financial part of founding a company is something that all the startups and entrepreneurs found challenging in different ways. When starting up a company one of the first acts the founders need to commit to is trying to find funds. This can be done through potential investors, through public funds, by lending money, private capital or through customers. But how to take the first step to find the right way to support the company financially is often hard. There are some important considerations that the startups and entrepreneurs need to make before they chose how they want to finance their company. Investments will cause the

entrepreneurs to potentially lose some or even a lot of the equity of the company. Public funding often does not go beyond the first initial months of the startup, and to finance along the way of customer agreements is a difficult way to go (WorldWideNarrative, 2014 and StartupNorway, 2014).

Some of the informants state that it was very nice to be able to get in touch with others that were not risk averse. The people searching out business incubators are people who have started a company, or are trying to start a company. This shows that they are not afraid to take a risk, and in that way it is much easier for entrepreneurs to find other actors who dare to go into new projects. There are many actors who have aversion against risk, and they do not want to engage in activities that present a gamble (FitSampler, 2014). This can often make it difficult to find cofounders and collaborators for projects, and hence make it hard to create a sustainable company that can create the value and realize the idea the entrepreneur is trying to achieve. The business incubators help the different actors get in touch with each other to form collaboration and it also helps absorbing some of the uncertainty and risk connected to being a startup company.

To summarize, the different challenges the startups and entrepreneurs face are:

- A suiting place to work
- Access to resources
- To be a part of a milieu
- Access to knowledge and information (social capital)
- Finding a way to finance the company
- Contact with actors who are not risk averse

6.2 Dealing with the challenges

The startups and entrepreneurs have chosen to stay in business incubators to get the possibility to deal their challenges and gain benefits and competitive edge. How they do this, differ from company to company, connected to what phase they are in, their financial situation and their next planned developmental step.

6.2.1 Network resources

In this section, an overview of the most important network relations discovered through the empirical data will be given, and show why networks are an important part of dealing with some of the challenges the startups and entrepreneurs face in the early phases of their development.

“I think the network is the most important part of the resources available to us in the [incubator] ⁴.”

- Stay.com (2014)

Virtually all of the interviewees pointed out how the network was important and valuable to them in different manners.

The startups have some different needs concerning networks. Some of them already have strong networks from outside the incubator, but they still have some interesting insights concerning the business incubators networks. The entrepreneur from World Wide Narrative points out that what is good about moving into an incubator is to get friend-companies and create, and take part in networks through social relations that have the possibility to create social capital. The company thinks this is some of the most important feats concerning the incubator (WorldWideNarrative, 2014). A company must be conscious about what the environment does to them. A company in the early phases of development is in need of getting a good network set up, but after they are satisfied with the network they have built, they will need a place with a calm environment to work with their project. So even after a startup has got their network in place, they still have a good place to work, and if they still need to use some of the resources in the network it is still available to them. Startup Norway already had established networks before joining the business incubator; they have invested in the startup environment in Norway and created a lot of contacts, and built up social capital to deal with the challenges they face in their early phases of development. Just by becoming acquainted with a network, one can use it to build on and expand it. This is something that is central for startups and entrepreneurs in the earliest phases (StartupNorway, 2014). But it is important that the company do not use too much time on just expanding its networks without being able to maintain them. Maintaining the networking can possibly take over too much of a company's time. It is important that the startups put a lot of working hours into the project, and not just network without having anything to use the network for (StartupNorway, 2014).

Some of the researchers from the literature show that the firms have to balance their networking. Networking is not necessarily an unlimited good, because at some point the positive gains had from networking turns over, and becomes an unnecessary burden. This often happens because a lot of time is necessary to be invested to keep up the contacts with different networks. A company can suddenly find itself in the position when they use more time on maintaining the networks than actually use them for positive gains for the firm. Maintaining a network of a few

⁴ All quotations are translated by the author

essential ties seems the best way to go about as an entrepreneur (Semrau & Werner, 2014). The literature seems to agree with the entrepreneurs concerning this point. Network is not an unlimited good. It is important to get the project developed before using too much time on networking.

6.2.2 The milieu in the incubator

In this section, an overview of the most important characteristics of what the interviewees think about the working environment and milieu will be given. It will also be shown how the entrepreneurs share knowledge, what kind of environment this creates and how this milieu affects the startups.

“The most important thing when sitting in an incubator is really the milieu itself. The fact that it is not structured, but rather unstructured, that people just drop by at your desk to share information is so valuable. So you are a part of the information flow even if you're at work, and not out networking.”

- Startup Norway (2014)

It is not a consensus on how the environment in the incubator should be shaped. There are a lot of different considerations concerning the needs of the different actors. It also shows that the actors residing in the different incubators have made conscious decisions before choosing where to join, or whether to change incubator. It seems that what stage or phase of the development a company is in is important considering what kind of incubator the company chooses. But even though the entrepreneurs seem to disagree on how to shape the milieu and environment, it seems that they do agree on the fact that the milieu is an important factor of the business incubator.

The milieu can be an important and valuable part of dealing with challenges connected to being an entrepreneur. Several of the companies state that they wish to stay in the incubator because it provides them with a good and resourceful milieu and environment. The representative from FitSampler AS (2014) argues that to just be able to go to the coffee machine and talk to people in the milieu is an important feat when staying in an incubator. The startups and entrepreneurs get to know each other and build their social capital to increase their capacity. Another point he stresses is that it is calm. They get their peace and quiet when they need to work. There are other working facilities where there is more action, more things happening, and more frequent interaction between the firms, but this is not always what the startup need in the

phase they are in. Sometimes they just need to clock hours working on their project (FitSampler, 2014). If this is what the project needs, then the entrepreneurs should be able to draw back and work without too much interruption. It is underlined that the entrepreneurs and startups have frequent interaction with each other in the incubator; they have lunches and talks by the coffee machine, but the startups know that people also need a calm working atmosphere. This understanding gives the actors in the business incubators peace to work with their project when they need it. The startups have witnessed and experienced that at some of the other business incubators there are too much noise and social events going on, and this can possibly create too many distractions that are not helping the future development of the firm. Even though the day-to-day social contact is low for some of the startups, the overall benefits are still present. This can be the reason for startups and entrepreneurs to move from one working environment to another, the milieu. This is exemplified by the entrepreneur from FitSampler: “you cannot just create network relations and be a part of the social interactions and events that are going on, you have to get on with the project as well” (FitSampler, 2014).

One of the founders of the company Orwapp AS has a different view than FitSampler AS. He calls for a more vibrant environment with more people and more events and happenings. He points out that office spaces in the incubator are almost never full, and that it possibly would be better to overbook it to have a more vibrant and creative environment in the incubators. But it is also stated that the environment created by the entrepreneurs and startups, that actually use their space, creates a good environment. The different startups and entrepreneurs have regular contact through lunches, events and sparring of ideas; this creates a good fellowship for sharing knowledge and experience (Orwapp, 2014). This fellowship is also used to build social capital to deal with the challenges presented to the startups in the early phases of development. It is used to get in touch with actors that can help promote the firm. Another point that emerged during the interviews is that the milieu is good, and that the entrepreneurs and startups have a sense of fellowship, where people help each other out with problems and advice, but some of the companies would like to see the work milieu a little more dynamic. The entrepreneur from pAID miss a more comfortable environment to hang out in, as it is stated: “a little bit more Google-philosophy would be great” (Paid, 2014). He further explains that he would like to see a Google-hub in Oslo, where people could work creatively in a relaxed, lean and dynamic environment.

Another important part of milieu that the entrepreneurs and startups are a part of informs them and gives them offers that make it easier for them to get access to capital.

An example of this is the soft money FitSampler have received from the VRI-programme⁵ that the incubator helped them put in an application for. They got 200 000 NOK to use in the first phases of development of their product. FitSampler AS points out that they are doing a parallel run, a technological run and a market verification run. It is important to have a good understanding of the market so that they use the equity they have in their company in the most appropriate way when going in to the market. The money they got through VRI has been very important for their development towards market realization (FitSampler, 2014). Several of the startups and entrepreneurs have received funding either through investment from the incubator or through aid when applying for soft money from the government. The startups and entrepreneurs have used the milieu, and the social capital they have created amongst themselves through trust and collaboration to help each other obtain funding for their projects.

6.2.3 Positioning

For startups and entrepreneurs it is important to position themselves close to the information and resources the company wish to obtain. This is because information and knowledge is crucial for providing a basis for action. The next action the company takes will often be based on the information and knowledge the company has about the market, trends, technology, new innovations etc. Information about these things is often costly and difficult to gather (Nahapiet & Ghosal, 1998). So to reduce the cost and ease the transfer and flow of information a network or a milieu providing social capital, based on social relations and trust can be used. The three interviewees at Orwapp AS, AbiliMe and FitSampler AS shows that the social capital created inside an incubator gives the potential for reducing the amount of time and investments required to acquire the information and knowledge desired.

Several of the informants have stated that they use social capital as resources to obtain the information and knowledge they need, when they need it. This helps them create new and extensive possibilities when making choices concerning the future of the startup company, and when the startups and entrepreneurs are dealing with challenges they face in their early phases of development.

⁵ VRI are funds that finance innovation-related research, and is an offer from the Norwegian Research Council. For more information about VRI see Norges Forskningsråd (2013).

6.3 The business incubators' role in coping with challenges

This section will look into the themes connected to how the startups and entrepreneurs develop their ideas or products in collaboration with the incubator and the other startups residing in the incubator. This help can come in different forms, both tacit and explicit, concerning both technical and bureaucratic problems. The section will also examine how the companies expand, and use the network to improve their idea or product.

6.3.1 The layout of the business incubators

Both the physical layout and facilities in addition to the management of the incubator is important for the entrepreneurs and startups. If they do not enjoy the environment they are located in, then it is harder for them to do their work and evolve as a company. They need to feel at home, and that all the resources they need are ready and available to them. They need to feel that they can use the resources available to get some advantage on other companies who are not residing in a business incubator in a way that staying in a business incubator makes it worth their while. This is especially the case for the companies that stay in the incubator that cost money. They have to feel that they get their money's worth in return for being a part of the business incubator environment.

6.3.2 Brainstorming, help and discussion

The entrepreneurs and startups are both brainstorming and discussing individual ideas with other firms to get the most out of their time in the incubator. Several of the startups points out that brainstorming and discussions is two of the most important resources available to a company at the early phases of a company's development. Brainstorming and discussions with other companies can be used to test their ideas with some of the other companies in the incubator to see if it can withstand criticism and critical questions. Some of the startups and entrepreneurs have also gotten some technical- and IPR help from the management in the business incubator. In addition to this, the startup companies have used experience gained by other entrepreneurs who had learned valuable lessons when applying for public funds from, among others, innovation Norway and VRI (Orwapp, 2014 and FitSampler, 2014).

“We are 50 companies only in this incubator. If all the various companies in the different incubators had just been operating individually, the startup environment would not be visible at all. [In an incubator] it is much easier to create some publicity and draw in investors and create press coverage about the companies here.”

- AbiliMe (2014)

The representative from the startup AbiliMe also specifically states that they got in contact with Innovation Norway a lot faster, which was central in their early phases. He continues to point out that they also got in touch with people that helped them develop their idea, and with factors concerning the programming and user-experience of their product (AbiliMe, 2014). A lot of the startups in the incubator have been through the initial phases and have important knowledge on how to build a company from the earliest phases and onwards. For the entrepreneurs in the earliest phases of development this is very valuable. A company that has just started up can lean on much of the experience some of the more mature startups have to offer. This can help the youngest companies to avoid some of the pitfalls in the initial phases of the startup (Paid, 2014).

Further on, the entrepreneurs point out the potential of networks in the incubator. Several of the informants argue that the access to people engaged in similar and relevant activities, and the connection with people who have gone through some of the initial phases when starting up, is a great resource and very valuable for a company. As for example when AbiliMe wrote their application to Innovation Norway, searching for funds, they got some crucial help from another of the companies in the incubator that had already been through this process, and from the management of the incubator who has helped companies through this process several times (AbiliMe, 2014).

6.3.3 Resources available in the incubators

In this paragraph, the role the resources provided by the incubator will be elaborated on through the interviews done with the entrepreneurs and startups. The section will highlight what kind of resources the entrepreneurs and startups have access to, and how they use these resources in their projects to get the development they wish on their journey towards becoming a successful company.

“You get access to everything that is necessary to run a small firm. It is very easy to move in [to the incubator], everything is in place so you do not have to use a lot of time to deal with bureaucratic stuff that is not creating value for your firm.”

- AbiliMe (2014)

There are a lot of different thoughts about what kind of resources that is central for the different startups and entrepreneurs. Some value the physical environment as a central resource, whilst others put more emphasis on factors concerning the milieu, environment and possibilities arranged for in the incubator. If we go back and look at the four points, posted in chapter three, agreed on by researchers that must be in place in order to define something as a well-functioning incubator, we can identify these resources through the data provided by the interviewees. The four points are:

- I. Shared office space (which is rented under more or less favorable conditions)
- II. A pool of shared services (to reduce costs)
- III. Professional business support and advice (legal, economic, strategic, mentoring, etc.)
- IV. Access to networks and contacts (internal/external, informal/formal)

As mentioned when addressing these points in chapter three, the authors do not agree on which of the points are the most important as a resource for the entrepreneur or startup when they develop their firm. Based on the data collected from the startups and entrepreneurs concerning the resources they use, the same point emerges, there are no clear indications as to which one of these resources are the most important for the firm when they develop their company. This probably has something to do with the different phases the companies are in.

The office space is an important resource for a firm. The infrastructure and the office facilities the startups and entrepreneurs get access to through the incubator are also great resources for them to use in their development of firm and product. Several of the startups companies mention the coffee machine and the lunch area as a central resource because of its ability to connect people and create an informal arena for interaction between actors that do not necessarily know each other, but that can be of help to each other (FitSampler, 2014, Paid, 2014 and WorldWideNarrative, 2014). These resources are mostly connected to point (I.) and touches on point (IV.). Another point that emerged during the interviews was that the office facilities are a central resource because, as the entrepreneur from Orwapp AS states: “a company needs a place to work” (Orwapp, 2014). And since the office space the company gets allotted in the

business incubator is cheap, or even free, it gives a company the possibility to free up funds to use on other parts of the firm's development. The flexible office environment and how easy it is to get in touch with other entrepreneurs and ask them for help when needed is also a central resource that is highly valued by the informants (Paid, 2014). This is especially the case for the entrepreneurs and startups that are located in the earliest phases of development; they often have a lot of questions for the more experienced entrepreneurs. AbiliMe sums it up by stating that: "you have what you need to get the job done, the essential infrastructure that is necessary to be able to work on a project" (AbiliMe, 2014). It is also pointed out how the access you have to the many people that are working with similar and relevant things, and to people who have gone through the startup process before are of great value. These people often have a lot of valuable information that the entrepreneurs can seize the possibility to interact with if necessary (AbiliMe, 2014).

This brings the analysis further to look at point (IV.) network and contacts, which a lot of the entrepreneurs and startups highlight as one of the most important parts of the resources that are made available to them through the business incubator. By being part of an environment in a business incubator a lot of new contacts have been made available to them through the network in the incubator. The network gives them access to the extended contacts the business incubator possesses, through this the startups can meet a lot of helpful actors that can point them in the right direction and help them with technical problems that would otherwise have been a potentially expensive resource to obtain (FitSampler, 2014). The representative from AbiliMe values the resources connected to access to useful contacts and key players in the startup game. The startups and entrepreneurs get the possibility to talk to people about everything from concrete technical problems on a detailed level to getting advice on more general issues of concern.

The people running the incubator, StartupLab, are skilled and insightful concerning startups because many of them have, in different degrees, started up companies themselves. They have been involved in many different ways in both startups that have made it, but also startups that have not survived the initial phases. This has given them a lot of crucial information and knowledge about the startup environment (AbiliMe, 2014). This is the kind of information that is tacit, and hard to transfer between individuals. This makes the information very valuable for the startups in the incubators, because the information and knowledge is hard to acquire anywhere else. Some of the informants state that it is possible to find all kinds of people working with different projects, everything from the business aspects to the more technological aspects. The entrepreneurs agree that it is a rewarding place to start a company (YayMedia, 2014 and

Stay.com, 2014). Further on it is mentioned that since the leaders of the incubator have been in the startup business themselves they know what it is like to go through the startup process, so the help you can get from them is unique (Stay.com, 2014).

Some of the entrepreneurs also points out some factors of importance connected to point (III.). The resources mentioned connected to point (III.) is professional business support and advice. Startup Norway explains how accounting companies, mentors and Innovation Norway has repeatedly visited the incubator to provide advice and offer their services to those who need them. People that have this experience from the startup scene are very valuable for startups. In one of the incubators there is a patent engineer working in an office just down the hall. The startups have used him several times to discuss patent-related problems connected to their product. On the other hand, some of the companies do not need to get the resources served by the business incubator, they seek them out when it is necessary (StartupNorway, 2014). Several of the entrepreneurs and startups mention that they use a lot of these resources in the earlier phases, but as they grew as a company they found themselves not needing these resources anymore. This shows that point (III.) as a resource for the entrepreneurs is more connected to the earliest phase of the startup period. The entrepreneur from pAID, that is in the very early stage, points out that these resources have been very useful to him when he was setting up the company and doing the accounts.

6.3.4 Technical and scientific development of the product or idea

The location of the incubator is central for many of the companies because it is not located just anywhere, it is very close to the Department of Informatics at the University of Oslo. This creates a lot of potential, as there are many actors who do not have a direct connection to the business incubator, yet situated in the extended network the entrepreneurs have access to through the business incubator. This gives the different startups good opportunities to meet and get in touch with people that might be useful for the company's development (AbiliMe, 2014). Some of the informants mention that the developers they are using are situated in a building on the same premises as the business incubator, and they would never have established a connection with them if they had not joined the incubator. The representative from AbiliMe states that: "Everybody we need when working with our project is situated just 60 seconds away" (AbiliMe, 2014). He continues to point out that the network, or "ecosystem" as he calls it, is much better than expected. The company is very satisfied with the value they have gotten by residing in the incubator. There are many things the companies have found out or received help or assistance with as a result of their place in the incubator (AbiliMe, 2014). This has given the

startups advantages in terms of tasks that they would otherwise have spent a considerable amount of time on are now going much faster because they have the privilege of competent actors around them to support them and guide them in the right direction. As for example when the company AbiliMe had a specific technical problem when developing the app, they went to another company in the incubator that was working on a similar app that had some important insight to share with them concerning how to get on with their technical difficulties (AbiliMe, 2014).

There a lot of ambitious companies gathered in one place, this creates a work atmosphere where everybody wants to build a business. The representative from Stay.com states that: “If you have people in the network around you that want to grow, you can take part in this energy and be a part of the community where everybody is positive and working towards success” (Stay.com, 2014). The entrepreneurs and startups get a lot of help to grow and get out of the earliest phases of the development by interacting with the other companies in the incubator (AbiliMe, 2014, FitSampler, 2014, Stay.com, 2014 and Paid, 2014). Several of the companies have especially needed help with user testing, and since there are a lot of companies residing in the incubator that are creating software-based products, they have expertise in the field and thus they can give each other good and constructive feedback when developing their products. Since the startups often have technical insight on how user-friendly software should work, they have been important for the development and bug fixing of the products created by the different entrepreneurs.

When a startup company is in constant contact with other entrepreneurs, they help each other to evaluate and determine whether the ideas they present are good or not. When a company works with technological products within hardware or software the time used to determine if an idea has market appeal or not goes much faster than it did just some years ago. Earlier a company could use as much as 1-2 million NOK on something just to get it tested for the market, and this is money the firm potentially loses if the idea is not good enough. Today a firm will only use between a fifth and tenth of this to find out if their idea or product is good enough and has market appeal, as everything is cheaper and faster (AbiliMe, 2014). This has a lot to do with the resources, networks and milieu the entrepreneurs now has available in the early stages of their development. The entrepreneurs do not have to use a lot of money to find out if their idea is good or bad and this makes it easier, and less costly, for people to try to be entrepreneurs. The risks are lower since they do not have to invest so much in arrangements before they can test the product or idea (AbiliMe, 2014). The milieu in the incubator is a place where you can get good, constructive help with your idea. Make the idea market-ready through

interactions and brainstorming sessions with other entrepreneurs in the environment. Especially user testing is something that is possible to save a lot of money on by using the other startups around you instead of having to hire someone, this was a point emphasized by several of the startups (AbiliMe, 2014 and YayMedia, 2014 and Stay.com, 2014).

6.3.5 The incubator as a matchmaker and facilitator

The entrepreneur from FitSampler AS used the network he got through the incubator to get in touch with the founder of FitSampler, they were a good match and started working together on the project. Another interviewee talked about some of the same issues. He found it hard to get in contact with someone to start a business with, before joining the business incubator (Orwapp, 2014). The contacts they made through the network in the business incubator were beneficial in the startup phase. Both of the entrepreneurs met partners in the business incubator. This was a critical step for them, without this connection they would never have ended up starting up the joint projects (Orwapp, 2014 and FitSampler, 2014).

The empirical data shows the value of the incubator as a matchmaker of the right people. The incubator creates the possibilities and facilitates cooperation between the entrepreneurs by offering them the opportunity to stay under the same roof. When startups and entrepreneurs in the same business, in this instance tech and ICT, stay under the same roof with access to central resources it is much easier to find someone to collaborate with. The Business incubator helps the different companies trust each other, and build up their social capital, by facilitating social events and networking. The company FitSampler is now two people working fulltime and three working part-time with the project, and are considering the next phase for the company (FitSampler, 2014). The two actors used the relationship they made in the incubator to build relationships and links to other people in the incubator that was of value to them. To achieve this connection they had to generate some kind of mutual trust. People that are going to cofound something together need to have a high level of trust, and to reach this level it is necessary to build the relationship in a common arena. So as mentioned in the literature chapter, the knowledge and network that actors hold can be very useful to each other, but you need to create some sort of link to utilize this value and create social capital.

6.3.6 “Bartering economy” in the business incubator

The network in the incubator gives the startup companies the opportunity to make a short process of operationalization and user-testing by simply asking other entrepreneurs or startups in the community sitting in their near proximity. The only repayment they have to provide is that

they do the part expected of them, that they help the other companies if there is something they can provide assistance with. Such an arrangement makes being a part of such a network potentially very attractive for actors in the startup phase. Ties like these are further elaborated on in the literature chapter where Rothschild and Darr (2005, p. 66) point out that ties like these are extensive and based mainly on informal contacts between the actors involved. They suggest that the informal exchange of knowledge and know-how lays the foundation for a barter economy between the actors involved in the knowledge exchange.

Some of the startups and entrepreneurs also wish they had more access to the extended network that the business incubator holds. Several of the startups need this in their next phase concerning the incorporation of their product in the market and to obtain pilot-customers (YayMedia, 2014 and AbiliMe, 2014). The entrepreneurs from the companies also point out that inside the incubator it is up each individual company to obtain and achieve the help the company needs. This is underlined with this quote from the interviewee from YayMedia: “If you want a lot of help and input with basic bureaucratic things like accounting it is easy to get it, but there is no one saying that you have to do it. If you want to talk with the leaders of the incubator for advice you can do so, but it is up to yourself” (YayMedia, 2014). The network is there, and if the company want the contact and the resources inherent in the business incubator, they have to be active and give something back, if the entrepreneur or startup keeps to itself, and are not socializing with the rest of the incubator, it is less likely that they get access to the opportunities and potential that exist in the network. It is up to each individual company to decide what they need, and when they need it. Companies are in different phases of their startup periods, and thus have different needs to be considered.

6.3.7 Financing

Both the incubators examined for this thesis have, as mentioned earlier, the possibility to invest in the startups that they house. This can give the startups and entrepreneurs extra motivation to work hard to make a good impression when staying in the business incubator. They will try to show that their idea is worth investing in. Financing is an important part of the development of a startup so this part of the chapter will present what the various startups and entrepreneurs examined has to say about their financing connected to the company’s development.

“There are a couple of big problems connected to startups in Norway, and one of them I think is that there is very little financing for the earliest phases.”

- AbiliMe (2014)

Some of the informants put emphasis on the fact that the incubator they reside in has an investment fund. The incubator has already invested in several companies, this has helped them with their development, and has given them an advantage on other firms in the same position (YayMedia, 2014 and FitSampler, 2014). If they had not joined the incubator, acquiring investments would possibly have been difficult. The incubator also brings in other potential investors that the firms can pitch their ideas to, and potentially find some good match-ups between businesses and investors. Since some of the startups are now an investment object for the incubator it will be in the incubators best interest to support the company in the best possible way

Startup Norway has a little different view on investments, they do not want big investors in their company because they do not want to be owned by someone else. They managed to get through the first hard economic phases, and continue to bootstrap⁶ as a way of financing. For a while they were considering investors, the main reason for this, was that they had projects, customers had hired them, and they had to deliver, but they could not afford to keep people hired to work on the projects because the company got paid arrears (StartupNorway, 2014). They could clearly see why other companies would bring in investors instead of bootstrapping, as there is the possibility of building a company with a much safer economic profile. However the company would then have to exchange some of the company's equity for capital, and Startup Norway did not want to do this. They underline that it is hard for the company to develop and start all the initiatives they want, but the company is still 100 % owned by them, and that is what is important for the founders. To stay in an incubator helped them keep the company founder owned. Through the incubator they have the security they need to stay independent, a task that would be harder if they were operating individually outside the incubator.

Several of the startups received capital from Innovation Norway in their initial phases. This is what is termed soft money, money received from government agencies that the startups do not have to pay back. One of the startups has the opportunity to finance itself, this is because they have started up another company earlier, sold it, and have put money aside to invest in this new project. But for other entrepreneurs that are starting up for the first time, financing and

⁶ Refers to the starting of a self-sustaining process that is supposed to proceed without external input.

capital may be difficult to obtain without giving away a big share of the company. Several of the informants argued that this is one of the problems with starting up in Norway, there is just so little financing from government agencies. A company can get a little bit from Innovation Norway in the very beginning of the startup period, but they have to make it on their own for a long while. When they get customers, and the project is ready to launch, then it is possible to apply for some more public funds, but before this there is little public capital to be obtained (AbiliMe, 2014). The period between the initial public funding till the company get customers and the projects is ready for launching is often referred to by the entrepreneurs as the valley of death.

6.3.8 Incubators role in different phases of development

This part of the chapter is going to consider the different phases of a startups development, especially the phase when they are no longer a startup and have to move out of the incubator. The different entrepreneurs are in different phases of their startups periods so it is interesting to see what they are focusing on as the most important for their development where they are at this point.

“One should optimally grow out of these facilities, because then you have succeeded.”

- Startup Norway (2014)

As the quote suggests, no matter how good and prosperous the relationship with the incubator is, the goal must be to move out of the incubator after a while. The companies have to try and sustain themselves without the support of the incubator. This is the only way to see if they can succeed with the product or project they have been working on. And when a company moves out of an incubator they should be more or less ready for this transition and potentially, and hopefully, go on to be a competitive and economically sustainable company that can be a presence in the market. This is one of the issues Bøllingtoft (2012) discusses in the literature chapter. She argues that the entrepreneurs and startups do not get ready for the transition to become competitive companies because of the artificially good conditions the startups have in the business incubator. They risk never developing the ability to transfer on to the real market. This is a point that is important to remember when discussing the development of the startups and entrepreneurs out of the business incubators.

Normally the entrepreneurs can only sit in the incubator for 12 months, but in special

circumstances companies can be granted an extension. This only happens when companies are in a dialog about future investments from the fund connected to the incubator. This shows some of the potential advantage startup firms can obtain by keeping a close relationship with their incubator. When the representative from World Wide Narrative is asked whether one year is enough for a company to stay in an incubator, she answers that they think one year should be plenty: “If you do not get some sort of development in one year you have been wasting too much time on things that have not been creating value for your firm” (WorldWideNarrative, 2014). AbiliMe agrees, but ups the time limit with one year, and states that: “after 24 months you should by definition not sit in the business incubator anymore. If a company still sits in the incubator after two years they are probably taking up space that most likely is needed more by another company in the startup phase” (AbiliMe, 2014). The entrepreneur from Orwapp AS disagrees with this, and thinks that one to two years is far from enough, and presses that their time in the incubator is almost over. He states that their start was relatively slow. They used a lot of time to put forward their concept and convince financial actors to support the project. They also used a lot of the time during the first year to develop a prototype of the product to show to potential customers and investors. They will start the real work with the product next year (2015), and that is when they would have needed the incubator the most (Orwapp, 2014). One of the informants thinks that the fact that you only have one year at your disposal is kind of a good thing. This can pressure a company to get out of the idea stages and on with the development of the project (Paid, 2014). Another of the informants does not really feel any pressure from the incubator at all, and she thinks that it is a good thing. As it is stated: “the pressure should come from the customers, and not the incubator. It would be very wrong for us if the incubator was the actor that was pushing us forward” (WorldWideNarrative, 2014). It is further argued that the moment you get dependent on other actors to push the company in the right direction, it will get very hard to stay independent in the long run. One of the good things about staying in the incubator, as mentioned by several of the interviewees, is that one can sit there for free or very cheap, just based on the idea without anyone pushing the idea or company in any direction, the company is free to develop the way it wants (WorldWideNarrative, 2014 and Paid, 2014). This is opposed to some of the other incubators that have clear purpose to invest in the companies. If they do not see this potential they do not engage with the startup in the first place, and the startup will be screened out during the initial admissions.

Some of the success stories from the incubators are the companies YayMedia and Stay.com that have seemingly made it. They have their product ready, they are financed and have income. The two companies are in the internationalization phase and are trying to grow out to a

bigger market. It remains to be seen if they can survive after they move out of the incubator, but they have a good starting point influenced by the fact that they have been using the resources available to them in a sensible way (YayMedia, 2014 and Stay.com, 2014). The startups also mention some aspects concerning exit strategies. The startups generally only stay in the incubator for one to two years and then they usually should have grown to become a “real” company, or have found out that their project or idea does not work, and start working on something else by that time. But for the companies that grow out of the incubator therefore some possibilities in-house. There are already companies that have moved to other offices in the institution connected to the incubator. According to YayMedia they have also started to talk about something called the startup alumni. These are startups that have grown to be well functioning companies, and move out of the incubator, but still stay in close proximity to the startup environment. The management of the incubator uses these companies to hold lectures and they arrange events where the startups and the alumni’s can meet and network to create potential collaborations (YayMedia, 2014).

Stay.com does no longer consider themselves a startup. The company is moving out of the incubator because they need more privacy and room. It is pointed out that the startup has grown out of an open area and need more space and time alone for their company. It is not good to stay a startup forever, the startups have to evolve, if they want to be able to become a real company they must evolve out of the startup phase and move out of the incubator. Some people in the startup environment thinks it is cool to be an entrepreneur, just for the sake of it, but the entrepreneurs need to get out of that state of mind after a while and take the company, project, product or idea onwards (Stay.com, 2014). This is an important point made by the entrepreneur in Stay.com, one should not stay an entrepreneur and reside in a startup environment forever, and at some point one must evolve out of this phase. The whole point is to get out of the startup phase and on to the market.

Another important fact presented by the informants is that a company will always be connected to another brand if it stays in an incubator. So in the long term it is necessary to become independent (StartupNorway, 2014). In the early phases the startups need information to base their actions on, but gradually they will get too much work to do, and that should lead to less interaction with the network and milieu because the startup companies have many other pressing concerns that they need to deal with for the sake of the development of the company.

The arguments above show how the network and resources helps the companies in the business incubator achieve potential benefits and advantages in developing their firm that they would not have had if they had not been in the incubation program. A company that have just

started up, and is facing the difficult issues connected to the first phases of the startup, but is not connected to the network an business incubator provides, would use a lot more time to find the right channels and resources and how to use and benefit from them in the most optimal way. The entrepreneurs in the business incubators can use each other's experiences to gain momentum compared to other entrepreneurs, which are located outside an incubator, and have to rely on their own establishment of networks. Creating networks can be a time- and effort-consuming activity, especially if you have to start from scratch. Based on this reasoning, companies like Orwapp AS, AbiliMe, Stay.com and FitSampler AS are getting a potentially competitive advantage on startups and entrepreneurs that do not have access to the networks provided by the incubator. This is valuable for the companies because when entering the market with their product the startup companies will need all the help they can get to survive and become viable and prosperous companies in the long run (Nahapiet & Ghosal 1998, p. 252).

6.4 Summary

In this chapter empirical data from the eight startups in two business incubators have been presented and analyzed to get an overview of some important topics connected to the research question of this thesis. A lot of different perspectives have emerged about the different startups and entrepreneurs staying in the incubators. A list of the key findings is presented in table 7.1, in the next chapter. The chapter contains a summary of the main findings, a discussion of the findings in light of the literature and implications, contributions and shortcomings of this study.

7 Key findings, implications and conclusion

This chapter will contain an overview of the key findings seen in the light of the existing literature. There will also be an elaboration on the contribution of the findings to the existing field, and the implications these findings can have on the existing research and practice. At the end of the chapter a conclusion will be drawn. It is worth mentioning the research question again as this section of the thesis aims to specifically elaborate on the question asked:

How does staying in a business incubator help startup companies and entrepreneurs to deal with the challenges and resource demands they face in their initial phases of development?

7.1 Key findings in light of the existing literature

The research performed in this thesis has culminated in seven main findings that appeared when working with the empirical data. For an overview of central themes presented in this chapter see table 7.1. This table contains a summary of the key findings, the existing literature concerning these findings and the contributions and implications these findings can have on research and on how to facilitate for entrepreneurs. The findings are essentially divided in to two parts. One part concerns the benefits of staying in a business incubator connected to the resources available, the network where the startups can socialize and gather information and the learning aspect connected to the interaction between the different startups and entrepreneurs and the business incubator. The other part of the findings concerns some risks of staying in a business incubator. The risks are mainly connected to over-embeddedness and the fact that keeping contacts and networks alive can be very resource demanding for a small startup company with limited resources.

After table 7.1 each main point is elaborated on.

Table 7.1 – Main findings, putting into perspective and implications of the result

KEY FINDINGS:	EXISTING LITERATURE:	CONTRIBUTIONS AND IMPLICATIONS:
The different startups and entrepreneurs have different needs for the different phases of their development	Not mentioned in any of the literature examined for this thesis.	This finding shows the diversity of the different startups when they are in different phases of their development. This can create problems connected to making generalizations about how to make the startup environment optimal for all the involved entrepreneurs.
The importance of the milieu in the early phases of development	Previous literature examines the role of the milieu in relation to competitive advantages. It is also examined in the social capital literature, where it is shown how entrepreneurs enjoy the benefits of relationships through interactions in a milieu.	It is thus important to facilitate a good environment and milieu that encourages interaction between the different actors in the business incubator.
Absorbing risk and uncertainty	In the literature this is viewed through the fact that an entrepreneur is one that work for the opportunity to assume personal gain for risk. It is also elaborated on how this risk can be managed.	The actors argue that they were searching for an environment where they could meet other actors that were not risk-averse. Risk is a factor that can potentially scare entrepreneurs away from starting a company because they view the risk of failing as too high.
The importance of having place with a nice and calm environment to work in	The literature examines the role of the working place through the resources gained by sitting in a business incubator.	To have a place to work is an important resource for the entrepreneurs and startups. This is not just for the networking or for the social milieu, it is also to have place where the company can work in peace and quiet to develop their project or idea further.
The significance of balancing and positioning in the network	The use of contacts, through the position in the network, to barter knowledge, information and services is examined in the literature. It is also mentioned that networking is not necessarily an unlimited good, and therefore it is important to balance it.	The different actors use, and take part in the network very differently connected to which period and phase of the startup they are in. The empirical data have shown that the most important part of the networking is done in the earliest phases of the startups development, and that after this period it is important to balance the networking and not use unnecessary resources on this.
The centrality of the access, and the ability, to absorb knowledge and information, and using this information when doing important choices for the development of the company	The existing literature examines this aspect through informal ties as an important way of knowledge sharing in the business incubator. It is also examined through absorptive capacity where the actors have to be able to distinguish and absorb the information in the business incubator that is relevant to them.	Information and knowledge as basis for action is a reoccurring theme in the empirical data. This means that it is very important for the entrepreneurs to position themselves in a suitable way to obtain the information and knowledge they need, when they need it. This makes it important to try to create a high-quality environment for knowledge sharing and information flow.
Finding funds and help to achieve financial backing	Not mentioned explicitly in any of the existing literature examined for this thesis.	The funding of the startup company is something that all the entrepreneurs have to deal with in one way or another. A lot of the actors complain about the financial environment to support startups in Norway.

7.1.1 Different needs for different phases

The different startup companies and entrepreneurs examined for this thesis are all in different phases of their development, some are less than one year old while others have been running for up to seven years. This means that they need different resources to develop their companies further. The companies that have just started their development, and are still working with sketches and ideas for products, need assistance in expanding their networks and trying to find contacts that can help them develop their idea further. They also need to decide how they are going to fund their project. In this phase the milieu in the incubator can potentially be very valuable. The youngest startups can use the more seasoned entrepreneurs in the sense that they have the possibility to ask for guidance and help from actors that have been through the process of starting up a company before.

The entrepreneurs and startups that are more experienced have other needs, and often emphasize the value of brainstorming and discussing with other entrepreneurs and startup companies in the same business as themselves. When the startups have developed a “beta” or pilot type of their product, they are often looking for pilot-testers that have tacit knowledge about the industry and the technology they are developing. This is a resource that the individual startups have the potential to arrange amongst themselves in a business incubator. The companies that already have a product often just need to put hours in their company and try to use the network provided by the incubator to get in touch with potential customers or users. If the startup company has progressed so far that they have their product ready and they have customers, they just need to work with their project and try to focus on what is important for their next phase of development.

The literature reviewed did not mention anything specifically about the findings concerning how the different startups and entrepreneurs need different resources in the different phases of their development. The thesis did a comprehensive literature search and review when building the theoretical basis for this research, but this was not mentioned specifically in any of the literature that was examined. This does not necessarily mean that this finding is unique, but probably just that this has not been a center of earlier research performed. However, since this is one of the key findings in this thesis, and it is not been a centre of existing research, it can add to the existing literature on the subject of the facilitation for entrepreneurs by business incubators in an expanding and interesting way.

As mentioned in table 7.1, this finding can have implications for the management of the incubator or for the institutions running the incubator. When facilitating for the entrepreneurs it is important to be aware of the differences in needs of resources by the different startups. Since

the incubators examined in this thesis had startups and entrepreneurs ranging from the earliest phases to the much more developed companies, it is important for the institutions and managements that run these incubators to be aware of the large dispersion between the different companies in terms of the resources they need, and when they need them. This encourages the leaders of the different business incubators to have a good overview of the companies that reside in their incubator. If this is done in a proper way it can create great potential for the startups and entrepreneurs involved. They will potentially get just the right help they need for the phase of the development they are in. This can help them speed up the transition from a startup to a viable firm and in that way support the startup in being competitive when it reaches the market.

7.1.2 The importance of a supportive milieu in the early phases development

Virtually all of the informants argued that the milieu in the business incubator was important for them to deal with some of the challenges they faced at some point during their development, but especially in the earliest phases. When the informants talked about the phase where they had just started up, they praised the incubator milieu as indispensable. They got a lot of help using the resources in the incubator and through brainstorming and discussions with the other startups. Especially the fact that the companies had the possibility to take part in an already established social environment, where the established norm was to help each other out and be open to give tips and advice, helped the startups to ease the transition out of the earliest, and often most difficult, phases. Many of the informants felt that the help they got dealing with the first challenges they met gave them a competitive advantage in their development compared to other startups and entrepreneurs that did not stay in a business incubator. Even though most of the informants were very satisfied, some of them also had some critique of this directed at the business incubator. They felt that the environment they were residing in was not always facilitated in a way that made it easy for the entrepreneurs to interact with each other or with the management running the incubator.

The existing literature bases its examinations on the competitive advantages the startups and entrepreneurs gain from participation in a milieu. The connection to social capital is also apparent as it shows how the entrepreneurs and startups benefit from the relationships and companionships that they create through the interaction in the social milieu (Hughes, Ireland, & Morgan, 2007). They use the resources they achieve in the business incubator to create valuable connections that have the potential to help them develop the company. A contribution to the existing literature concerning the social milieu in a business incubator could be proposed in

different ways. One is to make sure that the social milieu, and how this is facilitated, is emphasized in a way that encourages interaction between the startups. How to do this in practice will potentially be a challenge that the business incubators have to take upon themselves to deal with. The informants clearly placed a lot of value in the social environment and interactions with the other actors in the milieu, especially in the early phases. Some argued that how the milieu was facilitated could have been done better, but no one proposed how this could potentially be done.

7.1.3 Mitigating risk and uncertainty

It was pointed out by several of the interviewees that the risk they took when engaging in a startup project was something they were aware of. Many of them also mentioned that, before they joined the business incubator, it had been hard to find other actors that were not risk-averse. Several of the startups were looking for collaborators and partners, but found it difficult to find someone willing to go into a project with an uncertain economic future. This changed when they joined the business incubator, because there they met other actors that had the same mindset as themselves, and it was much easier to find people to collaborate and partner up with.

In the existing literature, risk is seen as one central factor of entrepreneurship (Lumpkin & Dess, 1996). A problem connected to risk is that it can often work as a hindrance for entrepreneurship, because potential entrepreneurs do not dare to engage in the economic uncertainty being an entrepreneur implies. The business incubators can absorb some of this uncertainty by creating an environment that helps the startups and entrepreneurs to succeed, especially through the first phases of development (Aernoudt 2004 and Phan, Siegel & Wright 2005). The implication this has for the actors running the business incubators is the suggestion that the business incubators should alleviate risks through making key resources for the startups and entrepreneurs available when they need them. This can have the effect that more people dare go into the startup business. This can again create more surviving business with all the positive benefits and effects this creates. If the startups and entrepreneurs are increasingly aware of the benefits of staying in an incubator it will attract more people eager to try their luck with their idea or product, and more people trying means that more people succeeds with all the positive benefits this potentially creates.

7.1.4 Access to networks

Networks are very important for startups. The informants claim that the network they gained access to through the business incubator could help them reach valuable contacts and resources, inside and outside the incubator, which again could help them develop in the direction they

wanted. A central theme that emerged in the interviews was the positioning the different startups and entrepreneurs chose to have. They needed to place themselves correctly in the network, considering the information, knowledge and associates they wished to obtain contact with. Even though the importance of networks and contacts surfaced as prime points of importance for the startups and entrepreneurs, how they utilize this resource is an important factor for how they deal with their challenges and develop as a company.

The existing literature emphasizes the collaborative relations networks provide through informal ties (Rothschild & Darr 2005 and Granovetter 1973). It is also pointed out in the literature how it is important to balance the networking, since networking is not seen as an activity that provides unlimited goods. Networking can become an unnecessary burden when a lot of time and resources are invested in the networks, but the benefits achieved through this investment are not worth the cost of participation (Semrau & Werner, 2014). This implication, both found in the empirical data and in the literature, suggests that it is important for the startups and entrepreneurs to be “smart” in their networking, and use their resources wisely by maintaining essential ties. How the entrepreneurs and startups position themselves in the network is also an important feature they have to assess when they build their network. To be able to deal with the challenges they face during their startup periods the entrepreneurs need to situate themselves correctly according to what kind of information and contacts they need access to. This is not something that the business incubator can help the startups and entrepreneurs directly with, but the incubator can help the startups and entrepreneurs get in contact with more seasoned entrepreneurs that can share their knowledge concerning this specific challenge.

7.1.5 A place to work

The entrepreneurs and startups that are beyond the initial phases of development that are further in the process, do not need to network and try to obtain financing for their company. What they need is to work with their project, get customers and make money or prepare the product for the market. It is important to have the network and the milieu in the incubator as backing when developing the company, but at some point the company has to focus on their own development and cut down on the socializing. This is something several of the informants mentioned as a central theme for their longer-term development.

This can give a contribution to some of the existing literature concerning startups with the connection to a business incubator. The literature has a tendency to put a lot of weight on networking and interactions between the startups and the incubator as the main resources for the startups (Bergek & Norrmann 2008, Bøllingtoft & Ulhøi 2005, Bøllingtoft 2012 and Brooks

1986). This is, as mentioned, something that is important in the earliest phases of the development of the company, but when the company has evolved beyond the initial phases, it is important that the company have the potential to work in a calm working environment without too many interruptions and social happenings that they feel obligated to join. This is knowledge that can give the startups and entrepreneurs advantages in facing their challenges when they are maturing towards becoming “real” companies. It is essential that this is clear for both the startups and the management running the business incubator so this can be facilitated in a suitable way for the involved actors.

7.1.6 Access to information and experience-based knowledge

Information and knowledge is important for the startups and entrepreneurs. When they make decisions regarding their company’s process and development forward they wish that these choices are made on a prudent basis. This is why they need access to the right information and knowledge at the right time. This is especially significant in the earlier phases of the development when the choices made can be crucial for the further development of the company. The startups also need a way to absorb the knowledge that they deem relevant, and this is where the concept of absorptive capacity comes in. To be able to absorb and process the knowledge that are relevant for the different startups they need prior knowledge.

This is examined in the existing literature, and shows that the prior knowledge can range from a shared language to a specific know-how concerning a technological field. The prior knowledge must be in place to be able to absorb the new knowledge (Cohen & Levinthal, 1990). This is a central factor for the different startups and entrepreneurs when they are building up their knowledge base to make well-judged decisions. The existing literature also highlights the information benefits of informal ties (Fang, Tsai, & Lin, 2012). The startups and entrepreneurs often find it difficult to create value through the choices they make because of their restricted access to resources and information. The implication for the incubation programs is that they should put emphasis on creating opportunities for entrepreneurs and startups to form social relations and gain access to new resources by building ties to other members of the incubator and external networks. The challenges connected to access to information can be institutionalized in the incubator. This makes the challenges easier to deal with than if the companies were working individually. This makes it important for the business incubators to facilitate for the creation of social relations and the forming of informal ties through, both the physical and the social, infrastructure of the incubator. Many of the interviewees deemed the coffee machine as a central resource because this created a natural habitat of talking to the other

actors in the business incubator and through these informal meetings form new acquaintances that could help them strengthen their social capital, which they could use when needing information and knowledge when assessing important choices concerning the development of their company.

7.1.7 Finding funds and financial backing

The funding of the startup company is something that all the entrepreneurs have to deal with in some way or another. This can be done through potential investors, through public funds, by lending money, private capital or through customers. But even after the company has decided in what way they are going to finance the company, the problem remains how to actually raise the funds necessary. Most of the startups examined for this thesis have received money through Innovation Norway or other government agencies. The money received from the government is termed “soft money”, meaning money that the companies do not have to pay back. Both of the business incubators examined for this thesis have the possibility to invest in the startups that they house, and this has the potential to make the funding environment an easier one for the startups and entrepreneurs involved. The incubators also help the startups and entrepreneurs with applications for soft money and introduce them to potential investors. This is something that the startups also help each other with in the business incubator. Some of the companies have already gone through the first rounds of financing and can thus help the young firms handling their initial phases. This is an invaluable resource for the firms joining the business incubator, because funding can be one of the most difficult challenges to overcome in the developmental phases for a startup company. This suggests that entrepreneurs achieve a valuable competitive edge on other startup companies that are not connected to a business incubator.

Literature concerning funds and financial backing connected to entrepreneurs and startups in connection with a business incubator were not discovered when researching literature for this thesis. The researcher did a comprehensive search and review when looking for literature, but this was not mentioned specifically in the literature examined. As mentioned under section 7.1.1, this does not mean that this finding is unique, but probably just that this has not been a center of earlier research performed.

7.2 Conclusion

The research performed in this thesis has had the goal of trying to show how the business incubators can help the startups and entrepreneurs deal with the challenges presented to them in their early phases of development. The research has also had the goal of showing what kind of resources the different startups and entrepreneurs need in different phases of their development. To find the empirical data that was needed to answer these questions it was performed several qualitative interviews to be able to get in-depth answers from the entrepreneurs and startups examined. It was also seen as necessary to go through a lot of existing literature and theories concerning business incubators to obtain a satisfactory overview of the field in research. The interviews led to the empirical material and from this data a pattern emerged that, after being processed, gave the empirical answers to the research question chosen for this thesis.

This research is important because of the place tech and ICT startups and entrepreneurs have, and are going to have in the future. The societies we live in are mainly driven by technology and innovation. The world has changed so much during the last decades because of the technological development. And behind every part of a new big technological evolution there is an idea that someone has come up with, worked hard for and eventually succeeded with. No one knows how the technology will develop in the future, but it is likely that there will still be individuals with an idea that is the “next big thing”, and they are going to need help to get this idea up and running. This is where the business incubators play a role. They can help individuals with ideas to get access to resources and knowledge necessary to make the transition from an idea to a product and a viable business. Based on this reasoning it is important to support entrepreneurs. However, support initiatives should be based on knowledge about the challenges startup-firms face in their initial phases of development.

To make a contribution to this, this thesis has addressed the following research question:

How does staying in a business incubator help startup companies and entrepreneurs to deal with the challenges and resource demands they face in their initial phases of development?

The main objective of this thesis has been to examine the interaction between the startups and the business incubator and try to identify how this relationship works, and how the business incubators can help the startups and entrepreneurs deal with the challenges they face in the early phases of development. The main finding is that the different startups and entrepreneurs need different resources connected to the phase of the development they are in. Awareness of this

fact can help the startups face their challenges in a better and more suitable manner. The business incubators can on their side help the startups and entrepreneurs by being aware of this fact, and facilitate the aid and contribution in a manner that provides the best possible adapted outcome for the actors involved. It is also important to mention the milieu as an important factor for the startups and entrepreneurs to deal with their challenges during their early phases of development. This is both important for the startups and entrepreneurs because of the other actors in the same position as themselves that they can brainstorm, discuss and socialize with. The milieu concerning the startups scene often achieves more publicity than individual startups working alone and this makes it easier to recognize for potential investors and to show the government agencies that there is a startup environment that should be focused on. To attract this kind of attention would be difficult if all the different startups and entrepreneurs were sitting individually at home or was renting office spaces separately. But having the startups in the business incubator makes it easier to deal with the initial phases of development for the startups and entrepreneurs, they are not alone and have through the incubator all the potentially resources they need to develop into becoming a successful company.

More specifically, it is observed that resource demands of startups differ in different stages of development. Table (7.2) summarizes the different resources the startup needs in the different phases of development. This table is based on the empirical data that emerged during the interviews, and shows what the different startups and entrepreneurs emphasized as the most important resources connected to the different phases of their development. The startups and entrepreneurs were all in different phases of their development when interviewed for this thesis. They all expressed different needs from when they started up to where they are now. When working with the empirical data a pattern emerged that showed how the different startups and entrepreneurs all were in relative agreement on what a startup company need in the different phases of development.

Table 7.2 – Resources needed in different phases

PHASE:	ABSORBING RISK AND UNCERTAINTY	THE MILIEU	NETWORK	ACCESS TO KNOWLEDGE AND INFORMATION	THE NEED OF FUNDS	CALM WORK ENVIRONMENT
Early: 0-6 months	X	X	X	X	X	
Medium: 6-12 months		X	X	X	X	
Developed: 12-18 months			X	X		X
Mature: 18-24 months				X		X

This table shows the importance of being aware of what kind of resources the different startups and entrepreneurs should have their focus on during the different phases of their development.

The results can give some important contributions and insight for the management of incubators. They can use the results to facilitate even better for entrepreneurs and startups that are situated in different phases of development. With this insight, the management will have an easier task when deciding what kind of resources, help and aid the startups needs when they are evolving.

7.3 Final remarks and further research

The first final remarks this thesis that will be elaborated on are connected to figure 3.1. This figure has been used to summarize and structure some important parts of this thesis. In this last part it will be looked at more closely to examine its relevance between its theoretical content and the empirical data examined in this thesis.

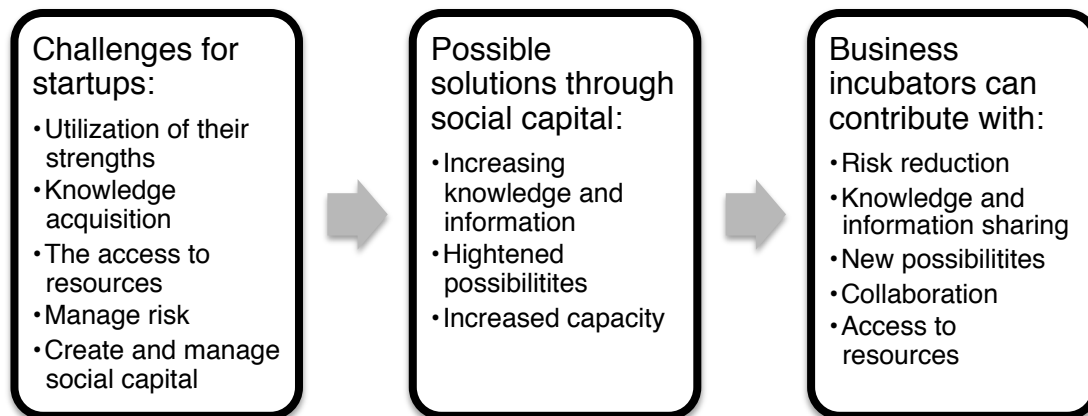


Figure 3.1

This figure has been apparent several times in this thesis and it is necessary that it is looked a little closer through some concluding remarks. The challenges listed in the figure are summarized from the literature, but addition to these challenges there is the ones listed in chapter six, made on the basis of the empirical data:

- A suiting place to work
- Access to resources
- To be a part of a milieu
- Access to knowledge and information (social capital)
- Finding a way to finance the company
- Contact with actors who are not risk averse

The challenges presented in the first box of figure 3.1 overlap with the challenges the informants presented, which were listed in chapter six. This shows a correspondence between the theoretical and empirical material concerning what kind of challenges the entrepreneurs and startups face. This connection contributes to strengthen the thesis validity through the consistency between

theory and facts. The exception is the first point in the figure that states that a challenge for the startups is to utilize their strengths. This was not something that any of the informants expressed explicitly as one of the challenges they faced when they were starting up their business. It is several reasons for how this discrepancy could have come about, but it is probably connected to the selection of informants, and how they worded their answers. This means that it does not influence the result noteworthy.

The possible theoretical solutions presented in box two are also generally matching the empirical material found in this thesis. The entrepreneurs and startups are trying to deal with their challenges by using social relations and collaborative networks. They are building their social capital to be better equipped to deal with the problems they have to overcome in the early phases of development. This corresponds well with the solution presented in the literature. The startups and entrepreneurs are trying to increase their knowledge base, their way of obtaining information and how they increase their capacity by forming ties to other startups and the incubator itself. They try to increase their possibilities to overcome their challenges. This correspondence also acts as a strengthening factor between the existing literature and this research. By this fact it is showed that the probability of this research being performed is correct because of its consistency with existing literature.

The last box, presenting how the business incubator can aid the startups and entrepreneurs in dealing with their challenges, also shows that the empirical data match the data examined in the literature. Several of the startups and entrepreneurs interviewed states that they use the resources offered in the business incubator to deal with challenges they face. The help and aid the companies achieve by staying in a business incubator are connected to the possibilities to brainstorm and discuss with other entrepreneurs and startups in the business incubator. They also have the possibility to use the resources available to aid the development of their company and/or idea. The entrepreneurs and startups also use the incubators to get in touch with actors that can help them with their financial situation, either through help with applications for funds or through direct investments in their company. This was not something that was expressed specifically in the literature examined. The literature also adds risk reduction to one of the challenges the business incubator can aid the startups and entrepreneurs to overcome if they join the incubation program.

The resemblance between the existing literature and the empirical data gathered shows that, as mentioned, the validity of this research is satisfying. It also shows that the decision to use figure 3.1 to structure chapter six was satisfying, in the sense of the issues the chapter tried to illuminate.

Many have seen business incubators as a suitable and promising way to facilitate for entrepreneurs and startups. Business incubators have popped up in Norway and in the rest of the world over the last ten years. During this thesis some central arguments for why the business incubator can be a good way for startups to get the start they need to develop into becoming a successful company has emerged.

It is important to note that it may be hard to generalize for all startups based on the qualitative interviews done in this thesis. That would call for a more comprehensive research project. But the strength of this study is the insight it provides at the micro level. The processes behind the choices and challenges the startups and entrepreneurs face are well documented through this thesis. Through qualitative studies, like this one, the researcher has the opportunity to get close to the research subjects and examine them carefully, and in depth. The addition this gives to the existing literature is the fact that startups and entrepreneurs in different phases need different resources. It would have been difficult obtain this information without doing in-depth interviews. The informants told different parts of the overall picture, and it was not before all the data had been gathered and processed that the whole picture of the main findings of this research was apparent. To do this type of data gathering through questionnaires would only show one part of the picture because of the locked in answers a research achieves when all the informants have to answer the same pre-generated and structured questions. All the answer will be inside the same frame of data. This study was much freer to follow up on interesting leads and had the possibility to do in-depth discussions with the informants to get their side of the phenomenon that was researched. This was more important than to be able to generalize.

But if the goal were to generalize, a more comprehensive study would be needed. It had to include data on a lot more startups and entrepreneurs than this research did. To be able to make generalizations it would probably be necessary to do a quantitative analysis. This could be achieved by creating a questionnaire that was sent out to a great number of startups and entrepreneurs residing in incubators. To send out to companies from all over the world would probably be to a large scale, but Europe or the USA would probably be a suiting level for research like this. The data gathered from the questionnaires could be gathered in a database, and from the information in the database analysis could be done that would help shed light on important issues concerning startups and entrepreneurs in business incubators. An analysis done with the goal of mapping what kind of resources the different startups need in their different phases of development based on the data gathered from a comprehensive study like this would probably give greater basis for generalizing about what different startups and entrepreneurs need in the phases of development, but it would miss the depth and the individual differences this

thesis has shown through its research.

The implications for the government institutions that handle entrepreneurial policy should, based on the empirical data that some of the informants deemed as important. This is a point connected to the financing of startups and entrepreneurs. Several of the interviewees talked about how the government and other public agencies do not engage enough with capital in the startup environment. One way to solve this could be for the government to invest in more publicly funded business incubators. And as the thesis presented in chapter one, a lot of the government agencies dealing with startups and entrepreneurs want to focus on making the environment for startups and entrepreneurs in Norway easier. A proposal for how this could be done is by the government mirroring the money used by the private actors starting up a business incubator, or that the government agencies, like Innovation Norway, started up their own business incubators, that was owned by the government, but privately driven to keep them competitive. With a change of policy in this direction it could be a positive step in the direction of a more sustainable and productive startup environment connected to business incubators. But again, to have a broad factual background to base this kind of initiative on, further and more comprehensive research is needed.

Another implication this research can have is on the incubation management. They can obtain some important insight on how to facilitate for entrepreneurs in a business incubator. If the management know what the different startups and entrepreneurs need, and when they need it, they can in a correct way facilitate for not just the immediate needs, but also the needs the startups and entrepreneurs will have when they develop into the next phase. To always have the right resources available when developing will probably be positive for the entrepreneurs because then they will overcome some of the challenges they face when they are in the early startup phases of development.

An aspect of the development process that has not been given a lot of space in this thesis is how entrepreneurs know if their idea is workable or not, and how they know if their company is going to be successful. This is the main question for investors, business incubators and the startups themselves. How to spot the winners, and get on the “next big thing” is something that many of the actors in the startups environment are trying to achieve. It would be interesting to see a comprehensive research that would use quantitative methods to see if it could identify some common traits among the startups that become successful companies. This would be an interesting research project to do in Norway and by trying to map the important traits that identify startups that evolved to become successful companies.

Literature

- AbiliMe. (2014, 25-November). Interview with AbiliMe. (J. Archer, Interviewer)
- Aaboen, L. (2009). Explaining Incubators Using Firm Analogy. *Technovation* (29), pp. 657-670.
- Academic Positions. (2013). *Arbeidsgivere: Simula Research Laboratory*. Retrived April 30, 2014 from Academic Positions: <http://academicpositions.no/employer/simula-research-laboratory/>
- Aernoudt, R. (2004). Incubators: Tool for Entrepreneurship? . *Small Business Economics* (23), pp. 127-135.
- Ahmad, N., & Seymour, R. G. (2008). *Defining Entrepreneurial Activity: Definitions Supporting Frameworks for Data Collection*. OECD.
- Baxter, J. (2010). Case studies in qualitative research. In I. Hay, *Qualitative Research Methods in Human Geography* (Vol. 3, pp. 81-98). Canada: Oxford.
- Bøllingtoft, A. (2012, 14-Januar). The Bottom-up Incubator: Leverage to Networking and Cooperation Practices in a Self-generated, Entrepreneurial-Enabled Environment. *Technovation* (32), pp. 304-315.
- Bøllingtoft, A., & Ulhøi, J. P. (2005). The Networked Business Incubator—Leveraging Entrepreneurial Agency? *Journal of Business Venturing* (20) , pp. 265–290.
- Bearse, P. (1998). A Question of Evaluation: NBIA's Impact Assesment of Business Incubators. *Economic Development Quarterly*, pp. 322-333.
- Bergek, A., & Norrmann, C. (2008). Incubator best practice: A framework. *Technovation* (28), pp. 20-28.
- Bourdieu, P. (2002). The Forms of Capital. In N. Biggart, *Readings in Economic Sociology* (pp. 280-292). Oxford, UK: Blackwell Publishers Ltd.
- Bourdieu, P., & Wacquant, J. D. (1992). *The Practice of Reflexive Sociology*. The University of Chicago Press.
- Brooks, O. J. (1986, June). Economic Development Through Entrepreneurship: Incubators and the Incubation Process. *Economic Development Review*, 4 (7), pp. 24-29.
- Bruneel, J., Ratinho, T., Clarysse, B., & Groen, A. (2011, 3-December). The Evolution of Business Incubators: Comparing Demand and Supply of Business Incubation Services Across Different Incubator Generations. *Technovation*, pp. 110-121.
- Bruni, L., & Sugden, R. (2000, April). Moral Canals: Trust and Social Capital in the Work of Hume, Smith and Genovesi. *Economics and Philosophy*, (1), pp. 21-45.
- Burt, R. S. (1992). *Structural Holes: The Social Structure of Competition*. Cambridge: Harvard University Press.

- Carbonell, P., & Rodriguez, A. I. (2006). The Impact of Market Characteristics and Innovation Speed on Perceptions of Positional Advantage and New Product Performance. *International Journal of Research Marketing* (23), pp. 1-12.
- Chan, K., & Lau, T. (2005, 10-March). Assessing Technology Incubator Programs in the Science Park: The Good, The Bad and The Ugly. *Technovation*, 25 (25), pp. 1215-1228.
- Chatterji, A., Glaeser, E., & Kerr, W. (2013). Clusters of Entrepreneurship and Innovation. *Innovation Policy and Economic Forum*, pp. 1-36.
- Clausen, T., & Korneliussen, T. (2012). The Relationship Between Entrepreneurial Orientation and Speed to the Market: The Case of Incubator Firms in Norway. *Technovation* (32), pp. 560-567.
- Cohen, W. M., & Levithal, D. A. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly* (35), pp. 128-152.
- Dhanaraj, C., & Parkhe, A. (2006). Orchestrating Innovation Networks. *Academy of Management Review* (31), pp. 659-669.
- Dowling, R. (2010). Power, Subjectivity, and Ethics in Qualitative Research. In I. Hay, *Qualitative Research Methods in Human Geography* (pp. 26-39). Canada: Oxford Publishing.
- Dunn, K. (2010). Interviewing. In I. Hay, *Qualitative Research Methods in Human Geography* (pp. 101-138). Oxford University Press.
- EC. (2002). *Benchmarking of Business Incubators*. Brussels: Centre for Strategy & Evaluation Services.
- Fang, S.-C., Tsai, F.-S., & Lin, J. L. (2012). Leveraging Tenant-Incubator Social Capital for Organizational Learning and Performance in Incubation Programme. *International Small Business Journal*, 28 (1), pp. 90-113.
- FitSampler. (2014, 10-November). Interview with FitSampler. *Gründergarasjen*. (J. Archer, Interviewer)
- Forskningsrådet. (2014). *Årsrapport 2013*. Oslo: Norges Forskningsråd.
- Forskningsrådet. (2015). *Årsrapport 2014*. Oslo: Norges Forskningsråd.
- Forskningsrådet. (2013). *Programplan 2014–2017 - Virkemidler for regional FoU og innovasjon*. Oslo: Norges Forskningsråd.
- Forskningsrådet. (2014). *SKatteFUNN: Ditt Sprinbrett til Innovasjon*. Norges Forskningsråd. Oslo: Norges Forskningsråd.
- Fukuyama, F. (1995). *Trust: Social Virtues and the Creation of Prosperity*. New York: Free Press.
- Ghoshal, S., & Moran, P. (1996, January). Bad for Practice: A Critique of the Transaction Cost Theory. *The Academy of Management Review*, 21 (1), pp. 13-47.

- Granovetter, M. S. (1992). Problems of Explanation in Economic Sociology. *Networks and Organizations: Structure, Form, and Action*, 25, pp. 25-56.
- Granovetter, M. S. (1973). The Strength of Weak Ties. *American Journal of Sociology*, 78 (6), pp. 1360-1380.
- Gründergarasjen. (2013). *Gründergarasjen*. Retrieved March 28, 2014 from <http://grundergarasjen.no/>
- Grimaldi, R., & Grandi, A. (2005). Business incubators and new venture creation: an assessment of incubating models. *Technovation* 25, pp. 111–121.
- Groen, A. J., Wakkee, I. A., & De Werd-Nederhof, p. C. (2008). Managing Tensions in a High-tech Start-up An Innovation Journey in Social System Perspectiv. *International Small Business Journal*, 26 (1), pp. 57–81.
- Hackett, S. M., & Dilts, D. M. (2004). A Systemic Review of Business Incubation. *Journal of Technology Transfer* (29), 55-82.
- Hansen, M. T., Chesbrough, H. W., Nohria, N., & Sull, D. N. (2000, September-October). Networked Incubators Hothouses of the New Economy. *Harvard business Review*, pp. 74-84.
- Hay, I. (2010). *Qualitative Research Methods in Human Geography*. Oxford Publishing.
- Høyre og Fremskrittspartiet. (2013). *Politisk Plattform for en Regjering Utgått av Høyre og Fremskrittspartiet*. Oslo: Høyre og Fremskrittspartiet.
- Henard, D. H., & Szymanski, D. M. (2001). Why Some New Products are More Successful than Others . *Journal of Marketing Research*, 38 (3), pp. 362-375.
- Hughes, M., Ireland, D. R., & Morgan, R. E. (2007, 8-March). Stimulating dynamic Value: Social Capital and Business Incubation as a Pathway to Competitive Success. *Long Range Planning* (40), pp. 154-177.
- Innovasjon Norge. (2014). *2013 Årsrapport*. Oslo: Innovasjon Norge.
- Innovasjon Norge. (2015). *Gründernettverk*. Retrieved 2015, 5-March from http://www.innovasjon norge.no/no/grunder/grundernettverk/?MainContent_MainBodyAndRestArea_Property1_ctl00_ctl00_ctl00tag_3620=Oslo#.VPgyiyc3wfo
- Innovasjon Norge. (2013). *Mål og resultater*. Innovasjon Norge. Oslo: Innovasjon Norge.
- Jacobs, J. (1965). *The Death and Life of Great American Cities*. New York: Random House.
- Johansson, B. (2005). Parsing the Menagerie of Agglomeration and Network Externalities. In C. Karlsson, B. Johansson, R. Stough, C. Karlsson, B. Johansson, & R. Stough (Eds.), *Industrial Clusters and Inter-firm Networks - New horizons in regional science* (pp. 107-148). Edward Elgar Publishing.
- Kapital. (2014). I Garasjen hos Simula. *Kapital*, 158-160.

Kramer, R. M., & Tyler, T. R. (1996). Whither Trust? In R. M. Kramer, & T. R. Tyler, *Trust in Organizations: Frontiers of Theory and Research* (pp. 1-15). Thousand Oaks, California, USA: Sage.

Kunnskapsdepartementet. (2008, March 25). *Tilknyttede virksomheter: Simula Research Laboratory*. Retrieved April 30, 2014 from Kunnskapsdepartementet: <http://www.regjeringen.no/en/dep/kd/about-the-ministry/Subordinate-agencies/simula-research-laboratory.html?id=440387>

Kuratko, D. F., Hornsby, J. S., & Covin, J. G. (2014). Diagnosing a Firm's Environment for Corporate Entrepreneurship. *Business Horizons* (57), pp. 37-47.

Lane, P. J., & Lubatkin, M. (1998). Relative Absorptive Capacity and Interorganizational Learning. *Strategic Management Journal* (19), pp. 461-477.

Lee, C., Lee, K., & Pennings, J. M. (2001). Internal Capabilities, External Networks, and Performance: a Study on Technology-based Ventures. *Strategic Management Journal* (22), pp. 615-640.

Lewis, D. A. (2001). Does Technology Incubation Work? A Critical Review. *Reviews of Economic Development Literature and Practice* (11), pp. 1-54.

Livingstone, D. W., & Guile, D. (2012). The knowledge economy and lifelong learning: A critical reader (Vol. 4). Springer Science & Business Media.

Lumpkin, G. T., & Dess, G. D. (1996). Claryfying the Entrepreneurial Orientation Construct and linking it to Performance. *Academy of Management Review*, 21 (1), pp. 135-172.

Martens, D. E. (2009). Innovation in a Business Incubator- A study of IT Fornebu. Oslo: University of Oslo.

Nahapiet, J., & Ghosal, S. (1998, April). Social Capital, Intellectual Capital, and the Organizational Advantage. *Academy of Management Review*, 23 (2), pp. 242-266.

NBIA. (2012). *NBIA - Business Incubation FAQ*. Retrieved 2014, 23-September from https://www.nbia.org/resource_library/faq/index.php#12a

Nelson, R. R., & Winter, S. G. (2009). *An Evolutionary Theory of Economic Change*. Harvard University Press.

OECD. (2002). *Small end Medium Enterprize Outlook*. Paris: OECD Publications Service.

OECD. (1997). *Technology Incubators: Nuturing Small Firms*. Paris: OECD.

OECD. (2001). *The Well-being of Nations: the Role of human and Social Capital*. Paris: OECD.

Orwapp, A. (2014, 2-December). Interview with Orwapp AS. *Gründergarasjen*. (J. Archer, Interviewer)

Oslo Tech. (2014). *Vårt konsept*. Retrieved 2015, 9-March from <http://www.oslotech.no/forskningsparken/vart-konsept/>

- Paid. (2014, 21-November). Interview with Paid. (J. Archer, Interviewer)
- Phan, P. H., Siegel, D. S., & Wright, M. (2005). Science Parks and Incubators: Observations, Synthesis and Future Research. *Journal of Business Venturing* (20), pp. 165-182.
- Porter, M. E. (2008). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Simon and Schuster.
- Punch, K. F. (2013). *Introduction to Social Research: Quantitative and Qualitative Approaches*. Sage.
- Putnam, R. D. (1993). The Prosperous Community: Social Capital and Public Life. *American Prospect* (13), pp. 35-42.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future. *Entrepreneurship Theory and Practice*, 33 (3), pp. 761-787.
- Rothschild, L., & Darr, A. (2005). Technological Incubators and the Social Construction of Innovation Networks: an Israeli Case Study. *Technovation* (25), pp. 56-67.
- Rubin, H. J., & Rubin, I. S. (2011). *Qualitative Interviewing: The Art of Hearing Data*. Sage.
- Schumpeter, J. A. (1934). *The Theory of Economic Development: An Inquiry Into Profits, Capital, Credit, Interest, and the Business Cycle* (Vol. 55). Transaction publishers.
- Schwartz, M., & Hornyk, C. (2010). Cooperation Patterns of Incubator Firms and the Impact of Incubator Specialization: Empirical Evidence from Germany. *Technovation* (30), pp. 485-495.
- Scillitoe, J. L., & Chakrabarti, a. K. (2010). The Role of Incubator Interactions in Assisting New Ventures. *Technovation*, pp. 155-167.
- Semrau, T., & Werner, A. (2014, May). How Exactly do Network Relationships Pay off? The Effects of Network Size and Relationship Quality on Access to Start-Up Resources. *Entrepreneurship Theory and Practice*, pp. 501-525.
- Shilling, M. (2008). *Strategic Management of Technological Innovation*. Boston: McGraw-Hill/Irwin.
- Siegel, D. S., Waldman, D. A., Atwater, L. E., & N., L. A. (2003). Commercial Knowledge Transfers from Universities to Firms: Improving the Effectiveness of University - Industry Collaboration. *Journal of High Technology Management Research* (14), pp. 111 - 133.
- Simula Research Laboratory. (2012). *About us: Simula Research Laboratory*. Retrieved April 30, 2014 from <https://www.simula.no/about>
- Simula Research Laboratory. (2013). *Simula Research Laboratory Annual Report 2012*. Oslo: Simula Research Laboratory.
- SIVA. (2013). *Ny Nasjonal Inkubasjonssatsing 2012- 2022*. SIVA.
- SIVA. (2015). *Om oss*. Retrieved 2015, 5-March from <http://siva.no/om-oss/>

- Stangeby, E. (2014, Januar 4). *Gründerne tar kaka*. Retrieved Mai 03, 2014 from Dagsavisen: <http://www.dagsavisen.no/samfunn/grunderne-tar-ka-ka/>
- StartupLab . (2015). *Startuplab*. Retrieved 2015, 9-March from startuplab.no
- StartUpLab. (2012, Oktober). *Founders Fund*. Retrieved 2015, 28-January from Webområde for Startuplab: <http://startuplab.no/founders-fund/>
- StartupNorway. (2014, 15-December). Interview with Startup Norway. (J. Archer, Interviewer)
- Stay.com. (2014, 27-November). Interview with Stay.com. (J. Archer, Interviewer)
- Thagaard, T. (2009). *Systematikk og Innlevelse: En Innføring i Kvalitativ Metode* (Vol. 3). Bergen: Fagbokforlaget Vigmostad og Bjørke.
- von Krogh, G., Ichijo, K., & Nonaka, I. (2000). *Enabling Knowledge Creation: How to Unlock the Mystery of Tacit Knowledge and Release the Power of Innovation*. Oxford University Press.
- Watson, J. (2007, 1-August). modelling the Relationship Between Networking and Firm Performance. *Journal of Business Venturing* (22), pp. 852-874.
- Westlund, H. (2006). *Social Capital in the Knowledge Economy*. Springer.
- Winchester, H. P., & Rofe, M. W. (2010). Introducing' Qualitative Research in Human Geography. In I. Hay, *Qualitative research methods in human geography* (Vol. 3, pp. 3-24). Canada: Oxford.
- WorldWideNarrative. (2014, 21-November). Interview with World Wide Narrative. (J. Archer, Interviewer)
- YayMedia. (2014, 21-November). Interview with YayMedia. (J. Archer, Interviewer)
- Y Combinator. (2014, June). *About us: Y Combinator*. Retrieved 2015, 12-March from <https://www.ycombinator.com/>
- Yin, R. K. (2009). *Case Study Research: Design and Methods* (Vol. 4). Los Angeles: Sage.

Appendix

Appendix 1 – Interview guide Gründergarasjen

Introduksjon

- Hva er navnet på firmaet ditt?
- Hvor mange jobber med prosjektet?
- Kan du fortelle meg litt/kort om deres produkt og ide?
- Hvor i prosessen befinner dere/du deg/dere?
 - o Fase
- Hvordan hørte du om GG?
 - o Hvordan endte dere/du opp med å velge GG, ble noen andre liknende tilbud vurdert?

Ressurser

- Kan du fortelle meg hvilke ressurser dere har tilgang på gjennom GG?
- Hvilke av disse ressursene er viktigst for dere?
 - o Utvikling
 - o Samarbeid
 - o Finansiering
- i) Felles kontorlokaler (som er leid under mer eller mindre gunstige forhold)
- ii) En pool av fellestjenester (for å redusere kostnader)
- iii) Profesjonelle råd og støtte (juridisk, økonomisk, strategisk, markedsføring etc.)
- iv) Tilgang til nettverk og kontakter (intern / eksternt, uformell / formell)
- Kan du fortelle meg litt om deres forhold til de andre entreprenørene i GG?
 - o Hjelper dere hverandre?
 - o Deler dere noen form for kunnskap eller erfaringer på tvers av selskapene/ideene?

Entreprenørene

- Hvilke forventninger hadde du til GG?
 - o Er du fornøyd med det tilbud som GG har gitt deg/dere?
- Kan du fortelle meg om hva du tror GG forventer av dere som selskap?
- Kan du fortelle meg litt om ditt prosjekts utvikling videre fra der dere er nå?
 - o Hva slags hjelp er mest nødvendig for å realisere denne utviklingen?
 - o Håper dere på investeringer?

- fra Simula?
- Synes du et år er nok til å realisere ditt prosjekt eller ide?

Mål

- Hvordan er forholdet til ledelsen av GG?
 - Får du den hjelpen du trenger?
 - Er det noe du savner?
 - Hva tror du er grunnen til at Simula har dette prosjektet?
- Vil du si at ditt prosjekt/ide er bedre utviklet på grunn av GG?
 - Kunne du fortalt litt om hvordan og hvorfor?
- Hva tror du GG kunne ha gjort annerledes for å støtte ditt selskap/din ide til å utvikle seg enda bedre?
- Er det noen oppfølging fra GG etter man er ferdig med sin tid her?
 - Hva kunne det eventuelt vært?

Tusen takk!

Appendix 2 – Interview guide StartupLab

Introduksjon

- Hva er navnet på firmaet ditt?
- Hvor mange jobber med prosjektet?
- Kan du fortelle meg litt/kort om deres produkt og ide?
- Hvor i prosessen befinner dere/du deg/dere?
 - o Fase
- Hvordan hørte du om StartUpLab?
 - o Hvordan endte dere/du opp med å velge StartUpLab, ble noen andre liknende tilbud vurdert (GG, MESH, OSV)?

Ressurser

- Kan du fortelle meg hvilke ressurser dere har tilgang på gjennom StartUpLab?
 - o Hva betaler man for dette?
- Hvilke av disse ressursene er viktigst for dere?
 - o Utvikling
 - o Samarbeid
 - o Finansiering
- v) Felles kontorlokaler (som er leid under mer eller mindre gunstige forhold)
- vi) En pool av fellestjenester (for å redusere kostnader)
- vii) Profesjonelle råd og støtte (juridisk, økonomisk, strategisk, markedsføring etc.)
- viii) Tilgang til nettverk og kontakter (intern / eksternt, uformell / formell)
- Kan du fortelle meg litt om deres forhold til de andre entreprenørene i StartUpLab?
 - o Hjelper dere hverandre?
 - o Deler dere noen form for kunnskap eller erfaringer på tvers av selskapene/ideene?

Entreprenørene

- Hvilke forventninger hadde du til StartUpLab?
 - o Er du fornøyd med det tilbud som StartUpLab har gitt deg/dere?
- Kan du fortelle meg om hva du tror StartUpLab forventer av dere som selskap?
- Kan du fortelle meg litt om ditt prosjekts utvikling videre fra der dere er nå?
 - o Hva slags hjelp er mest nødvendig for å realisere denne utviklingen?
 - o Håper dere på investeringer?
 - fra StartUpLab?

- Hvor lenge får man sitte i StartUpLab?

Mål

- Hvordan er forholdet til ledelsen av StartUpLab?
 - o Får du den hjelpen du trenger?
 - o Er det noe du savner?
 - o Hva tror du er grunnen til at Simula har dette prosjektet?
- Vil du si at ditt prosjekt/ide er bedre utviklet på grunn av StartUpLab?
 - o Kunne du fortalt litt om hvordan og hvorfor?
- Hva tror du StartUpLab kunne ha gjort annerledes for å støtte ditt selskap/din ide til å utvikle seg enda bedre?
- Er det noen oppfølging fra StartUpLab etter man er ferdig med sin tid her?
 - o Hva kunne det eventuelt vært?

Tusen takk!

