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# Financing of Startups

*A Comparative Study of Norway and the USA*

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Master thesis in Financial Economics and Business Analysis & Performance Management

NORWEGIAN SCHOOL OF ECONOMICS

# ABSTRACT

This thesis aims at gaining an understanding of the mechanisms behind obtaining the necessary funding for an innovative startup in both Norway and the USA. The main focus is to identify areas where the two markets differ in terms of accessibility to different sources of funding, underlying causes for this, and to give some insight into what implications these differences have in regards to entrepreneurial activity and innovation. Are there clear differences between the perceived ease of acquiring capital from an entrepreneur's point of view; how do comparable capital-providing institutions stand towards supporting innovative startups; and can the accessibility to capital contribute to explaining the difference in the degree of entrepreneurial activity between two countries that are in many ways very similar? Hence the research question is: *Are there any differences in the accessibility of capital for innovative startups between Norway and the USA, and what implications may these differences have?* To gain such insight we found it most purposeful to construct a qualitative research method, using personal interviews with individuals behind innovative startups, individuals in relevant positions in institutions that support startups financially, and other individuals possessing expertise on this particular subject. By doing so, we aimed at obtaining data that could shed light on this research questions from several perspectives, which was beneficial as it allowed for a nuanced analysis. These data were analyzed up against relevant theory from several researchers within the academic fields we have found to be applicable.

A number of interesting findings have been uncovered while examining the research question of this thesis. Gaps in both capital markets have been identified, where Norway lacks Series A capital and onwards, while Silicon Valley lacks external capital in the very earliest stages resulting in a greater reliance on self-financing among entrepreneurs. It is also evident that the culture of Silicon Valley has shaped their entrepreneurial environment, and vice versa, resulting in a self-contained ecosystem whose conditions facilitate entrepreneurial activities. This is particularly evident in how it is simpler for entrepreneurs to build and maintain their social and human capital in Silicon Valley, which is advantageous when seeking to obtain external financial capital.

# PREFACE

This thesis is written as a part of the MSc in Economics and Business Administration program at the Norwegian School of Economics, within the major-profiles *Financial Economics* and *Business analysis & Performance Management*.

The underlying motivation for this thesis and the choice of entrepreneurship as an overall theme has emerged through a growing interest among the writers. This was triggered during a semester abroad at the University of California, Berkeley, in the fall of 2013, which set the premise for our bachelor thesis, at Bergen University College, the following semester. During this time, we found the particular subject of financing of startups to be an interesting area for further research.

Writing this thesis has been a very educational and exciting process. Hence, we would like to express our gratitude to the participants by thanking them for fitting us into their busy schedules and essentially enabling us to realize the project. Furthermore, we wish to thank our supervisor, Tor Aase Johannessen, for his cooperation and insightful inputs during this process, and also for recommending a number of participants, which has been extremely valuable to us.

Bergen, 10.06-2016

Sondre Andenes and Even Lloyd Pendegraft

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# 1 INTRODUCTION

## 1.1 Background – Entrepreneurship and Innovation Creates Economic Growth

Entrepreneurship and innovation play a vital role in the economic development, as stated by Joseph Schumpeter early in the last century. This claim is widely acknowledged and supported by researchers within the field of economics (Galindo and Méndez-Picazo, 2013). Newly established firms are essential to uphold a healthy dynamic in a national economy. Not only do entrepreneurs create jobs, but by increasing competition and filling niches, the efficiency of the industry as a whole is increased. However, the entry and exit rate of startups ought to be limited as a too large turnover of businesses will cause uncertainty and increase risk, which in turn may hamper economic growth. A certain level of startups is required in order to eliminate non-viable and inefficient businesses, and this is also a source to innovation and general development of the business sector. (Singer et al., 2015, p. 14). Both Norway and the USA are considered to be innovation-driven economies. Given how startups may provide a significant contribution to the innovativeness of a country, it is important that startups whose business model is of an innovative nature receive the necessary support to survive the development and startup stages, and eventually become an established firm.

The USA is commonly associated with a relatively high total entrepreneurial activity (TEA), and is often referred to as the "land of entrepreneurship" (Ivester, 2013). Of the innovation-driven economies, the USA are a leading nation in terms of TEA, while Norway is below average (Singer et al., 2015, p. 13, figure 2.4). Norway's economy has in the recent decades largely been driven by the oil industry. However, as the oil industry is currently experiencing a historical low, future economic growth must be increasingly fueled by other sectors. Innovation and entrepreneurship should therefore have a more prominent role in terms of contributing to growth in the Norwegian economy.

## 1.2 Research Question

One of the most crucial underlying factors for succeeding with one's startup, is the ability to acquire the necessary capital to establish the startup and to keep the business alive until the cash flow of the business reaches a level where the business is self-sustained and can grow organically. Hence, this particular subject is of major interest, and the research question is then as follows:

*Are there any differences in the accessibility of capital for innovative startups between Norway and the USA, and what implications may these differences have?*

## 1.3 Scope

The scope of the thesis ought to be limited due to the big difference between Norway and the USA with regards to the size of the countries, both geographically and population-wise. Although there are clusters in Norway, each with its own competencies and technologies, we choose to focus on Norway as one region and any focus on separate regions within Norway will be limited. The reasoning for this is that no regions are significantly outperforming other regions. The benefit of comparing the USA directly to Norway would be limited, as the USA is drastically larger, and the more interesting comparison is with those regions that excel in innovative entrepreneurial activity. Hence, for the USA the focus should be on the entrepreneurial and innovative environments that distinguish themselves, which, in this thesis specifically, is Silicon Valley.

## 1.4 Presenting the Respondents

*Alsterberg, Bjørn*

Has been involved in starting and developing several companies for many years. Since 2008 Bjørn has also worked for Bergen Technology Transfer, where he has provided assistance for startups seeking to commercialize their innovative research.

*Amundsen, Paul Magne*

Co-founder of Technium. A startup in Trondheim, Norway, developing a quick and easy solution to change the surface of bicycle tires in order to adapt the properties of the tires according to road conditions.

*Berg, Jon Trygve*

Partner in Sarsia Seed since 2006. Sarsia Seed is a seed capital fund located in Bergen, Norway, that invests in Norwegian early-stage technology companies within the energy/cleantech and biotechnology/life science sectors.

*Dyrnes, Gro Eirin*

Director for the San Francisco and Silicon Valley branch of Innovation Norway. This branch advices and aids Norwegian startups in Silicon Valley, where the mission is to de-risk and accelerate the path to growth through leveraging Silicon Valley.

*Frøyen, Per Arve*

Works for the Hordaland (Bergen) branch of Innovation Norway, where he serves as a consultant for early-stage startups and specializes in network and competency programs. Per Arve has previously resided in the USA for seven years, and worked for a startup over a three-year period.

*Lande, Kristoffer*

Co-founder of Gobi. A startup from Trondheim, Norway that has relocated to Silicon Valley. Gobi are developing a social media application that allows users to send Snaps in groups, a feature that Snapchat has not included and does not intend to include in their application.

*Robinson, Mark*

A seasoned Silicon Valley entrepreneur, who also invests in technology startups as an angel investor. Mark has also worked with Innovation Norway and is credited with dramatically improving Innovation Norway's product offerings to its clients.

*Røen, May Kristin*

Co-founder of Pathogenomix. A startup in Santa Cruz, California. The successor to iSentio, which was started in Bergen, Norway. Pathogenomix are developing a technology that analyzes and identifies pathogens quicker and more accurately than existing solutions.

# 2 THEORY

## 2.1 Entrepreneurship

The two words *entrepreneur* and *entrepreneurship* derive from the French word *Entreprendre,* which translates to "to undertake" (Spilling, 2006, p. 35). Entrepreneurship was early on recognized to be an important and systematic source to economic growth by Joseph A. Schumpeter (1947, p. 8), and this has later on been an important aspect of economic research. Entrepreneurship should therefore be seen as an important topic nowadays for Norway as well as other countries due to regression in oil prices and generally harder economic times. We will start by looking at some historical views, and give you a chronological description of different definitions throughout time before we shift to Schumpeter's contribution to the subject. Further, we will focus on the role of two of the main elements for both our thesis and of entrepreneurship in itself; startups and innovation. Lastly, we will narrow down the broad specter of definitions of entrepreneurship in order to attain an appropriate definition for this thesis.

### 2.1.1 Historical Views on Entrepreneurship

Throughout history the terms 'entrepreneurship' and 'entrepreneur' have proven to be difficult to define. In the course *Innovations Management and Entrepreneurship* at the Norwegian School of Economics, Tor Aase Johannessen provides a chronological overview of some of the most important definitions developed by researchers within the field of economics. In 1921 Frank Knight describes an entrepreneur as someone who profits from bearing uncertainty and risk. Later on, in 1934, Joseph Schumpeter describes an entrepreneur as the person that carries out new combinations of a firm's organizations. In 1952, Bert Hozelitz argues that entrepreneurship entails (1) uncertainty bearing, (2) coordination of productive resources, (3) introduction of innovations, and (4) the provision of capital. Further, Arthur H. Cole defined entrepreneurship in 1959 as a purposeful activity to initiate and develop a profit-orientated business, while 2 years later David C. McClelland argued

that ‘moderate risk taking’ is the most describing definition of an entrepreneur (Johannessen, 2016).

*One of the major difficulties confronting any investigation into the connection between entrepreneurship and economic activity is that in the broad expanse of time the entrepreneur has worn many faces and played many roles. There is yet no consensus among economists regarding who the entrepreneur is and what he does* (Hébert and Link, 1982, p. 107).

The variety of definitions provided by Johannessen confirms what Hébert and Link stated in the early 80s, and although this was written more than thirty years ago, it is still accurate today, in the sense that economic researchers do not agree upon a common definition of entrepreneurship. Johannessen continues with Mark Casson’s definition from 1982, stating that an entrepreneur can be described as someone who is taking decisions and judgments about the coordination of scarce recourses. In 1985, William B. Gartner approaches entrepreneurship from another angle, and no longer questions who the entrepreneur is, but rather what he does and defines entrepreneurship simply as the creation of organizations. Later on in 1989, Stevenson, Roberts and Grousbeck described an entrepreneur as an individual that pursue opportunity without regard to resources they currently control, while Hart, Stevenson and Dial expand this definition in 1995 to the following; The pursuit of opportunity without regard to resources currently controlled, but constrained by the founders’ previous choices and industry-related experience (Johannessen, 2016).

It is evident that the entrepreneur has been defined very differently throughout history, and there exists nearly as many definitions of an entrepreneur as there exists writers on the subject. The researcher that perhaps has made the greatest contribution to the subject, is Joseph A. Schumpeter.

### 2.1.2 Schumpeter’s Approach

Joseph A. Schumpeter made an attempt to clarify the fundamental phenomenon of economic development and define the role of an entrepreneur in this context in his book “*Theorie der Wirtschaftlichen Entwicklung”* from 1912*,* later translated to the English version “The Theory of Economic Development”. Schumpeter describes economic development as

carrying out activities in new combinations, and provides us with the following five cases that explain this concept:

(1) *The introduction of a new good – that is one with which consumers are not yet familiar – or of a new quality of good.* (2) *The introduction of a new method of production, that is one not yet tested by experience in the branch of manufacture concerned, which needs by no means be founded upon a discovery scientifically new, and can also exist in a new way a commodity commercially.* (3) *The opening of a new market, that is a market into which the particular branch of manufacture of the country in question has not previously entered, whether or not this market has existed before.* (4) *The conquest of a new source of supply of raw materials or half-manufactured goods, again irrespective of whether this source already exists or whether it has first to be created.* (5) *The carrying out of the new organisation of any industry, like the creation of a monopoly position (for example through trustification) or the breaking up of a monopoly position* (Schumpeter, 1983, p. 66).

Further, Schumpeter termed the entity that carries out new combinations as "enterprise", and the individuals whose function it is to carry them out as "entrepreneurs". The entire concept is referred to as the "entrepreneurial function" (Schumpeter, 1983, p. 74). Schumpeter also distinguishes between entrepreneurship and intrapreneurship, stating that new combinations are embodied in new firms, which generally do not arise out of established firms but are started alongside them (Schumpeter, 1983, p. 66). What characterizes Schumpeter's definition, and what distinguishes him from many other writers, is that innovation and newness is argued to be a requirement in order to call it entrepreneurship. Schumpeter also distinguishes between entrepreneurs and the capitalists;

*... everyone is an entrepreneur only when he actually "carries out new combinations", and loses that character as soon as he has built up his business, when he settles down to running it as other people run their businesses* (Schumpeter, 1983, p. 68).

In other words, Schumpeter argues that to be an entrepreneur is time-limited unless you, as an entrepreneur, go from project to project as soon as the entrepreneurial role diminishes in each project.

### 2.1.3 Liability of Newness

As already established, newness and innovation are important parts of what Schumpeter defines as entrepreneurship, and according to Wennekers and Thurik (1999, p. 34) Schumpeter is the economist who has most prominently drawn attention to the "innovating entrepreneur". Innovation is commonly associated with a new product, however, economic literature emphasizes that it is much more than that. According to Spilling, innovation can generally be defined as *"doing something new that is of economic importance"* (Spilling, 2006, p. 112), while Nils Per Hovland defines innovation as *"a broad term that include all situations where society is introduced to, and use, something new"* (Hovland, 2008, p. 26). This will evidently include new products, but as already stated, Schumpeter's four other elements of new combinations; process innovation, market innovation, factor innovation and organizational innovation are also modes of innovation.

Even though a number of definitions on innovation have been presented, none of them defines innovation on a scale of newness, other than the fact that innovation entails some kind of newness. In order to do so one may distinguish between *radical innovation* and *incremental innovation*. Radical innovation is described as fundamental changes that represent revolutionary shifts in technology, and is characterized by a clear departure from existing practice. In contrast, incremental innovations are described as minor improvements or simple adjustments in current technology (Dewar and Dutton, 1986, p. 1422-1423). With this, risk connected to the degree of innovations is introduced. A high (low) degree of innovation is normally accompanied by high (low) risk. For instance, if one starts a business, as a replica of an existing business, this would involve less risk compared to starting a business deviating from the familiar and known (Hovland, 2008, p. 25), hence this should be of great importance to investors in their evaluation of an investment opportunity.

Although startups are commonly associated with entrepreneurship, Schumpeter does not include an individual who starts a business in his definition of an entrepreneur unless it is an innovative business. Among other writers however, startups are the focal point of the definition. William B. Gartner states that *"Entrepreneurship is the creation of new organizations"* (Gartner, 1989, p. 62), without distinguishing between whether this organization is innovative or if it is a replica of an existing business. Entrepreneurship is, in other words, all about the creation of new organizations. By defining an entrepreneur as the

individual creating a new business, the term is brought quite close to the, originally, German concept "*gründer",* or *founder* when translated to English.

The origin of the phrase "liability of newness" can be traced back to Arthur L. Stinchcombe's article on social structure and organization from 1965, and is based on the fact that a higher proportion of new organizations fail than old. Stinchcombe argues that there exist some poorly understood conditions that affect the comparative death rates of new and old organizations. In his article, he highlights four main factors that make up the liability of newness and that in many ways can explain why new firms have a tougher time surviving than older ones, as well as help us understand what new firms need to focus on in order to reduce the liability of newness. First, he argues that new firms, especially those of a new and different nature, commonly involve new roles that have to be learned. Further, the process of inventing these new roles and make them work have high costs in time, worry, conflict and temporary inefficiency. Because of this, the degree of initiative and eagerness to get the job done is of high importance in order to reduce the liability of newness. The third challenge for new organizations is that they must rely heavily on social relations among strangers, and trust that strangers will do the job that has been agreed upon. It is argued that although strangers are almost always less trusted than people with whom one has had long-lasting relations or experience with, it is possible to shorten this gap by creating some sort of social structure. Lastly, Stinchcombe argues that one of the main resources of old organizations lies within the ties between the organization and their customers. He argues that the stronger these ties are within a sector or market, the harder it is to establish a new organization (Stinchcombe, 1965, p. 231-233).

Following Stinchcombe's seminal contribution, several studies have contributed to our knowledge of liability of newness and the disadvantages of new firms relative to older organizations (Laursen at al., 2010, p. 4). For entrepreneurs seeking financing it is essential to limit the liability of newness and compensate for disadvantages in order to convince investors that they will succeed, though the odds may be against them. Later on in the financing sections we will return to some of these disadvantages such as the lack of track-record and asymmetric information.

### 2.1.4 Conclusion from the Literature

Researchers have clearly used a wide range of definitions on entrepreneurship in existing literature. The differences in these definitions are not insignificant, hence it is necessary to reduce the range of the term in order obtain an apt definition for this thesis. In order to illustrate how entrepreneurship is classified in this thesis, as well as getting a better understanding of historical definitions, we will distinguish between (1) entrepreneurship, (2) intrapreneurship, (3) imitative startup and (4) imitative expansion.

| Classification of Entrepreneurship | | |
|---|---|---|
| | **New Business** | **Existing Business** |
| **Innovation** | (1) Entrepreneurship | (2) Intrapreneurship |
| **Immitation** | (3) Imitative Startup | (4) Imitative Expansion |

*Figure 2.1: Classification of different forms of development of new business enterprises (Spilling, 2006, p.33: table 2.1)*

As previously discussed, numerous writers on the subject include imitative startup in their definition of entrepreneurship. Other writers also include intrapreneurship, which is to act as an entrepreneur within an existing firm, in their definition of entrepreneurship. Some also include imitative expansion. For this thesis, neither intrapreneurship, imitative expansion, nor imitative startups will be categorized as entrepreneurship, and consequently Schumpeter's definition of entrepreneurship will be the most suitable one. The emphasis will therefore be on startups that are based on a certain degree of innovativeness. The reasoning behind this is to focus on the financial opportunities of the more interesting higher-risk ventures, rather than the lower-risk imitative startups.

### 2.1.5 Statistics on entrepreneurship

In order to provide some useful statistics about entrepreneurship in Norway, the USA, as well as the rest of the world, we will rely on the *Global Entrepreneurship Monitor* (GEM). This is a survey cycle held every year since 1999, where the latest numbers from the 2015/16 report is counting sixty participating countries. The initial intentions of the GEM survey were to detect the interdependence between entrepreneurship and economic development

(Singer et al., 2015, p. 17). To be able to benefit from these data and statistics, it is crucial to understand what the data is based on. The definition of entrepreneurship used in this survey is as follows:

*Any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business* (Reynolds et al., 1999, p. 3).

Evidently GEM includes entrepreneurship as we previously defined it, as well as intrapreneurship, imitative startup and imitative expansion in their definition of entrepreneurship, which is important to be aware of when examining these data. Furthermore, these numbers must be handled cautiously since the numbers provided on the USA are for the entire country as a whole, while this thesis mainly focuses on Silicon Valley.

The first thing that we will look into is *Total early-stage Entrepreneurial Activity* (TEA), that is all individuals between 18 and 64 years of age that is in the process of starting a venture, and those running a business less than three and a half years old (Singer et al., 2015, p. 12). Generally, less developed countries have a higher TEA than developed countries, due to the significance of entrepreneurship as a mean to obtain an occupation/employment. This is evident in the 2015/16 report as countries such as Botswana, Senegal and Ecuador all have an TEA of 30% or more, while Norway and the USA have 5.7% and 11.9% respectively (Kelley et al., 2016, p. 122: table 3). It may be reasonable to believe that the difference between developed and less developed countries would be lower had the GEM definition of entrepreneurship been less extensive. The TEA percentages for Norway and the USA over the last five years are presented in figure 2.2.

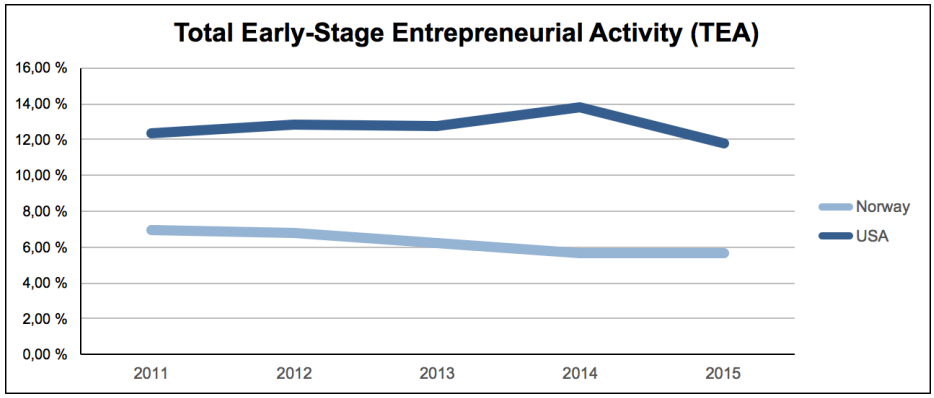


*Figure 2.2: TEA-level for Norway and the USA over the last decade (numbers are gathered from the Global Entrepreneurship Monitor visualization tool)*

By itself, this is not that interesting as GEM defines entrepreneurship differently from what this thesis does. But in the GEM's database, there is also statistics on the percentage of TEA who indicate that their product or service is new to at least some customers. In Norway, this percentage is found to be 19.76% for 2015, as for the USA, the percentage is found to be 47.09% in 2015 (Global Entrepreneurship Monitor visualization tool). The numbers for the last five years are displayed in figure 2.3.

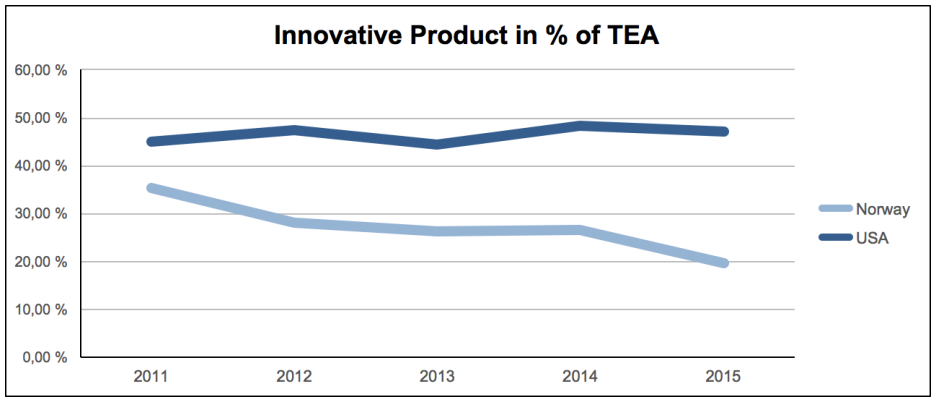


*Figure 2.3: Percentage of TEA that perceive their product or service as new to at least some customers in the last decade (numbers are gathered from the Global Entrepreneurship Monitor visualization tool)*

By combining the numbers for both TEA and the percentage of TEA that perceive their product or service as new to at least some customers, we find the TEA adjusted for newness or innovation. In 2015 1.12% (0.0566 x 0.1976 = 0.0112) of the Norwegian population between 18 and 64 years of age are in the process of starting a venture, or have been running a business less than three and a half years old where the product or service is perceived as new to at least some of the customers. As for the USA, the number is calculated to be approximately 5.56% (0.1181 x 0.4709 = 0.0556). This demonstrates that the entrepreneurial

activity, according to our definition, is of a larger scale in the USA then in Norway. The graph below displays TEA development, including the share of total TEA that is perceived to be innovative.

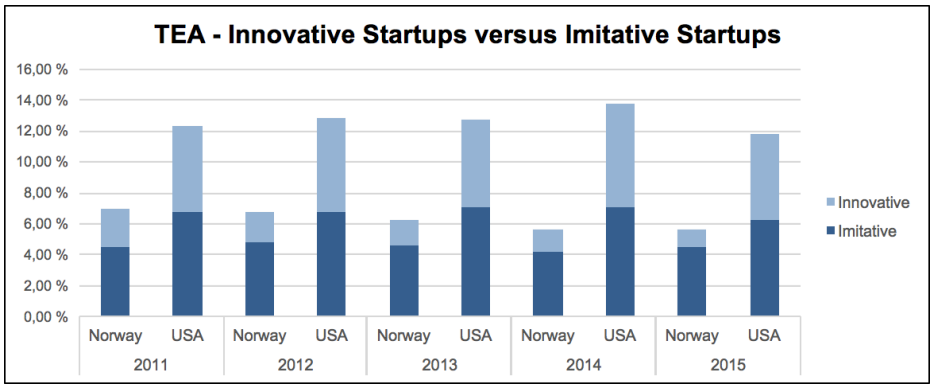


*Figure 2.4: Innovative startups versus imitative startups in Norway and the USA (numbers are gathered from the Global Entrepreneurship Monitor visualization tool)*

## 2.2 Financing of Startups

Financial resources are required for an enterprise to form, and subsequently operate. Hence, the financing of startups is one of the fundamental questions in enterprise research. Due to the role new businesses play in employment growth, competition and innovation, financing decisions of startups have high implications on the overall economy. Furthermore, these decisions, and how they explain the use of debt and equity, have important implications on how the business is able to operate, the risk of failure, performance of the business, and the potential for future expansion of the enterprise (Cassar, 2002, p. 262-263).

*Money is like a sixth sense without which you cannot make a complete use of the other five* (Timmons, 1990, p. 421).

Depending on the nature of the business, that is, the tangibility of the product and the degree of growth it seeks, there will be a great variation in financing needs between businesses. A software manufacturer usually needs less financing than a hardware manufacturer, as the former is typically less capital intensive. However, common for almost all business ventures is that they need some sort of financing in order to essentially realize the startup, and to facilitate growth.

Thus, being able to acquire sufficient financing is a crucial element in a business venture, especially in those where the business relies on new knowledge or technology, and where there is a lengthy development process from "idea" to a profit-generating business (Spilling, 2006, p. 18). Financing decisions rely heavily on which options are available for the entrepreneur. The availability of different financing sources will therefore have a significant impact on startup rates, survival rates and early development of the business.

### 2.2.1 Sources of Funding

When acquiring capital for starting a business venture, an entrepreneur can benefit from their personal resources, also referred to as (initial) insider financing. However, the financial needs will quickly increase as the startup develops and starts to grow, especially for innovative startups seeking to grow relatively rapidly. For acquiring external capital, entrepreneurs will meet investors and lenders in the capital market. The purpose of this market is to increase value creation through improving the allocation of financial resources. Besides financial capital, risk and managerial control are also allocated in the capital market (Knivsflå et al., 2000, p. 4).

*Venture Capital – Risk Capital Market*

Acquiring financing from the formal risk capital market is generally convenient in any phase from the startup phase until the business is publically listed. Venture capitalists are professional investors seeking to maximize the return of their investment. Therefore, they will normally contribute with intellectual capital, in addition to financial capital. They provide guidance, counseling and support for the executive management, access to large professional networks, and they can contribute to increase the legitimacy of the business. Venture capitalists are generally inclined towards investing in business whose goal is to grow rapidly, hence there must be a substantiated business plan supporting such objectives (McKinsey, 2007, p. 113). The active position venture capitalists take, and the resources they provide beyond financial support, further increase the likelihood of achieving this goal of rapid growth (Spilling, 2006, p. 152).

*Business Angels – Informal Risk Capital Market*

An angel investor is commonly a person working in a high-income profession willing to invest in businesses or projects that they believe will be successful, or that are of great importance to the investor personally due to other nonfinancial reasons. They are also regarded as competent and actively engaged in the venture. The business angel market, or the informal risk capital market, is similar to the more formal venture capitalist market in how the investor provides supplementary support. Nevertheless, they differ in certain ways. Business angels tend to invest in very early-stage companies, and in their own community. Furthermore, they generally prefer to invest in industries that they know and understand (Gompers, 2002, p. 325). The business angel market is less professional than the venture capitalist market, subsequently, terms and conditions are often less extensive and more favorable for the business owner. Still an interesting and credible business plan is required (McKinsey, 2007, p. 113). Business angels are a relatively heterogeneous group of investors, hence there may exist great varieties within the group as to how engaged an investor will be in the development of the startup, and to how aligned the views of the investor and entrepreneur are. This may have a significant impact on the likelihood of success for the startup. Thus, choosing the right business angel may be of equal importance as the actual financing the business angel may provide (Gompers, 2002, p. 325)

*Family and Friends*

Family members and/or friends of the entrepreneur are often very familiar with the concept of the venture. If there exists an interesting and credible business plan, and should the potential lenders/investors believe in the idea, they may be willing to carry some of the risk and provide financial capital. Acquiring capital from family and friends has several advantages; the process is simple and informal, terms are often very beneficial, the entrepreneur has direct contact with the capital provider, and the need for a track record is relatively low or nonexistent. However, the amount of capital available from family and friends is often limited, and this source is generally most convenient for acquiring "seed money" – providing capital for the very-early stage of the venture. Due to the presence of personal relations the investor may be too influential, and these relations may become damaged should the venture fail, as risk is transferred to family and friends (McKinsey, 2007, p. 111).

*Crowd-Funding*

Crowd-funding is a relatively new phenomenon where the customers become investors. Several people, or a crowd, fund a new project, and each investment is normally relatively small, but the sum of the investments from the entire crowd can constitute a significant source of capital. The incentive to make such investments, other than contributing to realize a project one believes in, is a share of potential profits proportionate to one's investment (Ordanini, 2009). Three players are included in this model. There is a (1) subject who proposes an idea or project to be funded, whose goal is to secure market access and financial support from truly interested investors. These investors compose the (2) crowd, bearing some of the risk and expecting a future return. Lastly, there is an arena, or (3) crowd-funding organization, that connects entrepreneurs and investors that are interested in supporting projects through crowd-funding mechanisms (Ordanini et al., 2011, p. 444-445).

*Banking Institutions*

Acquiring capital through lending from banking institutions is convenient for short-term working capital from the startup phase and onwards. Bank loans will normally require security in the form of credit (accounts receivable) or tangible assets (McKinsey, 2007, p. 112). However, startups may possess neither credit nor tangible assets, especially considering the increasing number of startups that are knowledge-based in western industrialized countries, such as Norway and the USA. Although Langeland and Jordfald (2000, cited in Spilling, 2006, p. 153) state that banking institutions are generally the most important source of financing for companies in general, they are rarely involved with knowledge-based ventures that are in a early-development stage (Spilling, 2006, p. 153). Historically, young companies have experienced a lack of debt financing as banks rule out firms with a short operating history, due to uncertainty regarding these companies' creditworthiness (Gompers, 2002, p. 431). Hence, the entrepreneur must often be personally liable for the loan. In addition, bank loans may negatively affect the company's financial freedom as they impose a lower limit on the liquidity of the firm to ensure its ability to pay off debt and interest. The benefits from debt financing through banking institutions is that ownership structure remains unaltered, required return does not exceed the interest associated with debt, and it is a flexible form of funding (McKinsey, 2007, p. 113).

*Government Financing*

From an efficiency point of view, governmental programs are only justified if the market itself will not finance these firms. There must be a gap to be filled so that the government money is not just a substitute for other means of funding. In other words, there would have to be a perfect market for capital, which is unlikely to exist (Hammond, 1987, p. 30).

*Governments around the world often develop programs aimed at financing young, entrepreneurial firms. The stated motivation for such programs usually involves the belief that the market for financing young firms is not efficient* (Gompers, 2002, p. 496).

Governments argue that governmental funding is further justified for socio-economic reasons. Firstly, young entrepreneurial firms create a disproportionate number of jobs. Secondly, the funding of startups may create positive externalities for other firms and society as a whole. For instance, if a firm develops a new and more efficient process for doing an operation, and this process is easily imitable, parts of the profit go to other imitating companies. Investors are then discouraged to fund said startup, and society as a whole will miss out on the benefits from this new and more efficient process (Gompers, 2002, p. 496). Furthermore, government-financing proponents argue that since young startup firms are often unable to acquire required capital, it is necessary that the government fill this funding gap by providing capital for the very-early stage (Gompers, 2002, p. 497).

*Self-financing*

An alternative to external sources of funding is for entrepreneurs to provide the necessary capital themselves, in the very-early stage (Spilling, 2006, p. 160). This entails that the entrepreneur has been able to accumulate enough personal capital to establish the startup. Depending on the size, asset needs and degree of early growth, such a form of funding may be sufficient in itself. Alternatively, it may provide a significant contribution to capital required for development and establishing the firm, while further operations may require additional external capital. In instances where a startup is funded by the entrepreneur's own private capital, it is common that the entrepreneur is still employed outside of the startup in order to cover living expenses until the startup begins to generate (sufficient) revenues, or is able to acquire external equity. The entrepreneur's personal resources include their personal debt capacity, which relies on the entrepreneur's earnings in existing employment and credit history. The need for remaining employed outside of the venture is then increased, seeing

how many entrepreneurs do accumulate personal debt for seed financing (Smith et al., 2011, p. 38). The advantage of being self-funded is that the entrepreneur maintains full ownership and control of the firm. However, the period of time needed to save up an adequate amount of capital may be long-lasting, and the startup phase is often demanding in terms of (financial) resources without generating much, if any, revenue. Additionally, the entrepreneur omits access to professional networks and industry expertise.

### 2.2.2 Optimality of Sources Depending on Development Stage

Due to how different sources of capital differ with regards to required return, required liquidity and other loan terms, and supplementary support that exceeds financial capital, there are arguments for why one source should be preferred over another, depending on which development stage the startup is currently in.

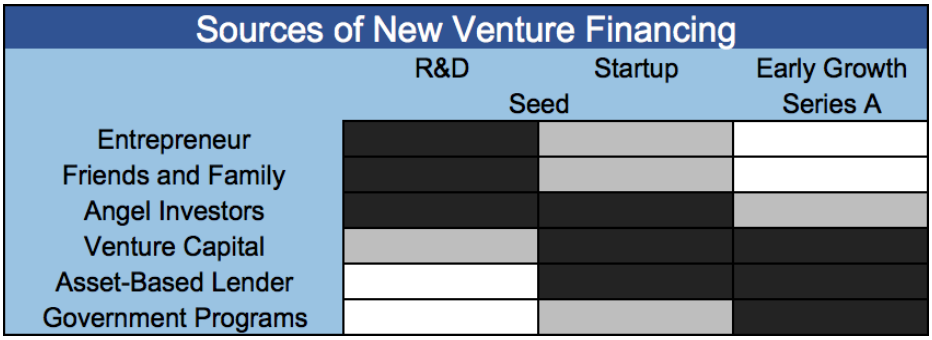


*Figure 2.5: Sources of New Venture Financing. Adapted from Smith et al. (2011), figure 2.1, p. 38.*

Berger and Udell (1998, p. 622) emphasize the importance of self-financing (initial insider finance) at the earliest stage of the development – the stage where the entrepreneur does not have much else than an idea in their mind, which is still being developed, along with the business concept. Once the business concept is presentable, the entrepreneur may attract further financing from business angels, and later venture capital. Although venture capital is occasionally acquired prior to developing the finished product (in instances where such development costs are high), it is commonly obtained to finance full-scale production and marketing after the product has been successfully test-marketed (Berger and Udell,1989 p. 623). However, some venture capital investors differ from the traditional characterization, with regards to which development stage they are inclined towards investing in and providing intellectual capital. The so called "seed funders" are venture capitalist firms that seek to invest in companies in the seed stage – earlier than the conventional venture

capitalist. As previously discussed, conventional wisdom argues that financing through loans from banking institutions will usually not be available at the earliest stage(s) ("Seed" in figure 2.5), due to the lack of tangible assets and collateral. In instances where the amount of external funding needed is large relative to the capital put up by the entrepreneur, the risk of moral hazard increases, which in turn can make such debt contracts challenging. Such scenarios increase the importance of external equity financing from business angels and venture capitalists. Berger and Udell (1998, p. 624) argue that such moral hazard may be particularly problematic for high-growth and high-risk startups, seeing how such firms commonly obtain risk capital before debt financing. It is also argued that risk capital may be preferable (over debt financing) in early stages, as these investors may possess superior information on some aspects of the venture, i.e. industry knowledge and marketability (Garmaise, 1997, cited in Berger and Udell, 1998, p. 624). When considering risk capital in these stages, business angels are to be preferred over venture capitalists. Business angels have in general a longer time horizon for their investments than venture capitalists do, which is beneficial for innovative startups as they can be considered to have a lengthier development process than less innovative startups. Also, business angels are simply the more viable option and the better fit at the idea and research & development (R&D) stages: their investment amount is normally smaller than that of a venture capitalist, and business angels are considered to be a great resource following initial seed financing, because of their ability to develop the business to the point where formal outside financing becomes achievable (Smith et al., 2011, p. 40). Seed funders are of course the exception, as this type of venture capital is at least equally appropriate for the earlier stages as the informal risk capital. However, for the idea and R&D stages, family and friends, and the entrepreneurs own resources remain essential sources of capital, the advantage of which is how the business will remain opaque, reducing the risk of intellectual theft.

As the business develops past the idea and development stages, to the startup stage, personal resources, family and friends, business angels and seed funders may remain important sources of capital. However, at this point the conventional venture capital becomes increasingly more relevant as these professional investors are able to obtain more information, and thereby reduce the uncertainty associated with their investment decision. The product has been further developed, reducing the entrepreneur's fear of intellectual theft, which in turn may reduce the opacity of the business along with the asymmetry in information available between the entrepreneur and investors.

Governmental programs aimed at aiding entrepreneurs exist in several countries. Naturally these differ in how they provide financial support. It is therefore inaccurate to claim a general characterization of how suitable governmental programs are at different development stages across all nations.

### 2.2.3 Funding Gap and the Importance of the Business Plan

The phenomena known as funding gap, or financing gap, refers to an issue where startups (and more established firms) experience difficulties acquiring the necessary capital at various stages in its development. More specifically, financing gaps tend to occur when approaching the stage involving the transition from idea to product or business, and the transition from being a newly established firm to evolving into a rapid growth enterprise (Spilling, 2006, p. 149).

When businesses seek additional financing, one crucial factor for potential investors or banks is the business' track record. The better a business' track record is, the greater is the chance of obtaining further financing, as a track record signals the quality of the firm. The challenge for startups is that their track record is extremely short, or nonexistent. Due to this, other factors become increasingly important for entrepreneurs seeking financing for their startup. The reputation of the entrepreneur may be essential (Cassar, 2002, p. 256), and in the instances of not yet established startups the business plan, or idea, is crucial (McKinsey, 2007, p. 23).

The lack of a sufficient track record increases the importance of a convincing and believable business plan. Essentially the start up must exhibit commercial potential, preferably on an international level. Although one can argue that the importance of this varies (i.e. high importance for venture capital, and relatively lower for family and friends), a viable business plan is generally an underlying condition for acquiring capital from any available external source of funding. Creating a business plan forces one to consider all aspects of a potential venture, and provide answers to how the entrepreneur plans to implement the venture. Essentially it must give all the answers a potential investor needs to be able to make the correct decision (McKinsey, 2007, p. 39-40).

*Writing a business plan forces you into disciplined thinking, if you do an intellectually honest job. An idea might sound great in your mind, but when you put down the details and numbers, it may fall apart.*

- Eugene Kleiner, venture capital investor (Mckinsey, 2007, p. 38)

According to Justin J. Camp (2002) there are six areas of a business that investors pay extra attention to when considering to provide capital; (1) screening, (2) the management, (3) the business opportunity, (4) intangibles (intangible assets), (5) legal aspect, and (6) financial aspect.

The screening is an overall evaluation touching into the other areas mentioned, which is done in order to provide a basis on which to decide if one should dismiss the investment opportunity or continue conducting a due diligence. The screening provides answers to questions such as the quality of the source - investors are more likely to invest in a business when referred to the project by someone they have a good relationship with, which is the primary screening criteria according to Camp (2002, p. 5). Entrepreneurs do not have much control over this criteria, but the quality of the business plan is considered as the second most important screening criteria, emphasizing the need of developing a credible, thorough and clear business plan, conveying the quality of the investment opportunity. Furthermore, the screening process aims at addressing the quality of other equity investors, legal counsel, accounting firm, customers and partners, and the origin – does the idea's origin resemble the pattern of other companies that the investors made previously made successful investments in? How well the investment opportunity is compatible with the investors' investment strategy is also considered, with regards to the targeted market space, development stage, the remainder of the investment portfolio, investment amount, geographic accessibility, projected liquidity/harvesting opportunities, and personal compatibility with the firm's management team. If an investment opportunity passes the screening process, a more thorough due diligence is conducted. Such a consideration of the investment opportunity may lead to a project being rejected, the project being altered according to wishes of investors, or the project being accepted as is.

Although a sound business plan is essential when trying to obtain funding for a business venture, it provides no guarantee. It is argued that very young startups' ability to acquire

finance is hampered due to numerous constraints that face young startup firms (Gompers, 2002, p. 497).

### 2.2.4 Startup Specific Constraints and Lean Start Up

Startups differ from other, more established and older firms in many ways. One of which is the level of uncertainty associated with the business. Young firms, whose business model has not truly been test-marketed, will face a wider array of potential future scenarios. This uncertainty may be with regards to how welcomed the product is by consumers, or how other firms operating in the same market respond to the introduction of the product. This unpredictability may affect investors' interest and/or availability of credit from banking institutions, as it makes it hard to foresee how the firm will perform and what resources may be required (Gompers, 2002, p. 5).

As previously discussed, startups have a limited operating history. It is therefore argued that startups are more opaque than other firms within the industry. This opaqueness limits the availability of information. When both an entrepreneur and a capital provider are engaged in the same venture, these parties will have access to different information. Thus, the information possessed by both parties is asymmetric. The entrepreneur may have greater knowledge regarding the startup's prospects due to his continuous involvement in the business, while an investor is likely to possess superior knowledge regarding marketing and the industry in general. The presence of asymmetric information may hamper an investor's interest in the project due to the moral hazard that may arise. On the basis of possessing different information the entrepreneur's and the investor's views may differ, and the former may pursue a different strategy than what has been agreed upon with the investor (Gompers, 2002, p. 5). Hence, more opaque firms are less likely to use external equity (Sanyal and Mann, 2010, p. 16).

According to Gompers (2002, p. 5), whether a firm possesses tangible or intangible assets may affect its ability to obtain financing. The more intangible the assets are, the easier it is for employees to leave and bring these assets with them, as opposed to tangible assets, such as machinery and buildings. Technical know-how and trade secrets will follow an employee wherever he goes, which can be discouraging for investors as it makes it more difficult to protect the firms competitive advantage. Furthermore, tangible assets, such as accounts

receivable, inventory and equipment, provide greater liquidity and can serve as collateral (Berger and Udell, 1998, p. 623). As a consequence, startups with more tangible assets are more likely use debt financing (Sanyal and Mann, 2010, p. 21).

The factors discussed; uncertainty, opacity and asymmetric information, and the nature of assets, are factors influence the level risk associated with the investment. Thereby it will affect the degree of which an investor is willing to financially commit to the project, especially if the product has not been test-marketed (Spilling, 2006, p. 148). One way to overcome such obstacles is to engage in the lean startup approach. This approach is meant to improve uncertainty managing, and also make businesses more capital effective – in other words this approach may reduce startups' need for external capital, as well as making it easier to acquire external equity. Eric Ries (2011, p. 5) states that the lean startup approach was developed because of *how* startups fail. Ries argues that in order to increase the likeliness of success, a solid strategy and thorough market research is insufficient. Due to how startups operate with immense uncertainty, often without even knowing what their final product will be, and consequently nor which customer segments to target, the old managerial ways of planning and forecasting will not work (Ries, 2011, p. 9). In essence, lean startup entails managing a startup according the different feedback loops, minimizing time and other resources spent on doing the wrong activities that otherwise may lead to a company's downfall. The lean startup approach is meant to better the use of a company's resources, limit the degree of which the development may go off-track, and accelerate the development (Ries, 2011, p. 8-9).

### 2.2.5 Intellectual Property Rights

For an entrepreneur or an innovator, an idea or invention would be worthless without the possibility of protecting it. Hence, protecting an idea, should be considered crucial in the financing process. An idea or invention will, unprotected, be defined as an intangible asset. Once an intangible asset becomes protected by law, we can refer to it as intellectual property. Intellectual property therefore falls into a small group of definable assets, such as trademarks, patents and copyrights, among others (Anson and Suchy, 2005, p. 16). In this thesis, invention patents are the most relevant. Scherer (1980, p. 439) describes an invention patent as *"an exclusive right to one's invention, including the derivative right to prevent others from using it"*. The purpose of a patent system can be summed up as three main

objectives: "*to promote invention, to encourage the development and commercial utilization of inventions, and to encourage investors to disclose their inventions to the public"* (Scherer, 1980, p. 440).

In order to understand the connection between intellectual property rights and the research question of this thesis, it is important to recognize how a country's system for Intellectual Property Rights has an impact on the level of innovativeness in that country. Among others, Sweet and Maggio (2015, p. 665-677) conducted research on the subject, presented in their article "*Do Stronger Intellectual Property Rights Increase Innovation?"* Their research confirms that stronger intellectual property laws have a positive impact on a country's ability to expand its productive frontier, and the ability to make innovative advances. However, this is only applicable to countries with an above-average level of economic complexity (Sweet and Maggio, 2015, p. 674). Seeing how both Norway and the USA are above-average countries with regards to economic complexity, we can assume that the stronger the intellectual property laws are for each country, the better the foundation is for innovation in the respective countries.

## 2.3 Network Approach

Economic literature highlights the importance of networks, and the prominent role networks play regarding entrepreneurship and resource allocation. In general, economic literature identifies three essential forms of capital, influencing the success of new businesses; financial capital, social capital and human capital. Seeing how economic activities are embedded in society, entrepreneurs develop social capital through building networks, and it is also argued that a fair amount of human capital, the one that exceeds formal education, easily can be obtained from the socialization process (Aldrich and Martinez, 2001, p. 45-47). According to Johannisson (1988, p. 83), the key to entrepreneurial success can be found in the ability to develop and maintain personal network. Heuven and Groen (2012, p. 131-132) argues that social networks can help entrepreneurs identify and access financial recourses and decrease the uncertainty and asymmetry of information between financial capital providers and entrepreneurs.

### 2.3.1 Network Characteristics

A network can be described according to numerous dimensions. These dimensions will be of different significance, seeing how positive characterizations of different dimensions are unequally advantageous to the entrepreneur during the funding processes. Greve (1995, p. 4) refers to Aldrich (1988), Aldrich and Zimmer (1986) and Scott (1991), and emphasizes that networks can be described by size, activity, density, distance, centrality, and multiplexity. This thesis will focus on size, activity, density, distance as well as the importance of tie-strength, introduced by Aldrich and Ruef (2010, p. 69).

*Size of the Network*

The size of the network is, among a number of other characteristics, a determinative factor for the entrepreneur's chances of acquiring financial capital, and can be described as the number of different people an entrepreneur is talking to during the establishment process (Greve, 1995, p. 5). It is argued that a high number of individuals in one's network increase the chances of receiving useful information, and the size of the network may therefore be one of the most important variables contributing to explain the success of establishing new firms, and receiving the financial capital needed (Greve, 1995, p. 5).

*Activity within the Network*

The time spent on maintaining and developing the network is dependent on the size of the network as well as the average time spent on each connection. In a larger network, the time spent on each person may be limited, and conversely, in a smaller network the entrepreneur has the opportunity to spend more time with each individual within the network (Greve, 1995, p. 5). It can be argued that there are better chances of picking up useful information by spending a smaller amount of time with a greater number of people, however it could also be argued that the chances of receiving useful information by one particular contact will increase by spending more time with this person (Greve, 1995, p. 5).

*Network Density*

Greve (1995, p. 5-6) defines density as the total number of lines, or direct links between individuals in the network divided by the total number of relations. In other words, density refers to how tightly connected the individuals within a network are. If we were to consider a smaller network, for instance a small work place, where each person has a direct connection

to all other individuals in the network, the density would be high (1.0 or 100%). It is argued that a low-density characterization is favorable for the entrepreneur to obtain useful information. This is explained by the probability of high redundancy of information in a high-density network, due to the likelihood of homogeneity in the network (Greve, 1995, p. 6). A network made up by homogenous ties may therefore be of limited value to the entrepreneur, since one individual's knowledge is likely to be similar to another individual's knowledge (Aldrich and Ruef, 2010, p. 69). On the other hand, if the network is heterogenic and high-density, the probability of useful information being shared increases.

*Distance within the Network*

Distance in a network refers to the number of relations that a focal person has to go through to reach a specific individual in a network. For an entrepreneur, it is easier to contact people who are close to them in order to access information and resources. However, the closest contacts may not always be able to provide the information or resources needed, hence it may be necessary to reach out to contacts that are friends or acquaintances of one's own friends or acquaintances. Such contacts are referred to as indirect contacts (Greve, 1995, p. 7).

*Importance of Tie Strength*

The strength of ties with contacts is closely linked to the activity within the network. Aldrich and Ruef (2010, p. 69) divide relations into three groups according to the strength of the ties; strong, weak and fluctuating (strangers). The most reliable relationships in a personal network are those with strong ties, and people rely on strong ties for advice, assistance and support in all aspects of life. People tend to invest heavily in these types of relationships, by having frequent contact with the other individual (Aldrich and Ruef, 2010, p. 70). Weak ties require less contact and interaction, and an entrepreneur is able to obtain a greater number of weak ties relative to strong ties. Thus weak ties are also of great importance for the entrepreneur in order to obtain useful information and financial support. Researchers argue that very early in the process of building a venture, the strong and weak ties are the most important, and as the organization achieve some stability, the importance of interaction with strangers will increase (Aldrich and Ruef, 2010, p. 69-71).

### 2.3.2 Social Capital

Social capital and networks are closely connected, as social capital is built through maintaining and developing your network. Social capital is vital to entrepreneurs because it enables them to obtain resources that otherwise would be unavailable (Aldrich and Martinez, 2001, p. 47). Nahapiet and Ghoshal (1998, p. 243) provides a definition of social capital based on the work of Bourdieu (1986) and Burt (1992);

*The sum of the actual and the potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network.*

In other words, social capital is the resources, such as knowledge, capital and clients, available to the entrepreneurs through their respective networks. The value of this social capital is significant since the amount of resources that their contacts possess is often large (Aldrich and Martinez, 2001, p. 47), hence social capital plays an essential role in the entrepreneurial success (Gedajlovic et al., 2013, p. 456).

### 2.3.3 Human Capital

Human capital is in academic literature commonly divided into generic and specific human capital. Generic human capital refers to the general knowledge acquired by entrepreneurs through both formal education and professional work experience, while specific human capital consists of capabilities that the founders can directly apply to the entrepreneurial role (Colombo and Grilli, 2005, p. 796). The specific human capital can be developed through interaction with people with an entrepreneurial background in the network (Aldrich and Martinez, 2001, p. 47). Colombo and Grilli (2005, p. 796) emphasize results from earlier studies that confirm a positive correlation between the age, education and work experience of founders and how likely it is that a startup survives and the subsequent growth rate of surviving startups.

## 2.4 Culture

As a term, culture is relatively vague, and there are variations as to what is meant by this term. Consequently, numerous different definitions exist. Among others, Geert Hofstede has been a prominent figure within the academic field of culture, and his research will form the basis for a conceptual framework for analyzing cultural differences and the implications this may have on how the two national capital markets function. Thus, we will rely on Hofstede's definition of culture:

*It is the collective programming of the mind that distinguishes the members of one group or category of people from others* (Hofstede et al., 2010, p. 6).

Collective programming refers to what characterizes a given culture. These characterizations are common perceptions among the members, which are often rooted in deeply set assumptions. They serve as guidelines for views, actions and valuations, and thus it creates boundaries for which norms and values that are applicable within a given culture. This programming is learned over time, and provides the members of a culture with a filter for how to interpret their surroundings. Common for all culture is that the members have a tendency to not notice it; it is the invisible weave in a society (Strand, 2007, p. 185).

The fact that culture is habitually taken for granted can make it difficult to grasp the significance of it. Still, culture is of great importance, especially in this study as we are examining transnational differences. Naturally we will then focus on national culture, which in cultural theory is considered to be the most influential on individuals and organizations, especially in industrialized countries (Strand, 2007, p. 188).

The link between culture and its effect on entrepreneurial processes is well established in academic research, particularly the effect of national culture (Zhao et al., 2012, p. 3).

### 2.4.1 National Culture

As national culture will be emphasized, we will present a new definition:

*A national culture is a common experienced and accepted cultural platform for the members of a nation, who through this common culture become a nation-state* (Hodne, 1995, p. 19).

To better understand the term *national culture*, it is essential to also understand what is meant by a *nation*. Two of the most vital underlying conditions for a nation are ethnicity and identity. Ethnicity refers to a group of people who are identified by themselves and others as a distinctive category of individuals on the basis of a common origin and sociocultural characteristics. Identity is based on whether an individual knows who he/she is and if this individual can fit into certain surroundings without difficulties. Additionally, national identity is characterized as a group of people linked to a certain geographic area that has historical meaning to this group. National identity is acknowledged when a nation conveys a culture that is shared by the population that constitutes the nation (Hodne, 1995, p. 21-22). It is therefore the national culture that has the most impact on which ideals are most prominent, and what separates "us" from "them".

### 2.4.2 Hofstede's Cultural Dimensions

To compare and group national cultures, there must be a way to measure it, which necessitates classifying what to measure. Geert Hofstede proposed the following four values to be the most dependent on which nation one belongs to: power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity. This model was expanded as Hofstede supported Michael Bond in his research from 1991, suggesting that the fifth dimension should be long-term orientation versus short-term orientation. On the basis of the work by Michael Minkov two additional dimensions were added, one of which correlated heavily with the fifth dimension. This dimension used to be an average of Bond's fifth dimension and Minkov's correlating dimension. Today long-term orientation versus short-term orientation is based on the research done by Minkov rather than Bond, and is sometimes referred to as pragmatic versus normative in business context. The sixth, and last, dimension added by Minkov is indulgence versus restraint (Hofstede et al., 2010).

Power distance: refers to what extent the (less powerful) members of a society accepts that power is unevenly distributed (Hofstede et al., 2010, p. 61).

Individualism versus collectivism: refers to what extent the members of a society are expected to look out for no one besides themselves, or if one can expect that other members of the society will take care of an individual in exchange for this individual's care in return (Hofstede et al., 2010, p. 92).

Masculinity versus femininity: refers to what extent a society appreciates competition, achievements and material rewards, rather than cooperation, modesty and quality of life (Hofstede et al., 2010, p. 140).

Uncertainty avoidance: refers to what extent the members of a society are uncomfortable when facing uncertainty and ambiguity (Hofstede et al., 2010, p. 191).

Pragmatic versus normative: refers to what extent the members of a society wish to be able to explain everything that occurs in their environment. Much of what happens in a society occurs without (Hofstede et al., 2010, p. 239, 358)

Indulgence versus restraint: refers to what extent a society accepts that the members of said society follows human urges such as spending their time on having fun and enjoying life, rather than a society that suppresses personal satisfaction and has strict social norms (Hofstede et al., 2010, p. 281)

The scores from Hofstede's research and the more recent studies expanding the model are displayed in figure 3.6.

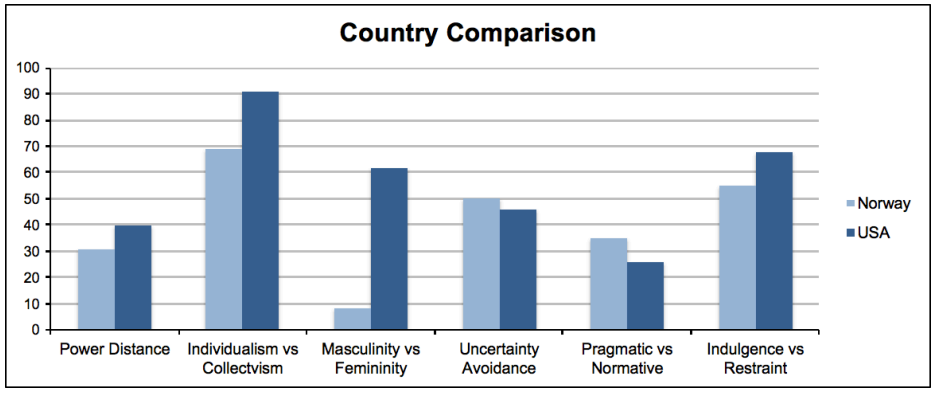


*Figure 3.6: Country comparison of Norway and the USA's respective scores on Hofstede's cultural dimensions (Hofstede et al., 2010, p. 59, 95, 141-143, 194, 257, 282-283)*

Dimensions that include two opposing characterizations (separated by "versus") will have a high score if the former characterization is dominating (i.e. both countries are more normative than pragmatic). A score of 50 indicates a fully neutral result.

### 2.4.3 Critique of Hofstede's Cultural Dimensions

Hofstede's cultural dimensions have been favored by most academics, also within entrepreneurial research (Zhao et al., 2012, p. 3). However, there are several critics who have called attention to flaws regarding Hofstede's cultural dimensions. The original four dimensions were created on the basis of the results from an international survey among IBM employees in 1970. Consequently, the results are exposed to being affected by this particular company's organizational culture, as IBM's organizational culture is likely to affect what kind of people they seek to employ. Hence there is an obvious controversy regarding the validity of these data as indicators for an entire country's national culture. Other arguments against refer to the age of the data, arguing that they may be outdated and not applicable in a continuously changing and more globalized world (Shaiq et al., 2011, p. 103). Although more recent data from other surveys can validate Hofstede's results, some of these data indicate a weaker validity. For instance, the uncertainty avoidance dimension was found to not apply to Asia. This in turn was the foundation for creating the long-term orientation versus short-term orientation dimension (Schmitz and Weber, 2014, p. 17). The uncertainty avoidance dimension is further criticized for lacking validity, as this particular dimension is likely to be affected of the then current (1967-1978) political climate, which was still affected by the aftermath of World War 2, increasing the uncertainty avoidance if one were to compare it to more recent data (Shaiq et al., 2011, p. 103).

Additionally, using nations as a unit for culture has also been criticized for being inaccurate, as culture is fragmented and can differ vastly within nations. Seeing how this thesis focuses on clusters and environments known for a relatively high innovative entrepreneurial activity in the respective countries it is also important to be aware of any regional differences within a country. According to Strand (2007, p. 188, figure 7.2) organizational culture in business is most affected by national culture, followed by regional culture, profession, industry and technology. Although Hofstede's dimensions are primarily created for comparisons across nations, it is equally appropriate for lower-layer comparisons such as across regions (Hofstede et al., 2010, p. 45).

An increasingly popular alternative to Hofstede's dimensions is the GLOBE (Global Leadership and Organizational Behavior Effectiveness) project, which was based on Hofstede's research but further developed and altered by Robert J. House. The results from the GLOBE project correlate empirically to Hofstede, but they are more detailed as it offers a set of nine dimensions, dividing, replacing and adding to Hofstede's dimensions (Hofstede et al., 2010, p. 41). Hofstede's results are exclusively based on quantitative data, while GLOBE also included qualitative data obtained through observations, interviews and media analyses. This methodology is considered to be a valuable contribution to the field of intercultural studies (House et al., 2004). However, the GLOBE project did not include Norway as one of the 62 nations or societies surveyed (Venaik and Brewer, 2008, p. 21).

# 3 METHODOLOGY

The choice of research methodology is of great significance due to how it may affect the result of the thesis. In this chapter we will describe the methodology used to examine the research question of this thesis. The research design, approach and strategy all depend on the nature of the research question, which in this thesis can be described as open and explorative.

## 3.1 Research Approach

The research approach can be either inductive or deductive, or a combination of both (Saunders et al., 2012, p. 160). An inductive approach is primarily based on a question or an observation, and the research design is then the plan for how to answer this question. It entails finding new answers and contributing new knowledge to areas where there may be limited existing research (Jacobsen, 2015, p. 29). The final objective of this approach is to construct a framework or a theory that can be utilized at a more general level, or to result in questions for further research (Saunders et al., 2012, p. 146). Using a deductive approach entails utilizing theory that facilitates in forming and testing a hypothesis.

This thesis benefits from combining the inductive and the deductive approach, given how open and explorative the research question is, however, the inductive approach is emphasized. Due to how this approach generally entails collecting data that establishes different point of views, it is particularly apt for research where the data is collected to explore a phenomenon and generate theory (Saunders et al., 2012, p. 146). Consequently, we employed a qualitative approach in our research, as a qualitative research method is in accordance with the inductive approach. The openness of the research question implies a need to explore this theme widely in order to develop a theoretical framework covering the relevant aspects of the research question. This framework, encompassing entrepreneurship and financing in general, specific conditions for early stage startups, and the impact of networks and culture, will serve as the foundation for the analysis.

## 3.2 Research Design

The design of the research can be exploratory, descriptive or explanatory, depending on what is the purpose of the thesis. It is defined as an overall plan for how to provide answers to the research question. This thesis is based on an exploratory research design, as this design is well suited for examining new areas through an open research question. An exploratory research design is favorable when conducting research intended to discover what is happening and gain insights about a topic of interest (Saunders et al., 2012, p. 170-171), which aligns with the nature of the research question.

## 3.3 Research Strategy

The research strategy sets the premise for how to go about answering the research question. It can be defined as a plan of action to achieve a goal. There are several research strategies to choose from, including, but not limited to, surveys, case studies, template analysis and narrative inquiry. These strategies are not mutually exclusive, and can be combined if it is appropriate, given the choice of research design and the nature of the research question (Saunders et al., 2012, p. 173). In this thesis the research strategy is a hybrid of template analysis and narrative inquiry. Both strategies are in line with the inductive approach.

Template analysis is similar to other strategies, particularly grounded theory, in how it is used to create clarifications of social interactions and processes in a wide range of settings. Seeing how much of business is about the behavior of people, this strategy is suitable in this setting. Template analysis involves developing categories, and to sort data by coding it according to these categories. This coding helps structuring the data and aids the further analytical process, which consists of exploring and identifying themes, patterns and relationships. Template analysis entails combining the inductive and the deductive approach as codes or categories may be specified prior to analyzing the data, as well as permitting further coding during the analytical process. By the analytical process we also refer to the actual gathering of data, meaning that categories can be developed in the process of collecting data as well (Saunders et al., 2012, p. 572). This flexibility is beneficial as it allows us to alter the analysis on the basis of what information arises from the data collection, which is especially valuable as we combine the template analysis strategy with

the narrative inquiry strategy. Combining these strategies enables the respondents to depict a fuller picture of the issue in question. Narrative inquiry strategy refers to how respondents freely tells a complete story, as opposed to providing answers that can be limited by how a question is formulated. This is beneficial due to the relationships that arise between groupings, as the complete story may better explain how categories are linked than if the categories were described strictly separately. The narrative inquiry strategy is described as being particular appropriate for comparative studies as it enables us to recognize how separate accounts of the same phenomenon differ (Saunders et al., 2012, p. 188).

The extent of which the narrative inquiry strategy was employed varies with different respondents, depending on how beneficial a full story is in each case, and to what extent the respondent has a story to tell.

## 3.4 Data Collection Methods

As mentioned, we employed a qualitative approach due to the openness and exploratory nature of the research question. This entails collecting data that is non-numeric, as opposed to a quantitative approach where one utilizes numeric data to examine the relationship between two or more variables. Qualitative data is favored when trying to achieve a deeper understanding of how and why different variables interrelate (Saunders et al., 2012, p. 546).

A quantitative approach would provide numerical data on how startups based on different technologies with different degrees of innovativeness are able to acquire sufficient financial capital, from what sources, and at what times. In turn this could depict how the two capital markets appear to function in effect, and thereby the access to capital. However, such an approach would be less sufficient to provide data on underlying causes and implications. The complexity of the research question, referring to the interconnectedness between the different aspects that comprise the theoretical framework, implies a need for a deeper understanding. Consequently, a qualitative approach to the data collection is the favored alternative for acquiring data that is suitable to examine the research question of this thesis. This entails collecting data that is non-numeric, which is advantageous in how it provides a deeper and more nuanced understanding than a questionnaire.

### 3.4.1 Primary Data

Primary data is data that has been obtained for the purpose of this thesis specifically. In accordance with the exploratory research design and the qualitative approach, this thesis acquires primary data by interviewing appropriate respondents.

The level of formality and the rigidity of the structure commonly distinguish different types of interviews. Interviews are consequently categorized as either structured interviews, semi-structured interviews or in-depth interviews. These structures may overlap (Saunders et al., 2012, p. 374). In this thesis we applied the use of semi-structured interviews, overlapping with in-depth interviews in order to facilitate the research strategy. Semi-structured interviews involve a set of key questions and themes to cover that may differ significantly between respondents. This structure enables us to tailor each interview for each specific respondent, which is valuable due to the variety in how the respondents are involved in entrepreneurial activities (see section 1.4). Furthermore, as opposed to structured interviews, semi-structured interviews allow the interviewer to add questions during the interview to further examine aspects of particular interest (Saunders et al., 2012, p. 374). The interviews overlap with the unstructured type, or in-depth interviews, to varying degrees, depending on each individual respondent and the added value from freely told accounts.

The questions that the respondents received are primarily focused around the relevant aspects presented in the theory section. These questions are formulated as open questions to encourage narration and facilitate the research strategy. Both semi-structured interviews and in-depth interviews are well suited for the exploratory research design (Saunders et al., 2012, p. 377).

### 3.4.2 Preparation and Execution of the Interviews

A key element when conducting interviews is for the interviewer(s) to be well prepared. This entails developing knowledge of the topic at hand, which is crucial for several reasons. Firstly, it allows us to demonstrate our competence and credibility as interviewers, which aids in avoiding spending interview-time on trivial aspects of the topic. Furthermore, it may impact the reliability of the research (see section 3.5.1). Secondly, it aids us in developing the necessary and appropriate themes and questions for the interview guides, which

subsequently enables us to provide any needed information to the interviewee prior to the interview, if this is necessary (Saunders et al., 2012, p. 384). This was done on a few occasions, where the interviewee requested it.

The purpose of the interviews is to acquire data that can provide information that may contribute to answering the research question. Even though the interview guides are all based on the theoretical framework developed in the theory section, each guide was created independently to benefit from the specific competencies and knowledge each respondent has that may distinguish said respondent from others (see appendices B-I). Our level of knowledge as interviewers was further developed for each interview conducted. As new relevant aspects emerged from some interviews, this new information aided in developing guides for interviews that had not yet been conducted to ensure that these new aspects were covered thoroughly.

The respondents were all contacted by e-mail, where we requested their participation in the project. Further e-mail correspondence ensued to agree on time and place for each interview. Four of the interviews were conducted in person, at a location of the interviewee's preference, which in all four cases was the interviewee's workplace. The remaining four interviews were conducted via video calls (Skype), due to the geographical distance between the interviewee and the interviewers. On average each interview lasted about an hour. Interaction with several participants continued after the interview had been conducted, as these participants were eager to share information that they felt could benefit the thesis and that had not been adequately conveyed during the interview.

## 3.5 Data analysis

Each interview was recorded after receiving permission from the interviewee. After finishing each interview, the interviews were transcribed as soon as possible. This was done in order to limit the loss of impressions and visual indications that may have provided additional information relative to audio only. After the interviews were transcribed, each interview was reviewed. In this process different pieces of text were labeled according to the different aspects of the thesis. Due to the interconnectedness between categories, some pieces of text received more than one label. The labeled data was then arranged according to the

corresponding categories. This process ensured that the data became organized, and facilitated in making the analysis structured. The data was then processed on the basis of the theoretical framework that had previously been formed, with the purpose of answering the research question.

All participants were given the opportunity to remain anonymous throughout the thesis, to the extent this would be possible. However, each interviewee allowed their name to be used in the thesis, which we found beneficial as it enabled us to present each participant in such a way that we could convey their specific areas of expertise and experiences. Furthermore, it reduced the level of sensitivity required to handle, process and present the data obtained. The disadvantage of using the real names of participants is how it may cause them to withhold specific information that could potentially harm their relations with others, or damage the reputation of the firm that they represent. As the anonymity question was brought up only after the interview was conducted, we argue that this thesis does not suffer from that problem.

Seeing how much of the presented data is translated from Norwegian to English, this data was returned to the participants for feedback. This was to ensure that any misinterpretations were avoided, and that the data were conveyed in a manner that represents their actual meaning.

### 3.5.1 Reliability

Reliability refers to what extent a study will give an equal result if it were to be repeated at a different time or replicated by different researchers (Gripsrud et al., 2010, p. 102). A high level of reliability is something any research tries to achieve as it indicates the extent of which the result can be trusted, however, it is often difficult to measure reliability in qualitative studies.

The issue of reliability in research employing semi-structured and in-depth interviews is especially concerning due to how these interviews lack standardization. The risk of biased opinions among both researchers and participants is a factor that may decrease reliability. This risk is especially prevalent in qualitative studies. It is therefore important to be aware of our own behavior as interviewers, in terms of our tone of voice and other non-verbal

communication that may reveal any preconceived opinions and thereby influence the answers from the interviewee (Saunders et al., 2012, p. 382). Obviously this entails that the actual questions were formulated as open questions, and not guiding the participant towards our own potentially biased opinions.

Whether or not we are able to appear as competent and gain the participant's trust may also constrain the value of information provided by the participant (Saunders et al., 2012, p. 381). With this in mind, all participants were informed of the theme prior to the interview, and we studied each participant from secondary sources beforehand, both to be able to tailor the interview guide individually, but also to ensure that the respondents were confident in us as researchers. Furthermore, we placed no constraints on dates, time or location regarding our availability, in order to accommodate the respondent's schedules and preferences. It is important to be aware of how participants may want to be perceived as 'socially desirable', or put the organization that they represent in a positive light. Hence, they may be hesitant to share certain information (Saunders et al., 2012, p. 381). These factors may result in inaccurate data. There is nothing that indicates that this has occurred during our research, and the extent of which it may have occurred would likely not be any different if the research was conducted at a different time or by other researchers.

Clearly, it is challenging to achieve reliability in qualitative studies. However, we believe that we have made the necessary measures to limit the effect of these factors that commonly reduce liability in research of this nature. Whether or not the results from this thesis can be replicated is unknown. The data collected represents the participants' interpretation of reality, which may change over time (Saunders et al., 2012, p. 382).

### 3.5.2 Validity

*Internal Validity*

Internal validity refers to the degree of which the collected data can be applied to studying the research question (Gripsrud et al., 2010, p. 49). A high validity is achieved if the collected data is relevant.

To ensure high validity in qualitative studies where semi-structured and in-depth interviews are the methods used to collect data, it is essential to explore themes and collect data from

sources that differ in their point of view. This set the premise for the selection of participants. The greater experience and competency the researchers have for collecting qualitative data within this particular field of study will further increase the validity (Grønmo, 2007). We will argue that the competency-validity is relatively high as both researchers have experience from collecting qualitative data through interviews on several occasions, two of which were within the academic field of innovation and entrepreneurship. Furthermore, validity is increased when researchers include data that contradicts the more general image depicted by participants as a whole (Silverman, 2011, p. 285). This is done consistently throughout the analysis. The concept of triangulation, referring to matching data from three (or more) different sources, is also an indication of high validity (Yin, 2011, p. 81), which has also been emphasized continuously during the analytical process. Another way to increase validity, that we benefited from, is to receive feedback from the participants, ensuring that the data used is not misinterpreted and that this data was conveyed in such a manner that they really represent the opinions of the participants (Yin, 2011, p. 79).

It is critical that we as researchers are aware of how the collected data represents different individuals' perception of reality. This needs to be considered both in the analysis and in the conclusion in order to ensure that the validity of the research is not compromised. Hence, we present findings as general characterizations of the entrepreneurial and investment environments, rather than as absolute or universal truths.

*External Validity*

External validity refers to what extent the results from a study can be generalized, or transferred to other instances (Saunders et al., 2012, p. 671). Seeing how this thesis is a comparison of Norway and the USA/Silicon Valley, it is not transferable to other countries/regions. Nevertheless, it can be of interest to those studying startup investment conditions in either Norway or the Silicon Valley, or, to a lesser degree, other similar countries or regions. The development of the theoretical framework utilized in the thesis may however be generalized for other studies where the research question is of a similar nature.

# 4 FINDINGS AND DISCUSSION

## 4.1 Financing

When starting a new business, it is essential for the entrepreneur to be able to acquire a sufficient amount of capital, especially for those startups that rely on new knowledge or technology. These types of firms often require a lengthy development process from "idea" to profit-generating businesses. The capital needed can be acquired from a number of different sources, and the availability of capital from these sources within a country will have a great impact on the respective county's startup rates, survival rates and early development of businesses. In the following, the main differences between Norway and Silicon Valley, regarding the most prominent sources of funding, will be investigated. Furthermore, a broad overview of the capital markets in Norway and Silicon Valley will be presented.

### 4.1.1 Sources of Funding

*Self-Financing*

Self-financing, as the very first capital needed in order to start a firm is important wherever you choose to start it. However, in this study it is evident that self-financing often accounts for a larger part of the early stage financing in Silicon Valley than in Norway.

*"Occasionally we've had to throw in money from our own pockets, but this hasn't been significant at all"*

- PAUL MAGNE AMUNDSEN

The amount of capital provided by self-financing is small for both Technium and Gobi, and nearly not noteworthy. Several respondents argue that the very first outside capital in Norway is quite easily obtainable, hence the need for self-financing might be limited. Startups in Silicon Valley are claimed to utilize the entrepreneur's own personal resources to a greater extent, and try to fund themselves initially. Several respondents argue that entrepreneurs do this because it forces them to spend their money more rationally.

*"I mean, I would say that most of the people I know who have started companies in the United States, they'll try to fund themselves initially. And they do this, not because it is easier, it is actually harder, they do it because it makes the company more disciplined about how it uses its money"*

- MARK ROBINSON

It appears as if government programs in Norway provide capital so early and easily obtainable, that entrepreneurs do not need to rely as much on self-financing as observed among entrepreneurs in Silicon Valley. Although it is evident that entrepreneurs in Silicon Valley tend to fund their companies initially to a larger extent than in Norway, this, in itself, is not an argument for whether or not the earliest outside capital is more available in Norway than in Silicon Valley. It might rather implicate that entrepreneurs in Silicon Valley are aware of the benefits of self-financing, compared to easily acquired outside financing, as highlighted by several respondents. This will be revisited and further discussed (see *government funding,* p. 47).

*Friends and Family*

In both Norway and Silicon Valley, friends and family is a rather common source of funding for most startups in the earliest stages, and based on our study, it is not possible to conclude that there are any major differences between the two environments in this matter. Several respondents emphasize that this form of capital has both positive and negative consequences. The upside is that friends and family will normally not impose any constraints on how the company should be managed or operate. Additionally, it is argued that the simple and rapid process of obtaining this type of capital is advantageous. On the negative side, it is stressed that this type of capital can become a psychological difficulty if the venture fails, and in some cases ruin relations with people whom the entrepreneurs has previously had good personal relationships with.

*"Friends and family is the toughest [source of capital], because I still have trouble looking in the eyes of the people that we received money from, and that hurts. And even if they are friends that say it doesn't matter, and that they knew the risk, it hurts to have lost that money"*

- MAY KRISTIN RØEN

May Kristin Røen, and her experience with loosing money that friends and family invested in iSentio, highlights an important factor. In such a business contract between an entrepreneur and their friends or family, it is important that the investor fully understands the terms, and is aware of the high risk involved in the transaction. If this is handled in a professional manner, which it appears to be in May Kristin Røen's example, this should limit the relational damages if the company were to fail. If it were to be handled in a less professional manner, for instance if the entrepreneur hides details regarding the risk involved, friendships and other relations are more likely to be ruined.

*Government Funding*

There are clear and very significant differences between Norway and the USA regarding governmental funding. Innovation Norway plays a prominent role in the innovative entrepreneurial environment in Norway, while in Silicon Valley, government support is argued to be close to non-existing. The function of governmental programs in the USA is more directed at aiding imitative startups or funding research-intensive projects, rather than innovative startups.

*"The government plays a pretty big role for financing startups in the earliest stage [in Norway]"*

- PER ARVE FRØYEN

*"Most people [in Silicon Valley] talk about how it [government support] doesn't exist, and for most people it isn't available. But the more research-intensive you are, the more applicable it becomes"*

- GRO EIRIN DYRNES

Economic literature claims that government programs, such as Innovation Norway, should only exists in economies where the market itself is inefficient, and not able to provide the capital needed. Hence, it can be argued that the different roles the two governments play concerning financing of innovative startups is a consequence of different capital market efficiencies, with regards to early stage capital. On the other hand, as we learned previously, entrepreneurs in Silicon Valley tend to use more personal capital than entrepreneurs in Norway. It is not clear whether this is caused by the entrepreneurs' personal preferences, or

if it is a consequence of better availability of early stage capital in Norway, including government funding, than in Silicon Valley. However, several respondents argue that the circumstance where Innovation Norway is such a prominent player in the early stage capital market is triggered by a lack of other options such as business angels.

*"I think they [Innovation Norway] fill a gap in the early stage of business. And I think there is a lot of seed money available in Innovation Norway. And seed money is a critical point in the time of a company. You need cash to start a company, so I think the gap that they fill is extremely critical"*

- MARK ROBINSON

It is argued that Innovation Norway fill a gap in the Norwegian market for early stage capital. Per Arve Frøyen stresses that Innovation Norway aim at funding startups and entrepreneurs that otherwise would not be funded in the private capital market. Hence, entrepreneurs that are considered to have a good chance of succeeding without support from Innovation Norway should, according to their objectives, not receive government funding. Innovation Norway's main ambition is rather to fuel as many projects as possible in order to facilitate the development of an innovative culture.

*"If we believe they will succeed regardless [of our help], then we won't join in on that venture. The private market will take care of it"*

- PER ARVE FRØYEN

However, several respondents emphasize how it may be too easy to obtain financial support from Innovation Norway in the earliest stages, and claim that this is one of the negative aspects from having a governmental financial support program for startups. When considering Gobi and Technium, it is evident that both companies obtained support from Innovation Norway quite easily. It is argued that when money comes too easy, the entrepreneurs are not able to see the true value of this money. This is related to what we discussed earlier regarding self-financing. When entrepreneurs have to use their own money in the early stages of the venture, they acknowledge that they have to spend them cautiously, and make budgets that guide them towards reaching a certain goal or milestone.

*"I would almost say that the worst, and it's maybe not the best thing to say, because it was arguably what we appreciated the most, was the help in the beginning [ref. startup grant] from Innovation Norway. Over here [Silicon Valley] you don't have any aiding tools like Innovation Norway, so you are forced to find the best solution by being smart, working nights, and finding the right people"*

- MAY KRISTIN RØEN

However, May Kristin Røen stresses how further support that they received from Innovation Norway, specifically the IFU-contract (Industrial Research and Development), was the most beneficial aid they received when working with iSentio, because of how this contract enabled them to further commercialize their product and landed them their biggest customer. This grant is offered at later stages than the startup-grants that are so predominant among the very early stage startups.

In general, all respondents argue that the earliest available capital from Innovation Norway is rather accessible, and clearly there are some disadvantages to this, as discussed above. However, one respondent argues that this is also one of Norway's strengths over Silicon Valley. Entrepreneurs in Norway have easy access to fast capital, which in turn enables entrepreneurs to start up a business very quickly. However, a question raised by several respondents about an institution like Innovation Norway, is whether or not the ventures that receive funding really are the ones that should be funded. It is claimed that a major difference between Innovation Norway and professional venture capital firms is the people working within them, and the fact that government money is not industry. It is argued that Innovation Norway does not hire people with sufficient business experience to the same extent as venture capital firms, and as a result of this numerous businesses that probably under most circumstances would not get funded receives funding in the very early stages in Norway.

Historically the support from Innovation Norway has been viewed as too small to make a significant impact in the early stages. Bjørn Alsterberg argues that there have been improvements in this area, and believes that support from Innovation Norway is now more valuable than previously, mainly because of how startup costs has continuously declined over the years. Combined with an unchanged level of support from Innovation Norway, the money startups receive from Innovation Norway today equals a greater share of a startup's

capital needs. Mark Robinson backs this up, arguing that his first venture, which acquired 135 million USD in Series A funding 20 years ago, only would need five or six million USD today, due to technological advances and the development of other tools that are now available.

*Angel Investors*

Throughout this study it is evident that there is a broad consensus among the respondents regarding how angel investors play a far more prominent role in the entrepreneurial environment in Silicon Valley then in Norway. Some respondents argue that business angels are close to non-existent in Norway, however, others claim that there have been very few angel investors in the past, but that the numbers are increasing and that they are becoming more organized. Jon Trygve Berg recognizes through Sarsia Seed's co-investors, that angel investors do exist in Norway, but argues that they are hard to find due to limited organizing.

*"The problem is that no one really knows who these angel investors are"*

- JON TRYGVE BERG

The angel investor community in Silicon Valley is described as being a vital part of the startup environment. There are several reasons for as to why angel investors are far more common in Silicon Valley than in Norway, one of which refers to who these angel investors really are. Several respondents argue that Silicon Valley angel investors are former (and current) entrepreneurs who have made a substantial amount of money from startups earlier in their careers. These individuals are eager to contribute to a further development of the entrepreneurial community in Silicon Valley, and to be a part of this community without being able to engage in a single venture full-time. Additionally, they recognize that it is possible to attain very high returns by investing in early stage ventures.

*"They want to do something new again, but at the same time they don't have the energy for it. So it is both a nice way to contribute to growth in the economy, and simultaneously be engaged in something that they care about without having to sacrifice all of their time to do it"*

- GRO EIRIN DYRNES

Other reasons for this will be discussed under the culture section (see 4.3). As for Norway, the majority of the few angel investors that do exist have limited experience from starting up a business. It is claimed that these are individuals who have inherited their money, or have generated their wealth from for example the oil industry, without necessarily acting as entrepreneurs. Hence, it is natural to assume that angel investors in Silicon Valley are far better equipped to provide entrepreneurs with intellectual capital than angel investors in Norway, and are able to lower the risk accordingly. One respondent provides an historical explanation for this, arguing how the entrepreneurial ecosystem that exists in Silicon Valley has been developed over several decades, and that it will take time for Norway to cultivate anything similar. This can be an explanatory factor for as to why a large share of the individuals that act as business angels in Norway do not resemble the common description of angel investors in academic literature, in the sense that they invest inherited family-money. They may therefore lack the extensive industry knowledge that angel investors in Silicon Valley commonly possess, as Silicon Valley angels invest capital generated from previous ventures.

*Venture Capital*

Acquiring capital from the more formal venture capital market is essential in order to develop an early-stage startup to a profit-generating company, and it is convenient in any phase in-between. In the following we will focus on early-stage venture capital such as seed funds (although the Norwegian seed fund arrangement is initiated, and partly funded, by the government), supplemented by some discussion on traditional venture capital associated with Series A, B and C in order to depict a broader picture of the capital markets.

When considering venture capital, there are both distinct differences and some similarities between Norway and Silicon Valley. Evidently, the venture capital available at seed level is rather similar in the two capital markets, although there is a trend in Silicon Valley where early-stage venture capital has moved to later stages. Venture capital aimed at later stages, such as Series A, B and C, is far more prominent in Silicon Valley than in Norway. This appears to be one of the major problems in the innovative entrepreneurial environment in Norway, seeing how many companies die, due to a lack of Series A, B and C funding. Not only is it argued that the amount of capital available in Series A, B and C is too small, but (that the arguably bigger problem is) that there are only a small number of venture capitalists, who consequently possess too much power.

*"…, so you have a relatively small number of [venture capital] investors with a huge amount of power"*

- MARK ROBINSON

As a consequence of this, venture capitalists in Norway possess greater bargaining power relative to entrepreneurs, and may exploit their position to acquire a larger share of the company than what is ideal for the entrepreneurs' motivation. However, in both Norway and Silicon Valley there are great variations between venture capitalists regarding the amount of control and influence they have, and want to have, on the development of a company. It is claimed that the best venture capitalists in both environments are those who let the entrepreneurs run their business themselves. Furthermore, several respondents argue that venture capitalists in Norway and Silicon Valley are equally professional, but that their ability to make the right investments is not dependent on their professionalism as much as their level of experience. This brings us back to the greater current and historical innovative entrepreneurial activity in Silicon Valley. With this in mind, it is argued that venture capitalists in Silicon Valley are more experienced with regards to developing new ventures, compared to their Norwegian colleagues, and therefore are able to make better investment decisions and has more valuable intellectual capital to contribute.

*"They have done this a thousand times before, you have venture capitalists [in Silicon Valley] that do this every day"*

- KRISTOFFER LANDE

Another distinct difference, that numerous respondents highlight, is how venture capitalists in Norway primarily base their investment decision on the technology that the startup is developing, while Silicon Valley venture capitalists are more disposed to invest the team, or people. This is also apparent in Sarsia Seed, as their investment strategy is to fund startups whose technology has the greatest potential growth-wise, and to more or less ignore the attributes of the team behind the startup. This is also claimed to be the reason why early stage venture capitalists in Norway commonly have quite an impact on the decisions made and subsequently the development of a venture.

*Banking Institutions*

Capital from banking institutions is unavailable in the earliest stages of the development, and is therefore the least relevant source of capital considering the scope of this thesis. However, it is evident that banking institutions in Silicon Valley are active players in the entrepreneurial environments, and have been for a long time. This involvement in the entrepreneurial community is becoming prevalent in Norway as well. Particularly DNB (Den Norske Bank) has increased their focus on entrepreneurs and startups the last few years, although this is far less apparent among other banks in Norway. However, this does not entail that they are willing to lend money to early-stage startups, but rather that they view startups as potential future customers. The presence of these banks in the entrepreneurial communities is primarily recognized through accelerator programs, access to intellectual capital, and so forth. Several of the respondents clearly state that banks simply cannot assume the risk that lending money to early-stage startups without collateral entails.

*"They [banks] make an effort through these programs and such, but they are not interested in lending money to a startup whatsoever"*

- GRO EIRIN DYRNES

It is argued by several respondents that what motivates banks to create such venture arms, is to protect their own existence. They recognize how the economic environment is in constant change, and that the people best suited to help them adapt to future development of the market are innovative entrepreneurs. This applies to both Norwegian and Silicon Valley banks.

*Crowdfunding*

Crowdfunding is a rather new source of capital for startups, which became feasible due to technological advances, as it is dependent on the Internet as a funding channel. The investors are regular people, each investing a small amount of money in a company. Hence, it is argued that this form of funding is, in practice, mostly relevant for startups that produce consumer goods, as the product must appear exciting to the average Joe in order to attract a sufficient number of investors. It is evident throughout the study that crowdfunding is widely used in Silicon Valley, however, startups are only able to, with a few exceptions, raise a relatively moderate amount of money.

*"I often hear about clients [of Innovation Norway] that acquire modest amounts [of money] ... What needs to be said about crowdfunding, is that it is mostly relevant, maybe solely relevant, for consumer goods"*

- PER ARVE FRØYEN

The use of the Internet as a funding channel implies that there should be no differences between the two markets regarding the availability of capital from this particular source. However, several respondents stress that crowdfunding in Silicon Valley primarily is not exploited as a source of capital. Entrepreneurs rather utilize it as a mean to obtain validation from the market, as well as to promote their product. It is not evident that startups in Norway utilize crowdfunding for these purposes to the same extent yet. This is consistent with the opinion of Gro Eirin Dyrnes, stating that startups in Silicon Valley are able to validate the market at an earlier stage than startups in Norway.

### 4.1.2 The Impact of Lean Startup

As previously mentioned several respondents claim that it is less capital demanding to launch a company today compared to ten or twenty years ago, due to newly developed tools that aid in shortening development time and reducing the amount of capital required to start the company.

*"I actually think that this is one of the best times in history to start a new company, because there is collectively a huge number of tools that cut down development time, that cut down accounting costs, that cut down all sorts of things"*

- MARK ROBINSON

One of these tools is the lean startup approach, which is becoming increasingly more common. It is claimed by several respondents that although the term 'lean startup' is rather new, the principles behind it have long been practiced. The opinion that lean startup in most cases will reduce costs dramatically and enable startups to introduce their product to the market more rapidly is consistent among all respondents. Furthermore, lean startup is argued to be essential in order to fully exploit the potential of a product or service, by continuously communicating with the market regarding its needs. Paul Magne Amundsen exemplifies this with how Technium has dramatically altered the features of their product according to

customer demands, through dialogue with future distributors. Several respondents highlight that the startups that are able to practice lean startup and utilize it properly become the winners.

*"What defines the winners is that they have identified a problem that they solve in a better way than anyone else. And the reason they know they solve it better than everyone else is because they validate all the time. They go out and ask"*

- GRO EIRIN DYRNES

It is argued that this applies to both Norway and Silicon Valley. However, Silicon Valley startups commonly appear to do this to a greater extent.

As for differences between Norway and Silicon Valley regarding lean startup, it is claimed that the principles of lean startup have historically been more commonly practiced in Silicon Valley. However, there is very limited consensus among the respondents if this is applicable today as well. Some argue that the lean startup approach is more widespread in Silicon Valley, while others claims that in today's market conditions it is critical to practice lean startup to some extent in order for the startup to even survive, and that it is necessarily close to being equally prevalent in both environments. Among those who claim that the lean startup approach is more common in Silicon Valley, Mark Robinson argues that the mindset and culture in Silicon Valley is more aligned with the lean startup method, compared to Norway. He argues that the community is more habituated to the available tools, hence, they are better equipped to reduce costs and development time. However, he believes that with time, Norway will follow and slowly develop a similar entrepreneurial culture and mindset.

*"And I think that it is about how they [entrepreneurs in Silicon Valley] are much better at going out and validating the market right away"*

- GRO EIRIN DYRNES

Several respondents claim that entrepreneurs in Silicon Valley are better at validating the market at an earlier time. Per Arve Frøyen emphasizes that market orientation and validation is something that Innovation Norway gives great attention to, and that they really stress the importance of this to their clients. However, this does not necessarily mean that the Norwegian entrepreneurial environment is very aware of the importance of continuously

validating. Innovation Norway's focus on this may be a necessary consequence of how Norwegian startups to a lesser degree acknowledges the vitality of market validation. Some respondents argue that entrepreneurs in Norway are too focused on the technology, rather than trying to build a structurally good company that can enter the market quickly. Regarding how local conditions in Norway and Silicon Valley might affect entrepreneurs' ability to validate the market, our data do not imply that there are any differences between the two environments. However, it was previously discussed how entrepreneurs in Silicon Valley make better use of the different tools available, and how they benefit from using crowdfunding as a validation mechanism, although the latter is equally accessible regardless of the startup's geographic location.

### 4.1.3 Intellectual Property Rights

As presented in the theory section, a startup's ability to protect its product or service may be critical when seeking to obtain outside financing. There are several ways and techniques to ensure that one's technology is protected, and patents are commonly considered to be the most secure option. However, in this thesis it is evident that different investors have different preferences regarding the protection of the technology they are invested in, though these findings appear to apply to both environments.

For both Norway and Silicon Valley it is evident that protecting the technology by securing rights for intellectual property is of low concern during the earliest stages, whereas a strategy that involves developing and maintaining diverse competitive advantages is considered more appropriate to protect the business model at this stage. The reasoning for this are the high costs and resource-consuming process commonly required to ensure that the technology becomes patented. Furthermore, it is argued that companies that patent their product prematurely might encounter problems at a later stage if they alter the product due to, for instance, customer feedback.

*"We see to many cases where the entrepreneur develops an idea, and then run straight to the patent office before they even know if the problem is worth solving"*

- PER ARVE FRØYEN

Later on in the lifecycle of a company, investors become more concerned about properly protecting intellectual property. It is highlighted how an invention patent can be used as an exit strategy, should the venture fail (i.e. selling the rights to the intellectual property). Investors that possess significant shares recognize thus the value of legally owning intellectual property. Although this is consistent for both Norway and Silicon Valley, it is observed a tendency that investors in Silicon Valley, to a greater extent may view the team's competencies, vision and drive as a competitive advantage that may sufficiently protect the idea in the earliest stages. This is connected to the previous finding, arguing how investors in Silicon Valley invest in teams, while investors in Norway invest in technology.

### 4.1.4 Time and Bureaucracy

The time it takes from initial contact between an investor and the entrepreneur until the entrepreneur receives funding from said investor varies between different sources of funding, and between investors within the same category. Nearly all respondents state that a venture typically runs out of money between each round of funding. If the venture does not receive the next round of funding immediately after running out of money they experience a funding gap. One respondent argues that gaps in funding may have fatal consequences to a venture, due to the rapid pace observed in the business sector today. Hence, the time spent assessing investment opportunities and the level of bureaucracy among investors in an environment will naturally impact the risk of not being able to obtain the necessary capital when it is needed.

As previously discussed, most respondents perceive it as fairly simple to obtain financing from Innovation Norway in the earliest stages. Some of the respondents also praise Innovation Norway for their quick response time, enabling entrepreneurs to quickly start setting up their firm. Based on own experiences, Kristoffer Lande argues that when negotiating with investors other than Innovation Norway, the duration of this process is longer in Norway than in Silicon Valley. It is argued that investors in Silicon Valley, due to their greater level of experience, are capable of concluding an investment process in less time than what is observed among investors in Norway. Several other respondents support this, and particularly the early-stage venture capital is emphasized as a source of funding where differences are apparent.

*"So it can be a very lengthy process [Sarsia Seed's investment processes], and that may well be one of our problems"*

- JON TRYGVE BERG

Several respondents claim that seed fund investments in Norway often take too long. One respondent believes this is caused by how the seed funds manage money from several other sources, and that there is extensive additional work associated with this. All of these sources, and their opinion are taken into consideration, before the seed fund makes their final decision, which drags out the decision-process. For Silicon Valley it is argued that the same type of investment is more rapidly finalized, thus the probability, or severity, of funding gaps should be relatively limited.

### 4.1.5 Liability of newness

Several ways to reduce the liability of newness were presented in the theory section, and it is claimed that by doing this, entrepreneurs or startups are able to improve their position with respect to outside investors and other comparable startups. Seeing how new and innovative businesses create new roles and functions that have to be learned, it is argued that the degree of eagerness and initiative from the entrepreneurs and other employees is critical in order to limit this inconvenience. This aligns with the notion that faster learners are able to adapt to new roles in a quicker and better fashion than others, and as such become the winners.

*"If you are going to create something of substantial value, then it is per definition very hard and risky. You don't know how to do this beforehand, so it is those who learn the fastest that win those races"*

- PER ARVE FRØYEN

This study provides no suggestions regarding any differences between entrepreneurs in Norway and Silicon Valley regarding their ability to learn and adapt. However, this aspect brings us back to how investors in Silicon Valley are more inclined to invest in teams rather than solely the technology. This implies that financial capital in Silicon Valley, to a greater degree, is invested in startups that possess this ability to learn and adapt.

In the process of starting a new business, and developing the idea into profit-generating company, entrepreneurs have to rely heavily on strangers. May Kristin Røen exemplifies this challenge, stating that in the process of rebuilding their venture (as Pathogenomix, after iSentio) they engaged in a partnership that turned out to be a waste of their time. In order limit this risk, it is essential to create some sort of social structure encompassing all individuals involved in the company. The capabilities of one's network may further aid in limiting this risk, by enabling entrepreneurs to include the right people in the business, either by knowing them directly or by receiving a third party approval from someone in their network. Differences between conditions for network building in Norway and Silicon Valley will be further discussed in section 4.2. A mechanism highlighted by several respondents that may facilitate in coping with the issues that arise from relying on strangers is vesting. This concept entails that shares are vested, meaning that employees accrue rights to buy more stocks, dependent on either the amount of time spent working for the venture or milestones achieved. This is argued to increase employees' motivation, or at least align the mindset of the entrepreneurs to that of the investors. Several respondents claim that vesting is far more common in Silicon Valley than in Norway, and consequently that startups in Silicon Valley are far more attractive as a place of work than the Norwegian counterparts.

*"The earlier you are a part of a startup, the longer you have vested, and the more shares you can get. So it is very attractive to work in an early-stage startup in Silicon Valley, which it isn't in Norway. Because why would you want to work in an early-stage startup in Norway?"*

- MAY KRISTIN RØEN

Lastly, the ties developed between an old organization and their customers are perceived as one of the most prominent competitive advantages that more established firms have over newly established companies. Several respondents discuss how consumers in Silicon Valley tend to be more open minded and eager to try something new. This is something that is integrated in the culture, created by the long entrepreneurial history in the area. This can be seen as a culturally dependent competitive advantage that entrepreneurs in Silicon Valley to a greater extent may benefit from, as customer ties to existing firms are implied to be weaker. The cultural aspect will be further discussed in section 4.3.

### 4.1.6 Overview: Capital Markets

After having visited a number of different themes, the following section will provide the reader with an overview of the two investment markets. The respondents unanimously state that the capital market in Silicon Valley is far more developed than in Norway, where the capital marked is described as immature and narrow. Some respondents suggest that this is partly because of the enormous success the oil industry has experienced. This success has contributed to prevent Norway from recognizing the importance of innovation and development in other sectors. Consequently, a large share of investments in Norway is channeled into the oil and gas industry as well as other related industries. Simultaneously, Silicon Valley has experienced a tremendous development, due to how entrepreneurial activity drives entrepreneurial activity. This is evident in how successful entrepreneurs become angel investors or work for venture capital firms, and how successful ventures attract more entrepreneurs. Several respondents emphasize the importance of former entrepreneurs remaining in the entrepreneurial community on the investor side. This is particularly beneficial due to how these individuals' intellectual capital is likely to be more valuable than that of individuals lacking this experience. Additionally, it is argued that because of this experience, investors in Silicon Valley are better equipped to pick the best investment options.

Despite the capital market in Silicon Valley being more developed than the Norwegian capital market, some respondents argue that it is more challenging to acquire seed funding in Silicon Valley. This is explained by the high number of startups in Silicon Valley, and consequently a higher degree of competition among entrepreneurs in Silicon Valley. An explanatory factor for this appears to be Silicon Valley's reputation as an innovative cluster, which attracts startups from all over the world. Gro Eirin Dyrnes illustrates this stating that she has seen numerous Norwegian startups fail to obtain capital in Silicon Valley, before returning to Norway where they then were able to acquire funding.

*"We see very few Norwegian companies that are able to get capital in Silicon Valley, but they might get capital in Norway after having been in Silicon Valley"*

- GRO EIRIN DYRNES

After evaluating the different sources of funding (section 4.1.1), we will now provide an overall portrayal of the capital markets in Norway and Silicon Valley. As previously discussed, the respondents acknowledge and identify one gap in each market. In Silicon Valley, outside capital in the earliest stages appears to be rather limited, which subsequently forces entrepreneurs to rely more on self-financing. This gap exists partly because of how early-stage capital has moved towards later stages. Additionally, Silicon Valley does not have a prevalent government program that fills this gap.

*"... I'd say a sizable percentage of the early stage capital from years ago has moved to later stages. And they do that essentially to lower the risk"*

- MARK ROBINSON

In the Norwegian capital market, Innovation Norway provides capital to a significant number of startups in the earliest stages. This capital is claimed to be quite easily acquired, which is essential to fill this gap. However, there is controversy regarding whether or not this capital *should* be this accessible. Furthermore, there are advantages from relying on self-financing as entrepreneurs are more likely to acknowledge the true value of capital that isn't obtained very easily, which in turn makes the entrepreneur spend money more critically and rationally. Such a behavior corresponds to the lean startup methodology, which appears to be more prevalent in Silicon Valley. This is evident in how Silicon Valley startups are considered to be better at validating their product or service in the market at an earlier stage, and reach the market more quickly. The gap in the Norwegian capital market appears later in a startup's life cycle. Several respondents claim that traditional venture capital in Norway is of a very limited magnitude. Seeing how the amount of needed capital at this stage makes startups more dependent on outside financing and makes self-financing an unviable option, this gap is argued to be more critical than the gap identified in Silicon Valley.

*"In Silicon Valley there is very little seed money available. In Norway there is a lot of seed money available. In Silicon Valley there is a lot of Series A capital available. In Norway there is almost no Series A capital available"*

- MARK ROBINSON

Based on our findings for each individual source of funding and the two capital markets as a whole, two figures are presented below in figures 4.1 and 4.2. The intention is to illustrate

the availability of capital from different sources across different stages early in the lifecycle of a venture. Darker shades indicate greater availability. For self-financing (Entrepreneur), the figure presents the extent of which this particular source is utilized, rather than availability, seeing how this source of capital is not external.

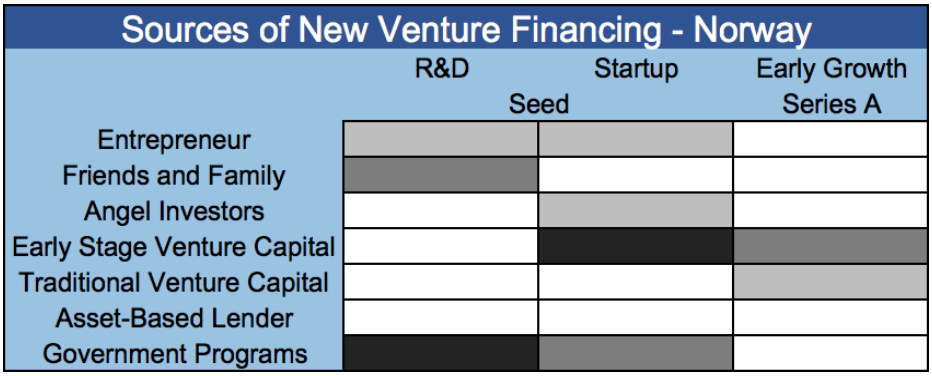


*Figure 4.1: Availability of capital in Norway*

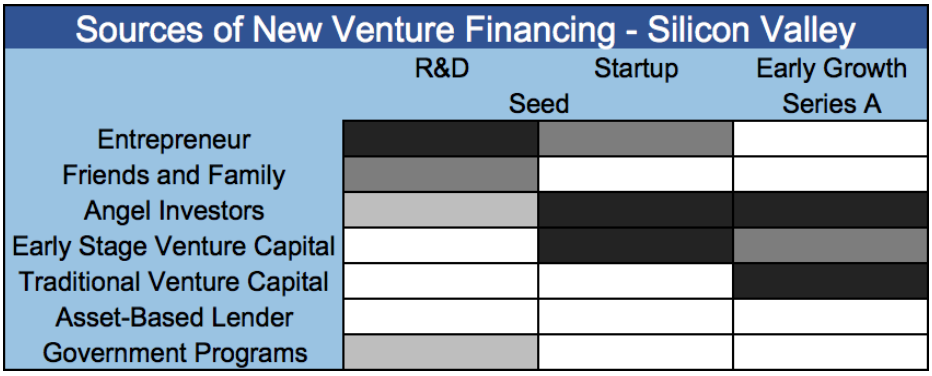


*Figure 4.2: Availability of capital in Silicon Valley*

The two gaps discussed, Series A in Norway and early-stage seed capital in Silicon Valley, are observable in these figures (when ignoring the source of "Entrepreneur"). However, as previously discussed, the gap in Silicon Valley appears to be less prominent as it is filled by personal funds from the entrepreneurs themselves. Regarding self-financing in Norway, it is difficult to conclude whether the limited self-financing is caused by lack of willingness, motivation and ability to risk one's personal financial resources, or simply because it is not necessary due to the sufficient amount of outside capital available in the earliest stages.

Historically, Silicon Valley have had a number of success-stories involving entrepreneurs and startups. It is claimed that everyone in Silicon Valley knows someone that have made a fortune on his or her startup. There are few equivalents to this in Norway, and none of the

scale that Silicon Valley produces. Some of the respondents emphasize how this influences both the motivation to start a company and the motivation to invest in startups, claiming that "the unicorn hunt" is stronger in Silicon Valley. "The unicorn hunt" is the search for the next big thing, and investors in Silicon Valley believe that if they are able to invest in only one "unicorn", this will cover the cost of all other investments and more.

*"They [investors in Silicon Valley] realize that if they put money on the winner, 'the winner takes it all', then that will pay back all other investments they've done"*

- GRO EIRIN DYRNES

This appears to be different in Norway. Due to the limited number of innovative startups relative to Silicon Valley, the probability of "unicorns" emerging in Norway is drastically lower. Jon Trygve Berg exemplifies this by comparing Sarsia Seed to Y Combinator, whose investment portfolio consists of 701 companies, eight of which constitute 75 percent of the portfolio value. In other words, the distribution is very skewed. Another example provided was a portfolio within renewable energy, where 379 companies provided an internal rate of 42 percent. However, when removing the two most successful companies, the internal rate dropped to 4,2 percent. Hence, smaller portfolios, such as that of Sarsia Seed (22 companies), are unlikely to contain any "unicorns".

*"There are 701 companies in Y Combinator's portfolio ... eight of those 701 companies stand for 75 percent of that portfolio's value"*

- JON TRYGVE BERG

Although it is argued by several respondents that the capital market in Norway is bound to improve over time and that entrepreneurial activity may increase, one respondent provides suggestions on how to speed up this development. Seeing how the Norwegian investment market is lacking capital on the venture level, it is argued that it would be favorable if all of Scandinavia worked together to create a cross-national entrepreneurial environment. This would quickly increase the size of the pool of investors and simultaneously limit the power of these investors, which would benefit the entrepreneurial environment. It is therefore suggested that instead of the government investing money through seed funds, and provide them with executive power, it would be better to hire one of the larger venture funds in Silicon Valley to both invest this money, and to train and educate those employed in

Norwegian seed funds and Innovation Norway. This may improve investment decisions in both the short-term, and long-term by developing the intellectual capital.

## 4.2 Networks

During the process of building a new business, entrepreneurs rely heavily on their networks due to the prominent role networks play with regards to entrepreneurship and resource allocation. For an entrepreneur, networking is to develop the social capital, and it is an essential source to any human capital that exceeds the formal education and work experience of the entrepreneurs. Both social and human capital are shown to have positive effects on an entrepreneur's ability to obtain funding and other resources. Furthermore, the reputation of an entrepreneur may be critical for his or her ability to obtain funding, and is maintained and developed through interactions in one's network.

### 4.2.1 The Importance of Networks

The importance of good networks while building a business, was emphasized by all respondents and appeared to be perceived as the single most important factor in order to successfully obtain the capital needed regardless of the geographical location.

*"Really, networks are everything. I usually say to people that most underestimate the value of networks"*

- PER ARVE FRØYEN

While it is evident that the importance of networks is great in both Norway and Silicon Valley, Kristoffer Lande argues that networks are more vital in Silicon Valley than in Norway. However, all other respondents claim that networks are essentially of equal significance in Norway and Silicon Valley, seeing how it is considered to be the most critical factor in both environments. Although networks in general are of great value to entrepreneurs, the study indicates that the importance of the entrepreneur's networks varies depending on which phase the startup is in, and the type of capital they seek to obtain. Per Arve Frøyen states that the importance of networks when applying for startup-grant phase 1 (etableringstilskudd fase 1) from Innovation Norway is non-existing, but that it might be of

value once you have entered the Innovation Norway system, and apply for other grants. This is supported by other respondents, arguing that nearly anyone may obtain funding by Innovation Norway in the earliest stages. As previously discussed, startups in Silicon Valley are often financed by the entrepreneur's own personal financial resources in the earliest stages. Consequently, the significance of networks is reduced compared to later stages in Silicon Valley as well, given the prevalence of insider financing.

As networks are of high value for entrepreneurs in order to acquire outside capital, and to develop their social capital, it is advantageous to connect with individuals that already belong to a large, and well-developed network. Paul Magne Amundsen highlights this while discussing what characteristics they seek in their next investor, arguing that investors with international networks would be favorable in their particular situation.

*"... it would be interesting to look at the network the investor has, and, for instance, what experience he has. What is most attractive to us, is to find an investor that has international contacts, and that can help us with getting the product distributed"*

- PAUL MAGNE AMUNDSEN

Several respondents illustrate the benefits of networks. Sarsia Seed's network is described as very valuable for the startups that Sarsia Seed are invested in due to how support from Sarsia Seed tend to drive support from other investors. Naturally this aids in acquiring external capital, but it also aids in scaling and developing the entrepreneur's network. Kristoffer Lande exemplifies this through his experiences with Gobi, where one of their initial investors belonged to a network described as massive. This network contributed to further investments, some of which came from public figures such as Petter Northug and Gustav Witzøe, which in turn generated media attention for the company.

As to why networks are important for the entrepreneurs in order to get funded, the respondents point to a number of different explanations. It is claimed that the most probable investors to an entrepreneur's company in Norway are someone that the entrepreneur knows either directly, or indirectly through links in their network. As discussed in section 4.1.1, there are diverging opinions regarding the existence of business angels in Norway. Some respondents argue that angel investors are close to non-existing, while others argue that they do exist, but that they are hard to recognize. This inconsistency implies that the networks of

an entrepreneur are essential in order to establish contact with an angel investor in Norway. As for Silicon Valley, it is argued that competition among startups for outside capital is what amplifies the importance of networks.

*"Networks are the most important condition for acquiring funding in the USA, simply because there is such an immense competition that if you want to be noticed, others must have confidence in you"*

- GRO EIRIN DYRNES

Other respondents share this view, claiming that when seeking to establish contact with an angel investor or venture capitalists in Silicon Valley, you are dependent on the abilities of your network for that to be possible. It is clearly beneficial, or even necessary, with an extensive network to get in touch with investors in both Norway and Silicon Valley. However, the underlying reasons for this are different. In Silicon Valley this is caused by competition, while in Norway it seems to be caused by the lack of an organized structure and low visibility (in the case of angel investors). Visibility is highlighted as one of Silicon Valley's strengths, seeing how angel investors and venture capitalists are a visible part of the entrepreneurial community, where the hierarchical distinction between entrepreneurs and investors is limited. This may indicate that the distance between entrepreneurs and investors within networks is shorter in Silicon Valley than in Norway.

Trust is often the reason why investors decide to invest in companies started by someone that either they know personally, is an acquaintance, or have an indirect connection to through friends. Either you know the person directly and trust them to give results, or you trust the recommendations of your friends and acquaintances.

*"Many investments happen on the basis of a recommendations from acquaintances, because the investor then has confidence in that person who made the recommendation, and decides to invest in you on the basis of this trust"*

- BJØRN ALSTERBERG

Another respondent provides a different outlook, arguing that network can be connected to personal qualities and claims that entrepreneurs with a good network is more likely to get funded simply because a project is more credible if the people behind it are good network

builders. This means that you, as an entrepreneur, is credited with a personal attribute that is perceived as a strength by investors.

*"We partnered with someone who turned out to really just waste most of our time, which was maybe the biggest mistake we made"*

- MAY KRISTIN RØEN

The quote above illustrates how personal attributes and qualities among individuals that entrepreneurs work with, as opposed to the entrepreneur's own human capital, is also of great importance. Such issues are likely to be avoided if these individuals are already within the entrepreneur's network, as previously established connections include a known level of trust.

### 4.2.2 Network Characteristics

In the theory section, a number of characteristics of entrepreneurs' networks were discussed along with corresponding implications for the entrepreneur's ability to access useful information, and subsequently their ability to raise capital. Through the scope of this study, it is evident that the complexity of networks is high, and to distinguish different dimensions between Norway and Silicon Valley is problematic. Nonetheless, there are some prominent differences that will be discussed in the following.

Several of the respondents state that they find the size of the networks to be very important for entrepreneurs in Norway, while for Silicon Valley, the strength of the ties are argued to be even more essential in order to obtain finance.

*"I have a tendency to work with the same group of 70 or 80 people that I have found myself the most successful with over my career."*

- MARK ROBINSON

Not only is the strength of the ties highlighted, but also the quality of the people in the networks. Given how the USA, and especially Silicon Valley has a more prominent entrepreneurial history than Norway, it is natural to assume that people in Silicon Valley have developed better entrepreneurial skills than people in Norway. Closely connected to the

strength of ties in networks, are the activities within the networks. To maintain and build strong ties, entrepreneurs must spend time actively doing so by continuously interacting with the network.

*"The people that I worked with there [referring to his time in Openwave, in the beginning of his career], I'll know for the rest of my life and I work with them constantly even now"*

- MARK ROBINSON

Although the majority of the respondents highlight the advantages of sufficiently large networks, and naturally the level of human capital within the network, Mark Robinsons states, based on personal experiences, that it is better to spend a larger amount of time with fewer people. He argues that this is to be preferred over spending a limited amount of time with more people, as it ensures stronger ties, and subsequently develop a greater degree of trust. The Norwegian entrepreneurial business environment is described as one where everyone knows everyone, and where networks extend beyond greater geographical distances, which aligns with the assertion that it can be more demanding to build strong ties within one's entrepreneurial network in Norway than in Silicon Valley. Furthermore, the description of the Norwegian entrepreneurial business environment implies that there is a greater density within networks in the entrepreneurial community in Norway, which may be a consequence of the limited size of this community relative to Silicon Valley. Theoretically, higher-density networks make it more difficult to obtain the funding needed, and they increase the probability of shared information to be redundant.

### 4.2.3 Social Capital

As social capital describes the *potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit* (Nahapiet and Ghoshal, 1998, p. 243), networks are the fundament of the social capital. One respondent argues that the social capital is easier to build in Silicon Valley than in Norway, given the accessibility to expertise, high-quality education institutions, and so forth. Other respondents concur to this, and it is argued that people are more open-minded in Silicon Valley, or in the USA in general.

*"Silicon Valley is a network. In fact, it is not only a network it is a very self-contained ecosystem. Within Silicon Valley you have capital, you have a strong education system, like Stanford and Berkeley and other universities, and in that mix, there is that group of people who are very open minded and also very international"*

- MARK ROBINSON

These observations can explain how the two environments differ with regards to the difficulty of accessing and developing social capital. The open-mindedness implies that individuals are more accessible and that it is easier to receive help from these individuals. The international composition in Silicon Valley can increase the value of your social capital, as opposed to a network that has a less diverse composition. This may also be an explanatory factor for as to why this environment is described as a self-contained ecosystem. The social mechanisms in this environment are developed so that the community in itself naturally assists people in developing their social capital. This appears to be one of the fundamental differences between Norway and Silicon Valley, and it is essentially based on the entrepreneurial history of Silicon Valley. It is stressed that the development of such an ecosystem in Silicon Valley requires a continuously evolvement over a lengthy period of time, likely to span over several decades.

*"The power of our networks is great, I mean, when I need help I usually go to one of them and say; 'hey, there is someone I need but they're not in my network, can you help me?', and I have never heard the word 'no'"*

- MARK ROBINSON

Another aspect to consider is how challenging it is for an entrepreneur to utilize their social capital and the accompanying resources. Respondents argue that it is very easy in Silicon Valley, and Mark Robinsons emphasizes how you never hear the word "no" when requesting information, assistance or other forms of help. Several respondents exemplifies this with the "pay-it-forward" mindset implemented in Silicon Valley's community, rather than "pay-it-back" mentality, which appears to far less prevalent in Norway. These elements are closely linked to the cultural traits, which will be further discussed in section 4.3.

### 4.2.4 Human Capital

It is evident that the focus on the human capital is different in Norway and Silicon Valley, although they differ less in their *appreciation* of human capital. Jon Trygve Berg states that in the venture capital industry, it is the people behind the startups that really matter. However, in Norway, venture capitalists and seed funds like Sarsia Seed are forced to invest their money in the technology rather than in the teams behind it. He argues that Norway is so small that you cannot expect to find investment opportunities where both the entrepreneurs and the technology is top notch, which naturally occurs more often in Silicon Valley. Sarsia Seed acknowledges how projects that they are invested in sometimes fail due to a lack of implementation capacity among the entrepreneurs.

*"If you ask anyone, they would say it is all about the people [behind the startup] … We have been very early and focused on the technology, not so much on the people"*

- JON TRYGVE BERG

Numerous respondents clearly state similar opinions. They argue that although the technology that a startup has developed is not necessarily of less importance, the team behind the startup is commonly the decisive factor when an investment opportunity is evaluated. Several respondents make the same statement regarding Silicon Valley; *investors invest in people*, whereas investments in Norway tend to be made into the business and the technology around it.

In academic literature, human capital consists of generic and specific human capital, where the generic capital is formal education and work experience. It appears as if formal education is valued somewhat higher in Silicon Valley, and the USA in general, than in Norway. Bjørn Alsterberg claims that in his impending angel network, consisting of a number of successful entrepreneurs, none have completed higher education (excluding himself), indicating that education is not a positive nor a negative factor in a financing process, and accordingly not a criterion, in order to get funded. As for the USA, several respondents argue that universities like Stanford, Berkeley and MIT provide the surrounding entrepreneurial clusters with a competitive advantage, seeing how these institutions equip individuals with greater human capital than what corresponding institutions in Norway are capable of. It is therefore argued that entrepreneurs in Silicon Valley are more likely to benefit from starting out with a greater

degree of trust due to their educational background. One respondent further highlights another aspect of this. The value of studying at elite universities is evident already before one finishes one's studies, due to the prospect of becoming a part of great networks with very talented people already while attending these universities. This is also the case for Norway, but arguably to a lesser extent. Regarding work experience, one respondent argues that this is essential to acquire the necessary knowledge about an industry in order to disrupt said industry, and it is claimed that this is particularly evident in Norway.

The vagueness of specific human capital makes it more problematic to quantify and exemplify. However, several respondents emphasize an important difference between Norway and Silicon Valley. Entrepreneurs generally build their specific human capital through entrepreneurial activity, but there appears to be less of an acceptance for failure in Norway. While in Silicon Valley, a "learning by doing"-mentality appears to be ingrained in the community. This reduced acceptance of failure is clearly not beneficial for innovative entrepreneurs, and will be further discussed in section 4.3.4.

### 4.2.5 Reputation

Reputation is essentially the basis for the majority of the previous discussion in this section, and the reputation of an entrepreneur may be of great significance when seeking to obtain external funding, especially in the earlier stages. This is applies to both Norway and Silicon Valley. To provide an example, Paul Magne Amundsen from Technuim states that in order to acquire "smart money" (i.e. funding from sources that may also contribute with intellectual capital), it is important for entrepreneurs to be known in the entrepreneurial environment, as it naturally is advantageous if potential investors are familiar with their venture. Hence, Technium make an effort to achieve this by participating in startup competitions, and generally being present in the investor communities.

*"First you have to make yourself known, investors must have heard of you … And then we sort of try to be present in the investor community, but eventually as the product gets to the shelves and possibly featured in the media and stuff like that, it will be easier to meet good investors"*

- PAUL MAGNE AMUNDSEN

As for Silicon Valley, several of the respondents suggest that it works in the same way. They argue that people in the community have to know the entrepreneurs as a brand, in order to believe that the entrepreneurs will be successful, and to be willing to invest in them. Pathogenomix is an example of this, as they made similar efforts to those of Technium, while being situated in Santa Cruz.

*"I can't raise money without a good network, because I need people who have known me as a brand. And it is not just me, it is everybody out there in the US. You raise money based on the reputation that you establish, and hopefully people see you as someone who is going to deliver a good company, and a good product into the market"*

- MARK ROBINSON

Although the entrepreneurs' reputation appears to be of equal significance in Norway and Silicon Valley, there are apparent differences in how important the reputation of investors are perceived to be, mainly due to how the pool of investors is bigger in Silicon Valley than in Norway. It is argued by several of the respondents that investors in Silicon Valley build their reputation through successful investments where the entrepreneurs make money as well. Their attitude towards this stems from the belief that startup-investments can be a win-win game, where everyone makes money, whereas in Norway investors are more inclined to, and has the relative power to treat it as a zero-sum game. This will be further discussed in section 4.3.3. It is therefore argued that investors in Silicon Valley, to a greater extent, (are forced to) let entrepreneurs keep a considerable part of the shares compared to investors in Norway.

### 4.2.6 Overview: Conditions in Norway and Silicon Valley

Although it is evident that networks are effectively equally advantageous in both environments, the respondents' opinions differ greatly regarding the difficulty of developing valuable networks. One respondent argues that it is easier to build networks in Norway since the entrepreneurial community is smaller than in Silicon Valley. However, as discussed above, the limited size of the entrepreneurial community is also one of Norway's weaknesses, seeing how it limits the level of expertise that is available, and thereby limits the social capital. Based on personal experiences, other respondents claim that it is easier for entrepreneurs to build networks in Silicon Valley, arguing that the entire startup

environment is meant to facilitate network building, which is evident in how there are events and meetups, with the purpose of expanding networks, arranged nearly every day. A possible explanation for the lack of consensus upon this subject is that it may be easier to build networks in Norway to a certain degree, while networks developed in Silicon Valley are likely to be more powerful. The respondents discuss some conditions that can explain the findings above, most notably the size of the population combined with geographical conditions.

*"It is infinitely much easier to acquire money regionally for a regional project"*

- JON TRYGVE BERG

Several respondents emphasize that it is easier to get funded regionally rather than across regions, which contributes to developing separated clusters. In Norway, it is argued that these clusters are created in and around the big cities like Bergen, Stavanger, Trondheim and Oslo, while Silicon Valley is considered as a single cluster encompassing several neighboring cities. This entails that more financial, human and social capital as well as other resources are available within this cluster, than if it were to be separated into several smaller clusters.

As previously discussed, several respondents stress how Silicon Valley has an entrepreneurial history so rich that it is nearly beyond compare. The entrepreneurial history, the accompanying development and numerous success stories are argued to influence the population so that a larger proportion are involved in building startups than what one can observe in Norway. This long lasting development process has also resulted in infrastructure that is advantageous for entrepreneurs' ability to build networks. This is exemplified with the many startup hangouts existing in Silicon Valley, where entrepreneurs, investors and others get together and discuss their technology and so forth. Several respondents believe that Norway is now in a process of developing an entrepreneurial culture, and that the entrepreneurial business environment is maturing, which will make it a more visible part of the overall community in the future.

Although networks are of equal importance in both environments, it appears as if conditions in Silicon Valley are more favorable for developing valuable networks, hence, the preconditions to obtain funding is better in Silicon Valley as well. The outstanding

universities in, and around Silicon Valley is a source of superior human capital, and individuals graduating from these universities often start out with a certain level of trust in the community. It is also argued that Silicon Valley's culture is favorable for entrepreneurs in order to use their social capital and by that, obtain finance and other resources. Culture will be further discussed in the ensuing section (4.3).

## 4.3 Culture

The concept of culture has previously been established (section 2.4), and academic literature suggests that national culture is the layer of culture that has the greatest impact on social constructs. Naturally this layer of culture is of significant interest when studying fundamental differences across two nations. As mentioned, culture is an underlying mindset shared by the population within said culture. It is virtually taken for granted, and is not something one contemplates in everyday life. Still, its effect on a population's behavior is substantial, and may therefore have a considerable effect on what opportunities exist within a given culture. We will try to uncover the cultural differences that may indicate a noteworthy effect on the access to capital for startups in Norway and the USA. These effects may both directly affect how the capital markets function, and indirectly through its effect on the general entrepreneurial environment.

*"[Culture] is fundamental for which role the government has in the economy, and that is culturally dependent on the Scandinavian models"*

- PER ARVE FRØYEN

Seeing how this thesis partially focuses on American clusters that outdo most, if not all, innovative entrepreneurial clusters, it is important to recognize of how these environments may have developed its own unique culture. Such regions may be characterized by a culture altering significantly, in some areas, from the national culture that the region belongs to. The vast size of the USA, the large population and diversity in the population is a cause for greater cultural variations within the country. It is therefore futile to consider the USA as one unit in this matter. Hence, it is important to be aware of any regional differences in culture that distinguishes these clusters, specifically Silicon Valley, in other ways than a general characterization of the national culture would enable us to do.

*"… It is not like that in every city and region in the US either, it is very concentrated geographically"*

- PER ARVE FRØYEN

In a global scope, Norway and the USA are culturally quite similar. The two countries have strong connections, both politically and historically. Furthermore, increased globalization has increased the extent of which cultures can affect one another, and this is particularly prevalent in Norway, where the presence of American popular culture is strong. Still, the two cultures in question possess their own distinct characteristics. We will seek to uncover which cultural traits that may affect the availability of early stage capital between Norway and the USA.

*Hofstede's Cultural dimensions*

The cultural dimensions of Geert Hofstede will serve as a framework for analyzing cultural differences. As mentioned, Hofstede's data are primarily collected from respondents within one global company, IBM. Hence, there is some controversy regarding how valid Hofstede's data are as indicators for an entire country's culture due to the narrow selection of respondents. This should be reason for some skepticism concerning the scores presented in figure 3.6 (p. 37). Despite this, the conceptual framework itself is very fitting and valuable for a cross-national cultural analysis. Hofstede's data serve only as a general characterization, and does not relate the dimensions to any particular theme as specific as its effect on the availability of early stage capital for startups. Using data from the interviews we will examine any findings along the cultural dimensions; power distance, individualism versus collectivism, masculinity versus femininity, uncertainty avoidance, pragmatic versus normative and indulgence versus restraint.

### 4.3.1 Power Distance

In the theory section we explained power distance as a measurement of to which extent the members of a society accept that power is unequally distributed. According to Hofstede's data Norway has a lower power distance than the USA. This is supported by Strand (2007, p. 231), who exemplifies this with how the gap in wages between managers and regular

employees is smaller in Norway than in the USA. However, both countries are categorized as countries with a relatively low power distance.

The respondents suggest that there exists a culture for equality in Norway, implying that the power distance should be low. People are expected to have equal rights and opportunities. It is argued that this contributes to a relatively large degree of governmental involvement in the economy, and thereby how it can be an explanatory factor for why the government is also involved in early stage financing of startups. However, there are some opposing views on this matter. One other respondent acknowledges this element of Norwegian culture, but argues that it may set a premise for Innovation Norway's selection criteria rather than how active this institution is with regards to funding startups. This argument refers specifically to historical conditions prior to when Innovation Norway was established, and when other governmental institutions were in charge of tasks that today are Innovation Norway's responsibility

*"The money was given out on equality, on immigration, preferably to someone who had a handicap. All groups were supposed to have their share"*

- BJØRN ALSTERBERG

This was a consequence of how Innovation Norway needed to satisfy criteria from other governmental departments. Today this institution is more professionalized and specialized in performing its core activities not according to other institutions' guidelines that may hamper its effectiveness. Still the selection criteria for Innovation Norway is heavily debated, suggesting that it may still alter significantly from how private capital investors screen potential startups.

*"You could swing a dead cat and probably get money from the Norwegian government level"*

- MARK ROBINSON

It is however important to keep in mind that one of Innovation Norway's main objectives is to take the risk that others will not. Consequently, their selection criteria will differ from those of a professional investor.

The implied low power distance in Norway is not as apparent between entrepreneurs and professional investors. Due to the small number of investors, entrepreneurs have very limited options, and this skews the power-balance between entrepreneurs and investors in favor of the latter.

*"What's always important, what makes you strong or not, is whether or not you have alternatives"*

- MAY KRISTIN RØEN

Several respondents bring up this issue. However, whether or not this condition really is a cultural trait is not obvious, as the underlying cause is clearly the lack of professional investors in the Norwegian capital market. As discussed in section 4.1.1, a consequence of this uneven distribution of power is that investors have the opportunity to down round a company to acquire more shares without recourse. One can argue that this is an unlikely event, as it would damage both the relationship to and the motivation of the entrepreneur. However, due to another cultural difference - how the Norwegian investment community is treated as a zero-sum game (which will be further discussed in section 4.3.3), there may be reasons to not dismiss the possibility of investors exploiting opportunities that the possession of greater power may provide.

Although the Hofstede data implies a somewhat greater power distance in the USA than in Norway, there is a tendency towards the opposite in the innovative entrepreneurial environments. The number of potential investors is much greater in Silicon Valley, and despite the argument that the number of startups seeking financing is even higher, the larger pool of investors means that there are other options for an entrepreneur to turn to. This clearly limits the power an investor may have over an entrepreneur. Consequently, there is not room for any large misalignment between the interests of the entrepreneur and investor. The business environment is described as informal, and one where higher-ups are approachable.

*"And I think that is how you make a successful business environment. You take the elitism out of everything, and you turn everybody into just another component in the community"*

- MARK ROBINSON

The quote above refers to the business environment in Silicon Valley, where, if one were to go into a coffee shop would see a venture capitalist getting pitched. It is a community where everyone is integrated and where investors are not an elite outside of the general entrepreneurial community.

Overall the respondents form a depiction where the power distance between entrepreneurs and investors is relatively lower in Silicon Valley than in Norwegian investment communities. However, this does not necessarily contradict the low power distance characterization from Hofstede's survey, as it may be a natural consequence of the size of these investment communities. One of the fundamentals of this dimension is equal rights for all, which seems to be evident in both cultures.

### 4.3.2 Individualism versus Collectivism

This dimensions measures a culture according to what extent the members of the culture only look after themselves, or if they also attempt to take care of others. According to Hofstede, the USA is the most individualistic nation in the world, with a score of 91, while Norway with a score of 74 is also considered individualistic but to a lesser degree. This creates an expectation of quite similar results. However, Strand (2007) pointed out a significant difference; a Norwegian will commonly appear as reticent and modest by an American, while an American is often looked at as ostentatious and assertive by a Norwegian, suggesting a larger will to highlight the "self" in American national culture. This supports the claim that Americans are commonly less shy than what people in most other cultures are when approaching potential business partners.

Due to the limited size of the Norwegian investment environment and also the innovative entrepreneurial environment, at least compared to those that exist in the American clusters, some respondents argue that there exists a sense of community across regions or all of these environments in Norway. Everyone know someone anywhere within this community, in a national scope. However, other respondents claim that it is more fragmented and perhaps not very collaborative or knowledge sharing in Norway, with a particular regard to the investment community. Comparing this phenomenon to Silicon Valley may be of limited value as Silicon Valley is only one region in itself. So naturally there will be a sense of community there as it essentially is just one community. However, this community in

Silicon Valley is so immense relative to Norway that it creates a need to establish an own sense of community in order to assure that time is spent with people that one can rely on. Nonetheless, it may be valuable to consider any positive effects such a sense of community across regions may have for the Norwegian investment community if it were to be properly utilized.

*"It's not just a societal community, it's a business community as well … and I think that is one of the most powerful advantages of being there [Norway]"*

- MARK ROBINSON

The difference in the scores from Hofstede along this dimension aligns with some of our findings. Firstly, Americans are considered to be more self-reliant than Norwegians. This can be an explanatory factor for as to why it is more common to be self-funded among entrepreneurs in Silicon Valley in the very early stages than in Norway, and also for why governmental programs created to aid innovative startups in the early stages are far less commonly used by entrepreneurs in the USA. Secondly, the national culture of America is described as one where one is expected to take initiative, which can explain why there is a larger share of the population engaged in their own startup than what it is in Norway.

*"Everyone has a business plan in their back pocket. If you go to Starbucks and ask 'what business plan do you have', then you can bet that the one who serves you coffee has a business plan"*

- MAY KRISTIN RØEN

Furthermore, business angels are described as wealthy individuals that are eager to engage in ventures, but do not have the time to do so full-time themselves.

*"There are a lot of wealthy people that want to spend their money on being a part of something else, but doesn't have the time to do so one hundred percent. But there are many"*

- MAY KRISTIN RØEN

The high number of business angels in Silicon Valley can be a consequence of the general will to initiate ventures. Business angels lacking one resource (time) aid entrepreneurs with resources that the entrepreneur may lack (financial capital and industry expertise). This can

be seen in conjunction to a phenomenon in Silicon Valley that several respondents highlight, a pay-it-forward mentality. Meaning that individuals are inclined to help people so that these people in turn will help someone else. This is evident in business angels that may have become wealthy when someone helped them with their startup, who in turn spend their money helping others succeed with their own startup. However, it refers to more than financial capital, for instance introductions and network development. The great benefit from this is how it speeds up both the innovation process and the processes within the networks themselves, as well as enhancing network building.

*"So that is important, pay it forward, rather than pay it back"*

- GRO EIRIN DYRNES

Furthermore, larger companies in Silicon Valley have recognized the importance of collaborating with smaller startups in order to retain their ability to innovate, while startups are eager to collaborate with the larger companies in order to scale faster. This phenomenon has become increasingly apparent in Norway as well.

*"DNB and Statoil and all of these have started their own venture arms, some of them create accelerator programs, and some talk a lot about how much they work with startups. So you could say that is a great start, but I'm still a little unsure of the reality of it"*

- GRO EIRIN DYRNES

Although both national cultures are characterized as individualistic, and there are obvious advantages from this cultural trait, the respondents stress the importance of a collectivistic mindset. All parties involved in the innovative entrepreneurial communities are dependent on each other for creating an environment that fosters success, which is essentially their main priority in the end. This is closely linked to the importance of one's network, as discussed under the network section.

### 4.3.3 Masculinity versus Femininity

This dimension is a measurement of to which extent a society values competition, achievements and material success, as opposed to cooperation, welfare, modesty and quality of life. This is the dimension where Norway and the USA differ the most according to

Hofstede. The American national culture is considered as more of a masculine one than a feminine one, while Norway is located at the other end of the scale as the second most feminine culture in the world.

Hofstede's feminine characterization of Norway is prevalent in the entrepreneurial community. A large share of Norwegian research, and consequently startups, is focused around industries such as medical science and environmental, or green/clean technology. The latter is described as an industry that it is currently fashionable to invest in among Norwegians. Such a strong commitment to develop industries regarded as feminine is seldom found anywhere else, and is why Norway possesses highly competent people within such fields. Hence it is only natural that many investor groups are inclined towards investing in such industries, as these are industries that the investors know and may themselves be competent in. This is especially evident in Innovation Norway, but also the (partly governmental) seed funds and their investment strategies. The problem with these industries is the lengthy development process, increasing the time required to scale companies within these industries, especially medical science, which may limit interest from investors as they commonly seek projects that are quickly scalable.

*"You know, Norway is naturally strong in certain areas like energy, like fishing, some medical sciences. There are some areas where there are some natural strengths"*

- MARK ROBINSON

Paradoxically, Norway's largest industry is, and has been for nearly six decades, the petroleum industry, which clearly does not align with the feminine cultural values. Furthermore, the Norwegian government has heavily supported the development of this industry.

*"And people were willing to put money on that [oil] … because the government acted as a guarantor, by providing a 78 percent write-down on losses"*

- BJØRN ALSTERBERG

However, creating a petroleum industry is largely the cause for the increased wealth of Norway, which in turn enabled the creation of the Norwegian welfare state. This is also a reason for why the Norwegian government is able to, and has chosen to support startups

financially, as the nation must develop other industries, without necessarily knowing which, and partially rely on these for future economic growth as there is an increased consciousness regarding an end to the petroleum era. Furthermore, the increased focus on green energy, and thereby the development of expertise within this field, originates from the negative externalities from petroleum and other non-clean energy industries. However, today there are not many incentives from the government (i.e. tax incentives) for entrepreneurs to start a company, although there are clear policies favoring green technology on a general basis.

Americas national culture is described as one where "the winner takes it all", and one where individuals are motivated by the opportunity to express their personal success. However, this is not evident in the entrepreneurial environment in and around Silicon Valley. Although the national culture is implied to be competition driven, meaning there will be a winner and a loser, the respondents depict an environment where individuals help each other wherever they can, even though these individuals are not involved in the same venture as either an investor or an entrepreneur.

*"If I need help there is any number of people that I can go to and talk to and no one will ever say no. They might say 'I can't talk to you right now, but I can talk tomorrow', but they'll never say no"*

- MARK ROBINSON

This can be seen in context with the previous two dimensions as well, where all these factors combined underpin the evolvement of a vibrant entrepreneurial community. Consequently, this may have contributed to creating a self-reinforcing environment that, with time, has attracted more entrepreneurs and investors as they become familiar with the success stories, although the number of failures increases proportionally. One would think such an environment found in Silicon Valley increases the likelihood of succeeding with one's startup, however, some of the respondents stress that there are approximately even shares of startups that succeed in both Norway and the USA, and that this willingness to help is prevalent in both countries.

Mark Robinson has taken notice of how investors in Norway tend to think of startup-investments as a zero-sum game. Meaning that for there to be a winner, there must also be a loser – not everyone can win simultaneously. He argues that although there is a limited pool

of startups, there is an even more limited pool of investors. So entrepreneurs and investors are competing for who is going to come out the best at the end of the life of a company. This phenomenon is clearly aligned with the masculine values, and does not resemble the feminine characterization provided by Hofstede. Within the entrepreneurial community in Silicon Valley there appears to be lesser degree of competition between the entrepreneur and the investor.

*"If you're here [Silicon Valley], you're going to find that your investors would be perfectly happy if they gave you money, got twenty percent of the company for giving you money, and then you were a huge success and you sold it the next day. They're not going to think 'how do I get more of the shares?'"*

- MARK ROBINSON

Overall, neither entrepreneurial environment is distinctly feminine. Still, the femininity of the Norwegian national culture has had en evident effect on which industries and what technologies are prioritized. At least this is the case from a governmental perspective, and their policies have to some degree affected what technologies startups arise around. However, clearly contradicting Hofstede's categorization of the two national cultures, the Norwegian investment community appears to be more masculine than that of Silicon Valley. Investors in Norway may be greedier due to their greater power relative to the entrepreneurs as discussed under section 4.3.1.

### 4.3.4 Uncertainty Avoidance

This dimension is a measurement of to what extent the members of a society are uncomfortable when faced with uncertainty and ambiguity. Uncertainty and risk are closely related; both entail doubt and ambiguity regarding an outcome. There is however a difference that is important to be aware of. Risk refers to known possible outcomes that involve a probability, while uncertainty is less tangible and does not involve probabilities, as possible outcomes are less predictable. Essentially, risk is a form of uncertainty where one has more information on possible future events. According to Hofstede's scores Norway is neutral along this dimension, while Americans are slightly less concerned about uncertainty. It is however important to keep in mind that Hofstede's scores along this dimension have been heavily criticized.

The USA is described as a country open to new ideas and innovative products, which may impact how inclined investors are towards funding untraditional and innovative projects. The Norwegian national culture does not differ significantly in that manner. Still, some respondents claim that investors in the Norwegian investment community may be less willing to take risks in their investments.

*"And Norwegian investors are very risk averse, so they don't want to get involved early"*

- PAUL MAGNE AMUNDSEN

Obviously, the more risk averse investors are the less beneficial it is for startups seeking funding, though it is particularly disadvantageous in the earlier stages as risk associated with such investments is greater. If the quote above is true, it can be a contributing factor for explaining why there is a market gap in the Norwegian capital market where the government aids in financing startups in the very early stages. However, most respondents argue that Norwegian investors are not necessarily less willing to take risk, but that they act under conditions of greater uncertainty due to a lower level of experience and knowledge relative to their American counterparts.

*"What I think it is, is that it is very unfamiliar. It's very new, and everyone [investors] are scared to go where no one else have gone before"*

- KRISTOFFER LANDE

Several respondents point out a different perspective on the act of failing between the two cultures. In Norway a failure is seen as simply a failure. They gave it a shot, and it did not work out. The idea was not good enough to succeed. In Silicon Valley the term failure is not as negative. There is more focus on the positive learning outcomes from failing, which will make both the investor and the entrepreneur better equipped the next time around. They failed this time, but will surely not make the same mistake again.

*"The most important thing going on in Silicon Valley is the part that you have the hardest time seeing, which is that there's a real acceptance of failure here. People know you can't succeed unless you fail, and that is a big cultural difference between Silicon Valley and other parts of the United States and other regions of the world"*

- MARK ROBINSON

*"Here [Norway] it's like 'well of course he failed! That idea was doomed to fail' instead of 'that took guts! He was not able to reduce the risk enough, but he has probably learned a lot.'"*

- GRO EIRIN DYRNES

These different point of views on failing may affect an investors fear of risk as negative externalities from failing in Silicon Valley, outside of losing the actual investment, are less prevalent. One respondent argues that this is evident in how innovations in Silicon Valley are more radical. In Norway the focus is to improve rather incrementally. In Silicon Valley it is more common to look at a problem from a new perspective and solve it in an entirely different way. Such an approach to problem solving increases the likeliness of disruptions within industries, and many of the prime examples of successful startups in Silicon Valley are projects that disrupted an entire industry. Jon Trygve Berg believes that for the Norwegian investment community or capital market to evolve there needs to be a few very successful projects. It is argued that this would allow and enable successful entrepreneurs to contribute in other projects. Essentially it is a key factor for being able to develop a prominent business angel and venture capital market. Still, it is claimed that it has become increasingly popular to invest in early stage startups in Norway, due to an increased acceptance for riskier investments.

*"It is fashionable in 2015 and onwards to put your money in early-stage companies … it is okay to lose on something that could give a sky-high return"*

- BJØRN ALSTERBERG

Overall, the investment community in Silicon Valley is portrayed as less uncertainty avoidant than in Norway. The respondents point to two cultural key differences as for why. Firstly, they refer to society's view on failing. And secondly, the greater experience and knowledge, of investors in Silicon Valley reduces uncertainty around their investment

decisions. If a typical Silicon Valley investor were to make an identical investment as a typical Norwegian Investor, the difference would be the information they possess, and consequently the degree of uncertainty associated with the investment.

### 4.3.5 Pragmatic Versus Normative

This dimension is a measurement of to which extent the members of a culture feel a need to be able to explain everything that happens in their environment. However, as previously explained, it also refers to whether or not the members of said culture are long-term oriented or short-term oriented. According to Hofstede's scores both countries are more normative than pragmatic, and more short-term oriented than long-term oriented, implying that both cultures seek the absolute truth and are more concerned with quick results than cultures that are more long-term oriented.

How both cultures are described as valuing quick results is evident among professional investors in any country. They prefer projects that are quickly scalable. However, quicker growth is not always better. So called gazelle companies are characterized by an extremely rapid growth. In some cases, the growth is too rapid for the company too handle, which subsequently may lead to the company's downfall. Still, one of the clear advantages Silicon Valley has over the entrepreneurial community in Norway is how quickly they make things happen.

*"And then we went to Silicon Valley, and both me and my husband thought 'Wow! More things happen here in a week, than what has happened in Bergen the last two years', regarding the feedback we got"*

- MAY KRISTIN RØEN

This tendency in Silicon Valley of making things happen faster, may imply an urge for quicker results and thereby a more prominent short-term orientation. One respondent highlighted how investors in Silicon Valley are more inclined to grasp the opportunities that arise, without wasting more time than necessary. This may be because of how there is a higher degree of competition among Silicon Valley investors than investors in Norway as discussed earlier. This is further supported by Jon Trygve Berg who stated that Sarsia Seed is in no rush to finalize an investment deal, and that these processes may be rather lengthy

(more than half a year). He argues that the reasoning for this is so Sarsia Seed are able to obtain all necessary information, and do not rush any investment decisions. It is not a concern if these lengthy screening and due diligence processes cause some startups to obtain financial capital from other sources instead, as one of their main objectives is to help the startups in their portfolio to obtain additional capital from other investors.

*"If someone comes to us and says 'you have to jump on this, or someone else will', then I'll just say 'Great!' Because what we really want is that more companies get funded, it's not like it has to be us [Sarsia Seed]"*

- JON TRYGVE BERG

These lengthy screening and due diligence processes align with the normative characterization in the sense that these processes uncover the truth, however, it may hamper the ability to achieve quick results. It is reasonable to believe that the ability to make things happen quickly in Silicon Valley may positively impact how severe the problem of financing gaps is in effect.

### 4.3.6 Indulgence Versus Restraint

This dimensions measures a culture according to how accepted it is that the members of said culture spend their time fulfilling human needs, personal aspirations and essentially enjoying themselves. Hofstede characterizes the Norwegian national culture as neutral, while the American national culture is more indulgent. For entrepreneurship an indulgent culture appears to be beneficial, as it does not hinder individuals from doing what they desire. One respondent argues that many of the most prominent entrepreneurs are lacking higher education, and that those who prioritize education are more inclined to do as they are told, rather than see and explore "the possibilities in the impossible". Furthermore, individuals who are a part of the entrepreneurial environments, whether it is an entrepreneur or a business angel, are all involved because there is a desire to be a part of creating something.

*"It is what we like the most. Building things, accomplishing things and being a part of trying to change the world"*

- BJØRN ALSTERBERG

A cultural phenomenon that illustrates the indulgent characterization of the American national culture are the so-called moonshots. The term originates from how the American nation galvanized around building rockets and putting a man on the moon.

*"The business cultures that do the best are the ones that acknowledges moonshots. They acknowledge the fact that to have a successful business you need to do some spectacular things, of which some will fail. But if you don't try you don't really succeed in anything new"*

- MARK ROBINSON

This aspect is also closely linked to the acceptance of failure that exists in Silicon Valley. Should Hofstede's scores along this dimension be an accurate portrayal of the two national cultures it may be a contributing factor as for why there is a smaller share of the population engaged in entrepreneurial ventures in Norway than in the USA.

### 4.3.7 Overview: Cultural Differences

The impact of cultural differences is clearly apparent in the two entrepreneurial environments. Although some of these differences are reasonable to believe to have a direct impact on how the two capital markets function, most of the cultural differences will affect these markets indirectly through its effect on the general entrepreneurial environment. Interestingly, some of our findings that indicate clear differences between the entrepreneurial environments in Norway and Silicon Valley are contradicting the more general characterizations of the two national cultures that Hofstede has provided.

Overall, the culture in Silicon Valley appears to be more advantageous with regards to entrepreneurial activity, which is evident in the different views on failing and the lower power distance between entrepreneurs and investors in Silicon Valley relative to Norway. Furthermore, the prevalence of the pay-it-forward mentality in Silicon Valley is clearly a factor that contributes to explain why Silicon Valley has developed into the vibrant entrepreneurial cluster it is today. This directly affects the availability of external capital for innovative early-stage startups, particularly from angel investors.

# 5 SUMMARY

The objective of the thesis is to examine the local conditions in Norway and the USA, with regards to financing of startups, underlying causes, and what implications differences between the two entrepreneurial environments might have. Seeing how Silicon Valley is considered to be one of the most advanced entrepreneurial clusters in the USA, and the world, we limited the scope of our thesis to focus on this particular region, as opposed to the USA as a whole. The entrepreneurial environment in Silicon Valley is then viewed as benchmark for others to aspire to. In addition to examining each of the most prominent sources of funding in both Norway and Silicon Valley, there is placed emphasis on the importance and accessibility of networks, as well as cultural differences and its accompanying impact on financing of startups in the respective environments.

Due to the openness and explorative nature of the research question, a qualitative approach was applied, where the data set consists of eight interviews characterized as semi-structured interviews, overlapping with in-depth interviews. The selection consists of highly competent individuals within the field of entrepreneurship and financing of startups, in addition to some newly established entrepreneurs.

When analyzing the collected data according to the theoretical framework developed, a number of interesting observations were made. It is evident that the Norwegian government provides both financial capital and, to a lesser degree, intellectual capital, to a high number of early-stage innovative ventures in Norway, which, for Silicon Valley, is considered to be close to non-existing. This gap is not filled by other players in the Silicon Valley investment community, which results in a lack of available external capital in the very earliest stages for ventures in Silicon Valley, thus, entrepreneurs are forced to provide this capital themselves. However, this gap is not exclusively considered to be negative, as entrepreneurs develop a more realistic relationship to money and are able to recognize the value of this money, consequently it is spent in a more considerate manner. This can also be seen in relation to the individualistic culture in Silicon Valley, as entrepreneurs may *want* to fund their ventures themselves initially. As for Norway, the capital market appears to have a lower availability

of external capital for Series A funding and onwards. This is identified as a crucial gap in the capital market, and a phase where many ventures fail in Norway due to the lack of capital.

One of the major differences identified between the two capital markets, is the availability and visibility of angel investors. Clearly, there exist far fewer angel investors in Norway than in Silicon Valley. Secondly, angel investors in Norway seem to lack visibility compared to their Silicon Valley counterparts. Based on this, it is argued that networks are extremely important in Norway, in order to locate and get in contact with angel investors. As for Silicon Valley, networks are tremendously important as well, but this is rather caused by the high degree of competitiveness observed among startups with regards to acquiring outside funding. Regarding the visibility of investors, this can be seen in relation to the lower power distance observed in the entrepreneurial environment in Silicon Valley. It is argued that investors are not as distanced, hierarchically, as in Norway, and that they tend to be a visible part of the entrepreneurial environment in Silicon Valley.

The study indicates that the environment is better suited in Silicon Valley than in Norway for developing the entrepreneurs' social- and human capital. It is argued that the social capital is easier to build due to the open mindedness in Silicon Valley, and that the value of the social capital is higher due to the entrepreneurial history and experience in the community. The culture in Silicon Valley, with its pay-it-forward mindset, can be comprehended as an underlying factor contributing to explain the observations regarding social capital and the ease of building and utilizing it, due to how this mentality speeds up the networking process. It is also argued to be one of the main explanatory factors for why angel investors are so prominent in Silicon Valley, seeing how angel investors often have built their wealth based on a venture, while relying on the support from other angel investors. Subsequently, they are eager to provide the same support for other ventures, whose business models align with angel investors' interests and expertise.

## 5.1 Conclusion

As one may have been inclined to expect, it is clear that Norway could benefit from replicating certain elements of Silicon Valley's entrepreneurial environment, regarding financing of startups. Despite how there is observed gaps in both capital markets, the overall

financial conditions are more developed in Silicon Valley, additionally, the environment in general is far more facilitating for innovative entrepreneurial activity. This is mainly a result of the entrepreneurial history of Silicon Valley, and to develop similar conditions and a similar culture in Norway will take time, and requires patience and effort. Still, the entrepreneurial environment in Norway is evolving in the right direction. We can determine that a particular focus should be set towards traditional venture capital in Norway, as the extent of this particular element of the capital market is very limited. Furthermore, this would aid in developing the potentially high-growth ventures and increase the probability of building truly successful startups, or so-called "unicorns". Given how previous success is found to be one of the main drivers for future entrepreneurial activity, and to have a substantial and positive effect on the financing of startups, this may contribute to creating a better foundation underpinning the development of startups. In a long-term perspective, this would ideally contribute to creating a self-contained entrepreneurial ecosystem, similar to that of Silicon Valley.

## 5.2 Limitations and Further Research

The extent of the thesis represents a central limitation, given how the data sample is comprised of eight interviews. Although this is considered to be a relatively large sample in qualitative studies, this permits personal opinions that do not necessarily reflect reality to be given too much attention in the thesis. Additionally, it is problematic to generalize any results, given how the thesis is a comparative study of two specific environments. An interesting approach could therefore be to expand the scope of the thesis to include more clusters or regions, in order to increase the validity of the results. However, this would negatively impact the meticulousness of the analysis for each environment, given the timeframe available for conducting the thesis. Additionally, this would involve a significantly larger data sample (i.e. more participants), which is unfavorable given the qualitative approach of the study.

It is also necessary to point out how the empirical context of the thesis is a limitation, due to how the studied environments are very complex and dynamic. This makes it problematic to assess the results across different points in time, which hampers the reliability of the thesis.

Hence, we need to emphasize that the purpose of the thesis is to examine the current conditions.

In order to further examine the research question of this thesis, it may be pertinent to combine the qualitative approach with a quantitative analysis. This could increase both the validity and reliability of the thesis. However, the quantitative data ought then to be of such an extent that the results could be relied on as representative for both capital markets, which naturally may be problematic to achieve.

When considering further research, the lack of capital in the Norwegian capital market on the traditional venture level stands out as a particularly interesting aspect. Deeper knowledge and underlying reasons for this, as well as possible measures that can be done to change these conditions may be of significant interest for further research. Additionally, it is very interesting to see how the lack of governmental support for innovative startups in the USA is, to some extent, perceived to be an advantage. This is explained by how this forces entrepreneurs to rely on other sources, particularly themselves, and consequently become more conscious of how they spend their money. From the perspective of the Norwegian government, it may then be beneficial to examine the effects of reducing the number of startups that receive funding in the earliest stages, and partly shift more of their attention towards later investment rounds. Could it be an alternative for the Norwegian government to contribute more on the venture capital level, and thus develop a better functioning system in the long term?

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# 7 APPENDICES

APPENDIX A: Lecture-slide from Tor Aase Johannessen's lecture in the course *Innovation and Entrepreneurship*

**Definitions of Entrepreneurship**

| Source: | Definition: |
|---|---|
| Knight (1921) | Profits from bearing uncertainty and risk |
| Schumpeter (1934) | Carrying out new combinations of firm organization (see more later) |
| Hoselitz (1952) | Uncertainty bearing - coordination of productive resources - introduction of innovations and the provision of capital |
| Cole (1959) | Purposeful activity to initiate and develop a profit-oriented bus. |
| McClelland (1961) | Moderate risk taking |
| Casson (1982) | Decisions and judgments about the coordination of scarce resources |
| Gartner (1985) | Creation of new organizations |
| Stevenson, Roberts, &Grousbeck (1989) | The pursuit of opportunity without regard to resources currently controlled |
| Hart, Stevenson & Dial (1995) | The pursuit of opportunity without regard to resources currently controlled, but constrained by the founders´ previous choices and industry-related experience |

# APPENDIX B: Interview Guide - Bjørn Alsterberg

1) How would you describe the Norwegian market for seed capital?
    a. Follow up on the USA.
2) If you consider the Norwegian seed-funds as a whole, how does their range of investment strategies align with the general Norwegian startup landscape?
    a. What are the effects of any mismatch?
3) How would you describe the market for business angels in Norway?
    a. Follow up on underlying causes.
    b. Follow up on the USA.
4) How would you describe the Norwegian market for traditional venture?
    a. Follow up on the USA.
5) How widespread is venture capital in early stages in Norway?
    a. Follow up on the USA.
6) Government support for startups in Norway is relatively prominent. Does this imply that the Norwegian capital market is imperfect?
    a. How is this linked to cultural traits?
    b. How do you see this compared to the American market, where the government support is less dominant?
7) What are the advantages or disadvantages of a prominent governmental role with regards to startup funding?
8) How widespread is Lean Startup practiced?
    a. To what extent does this affect capital needs?
9) Based on your experiences, to what extent do investors constrain or guide the development of startups thet they are invested in?
10) How would you describe investors in Norway with regards to risk aversion?
11) Are there any specific personal traits that investors commonly think of as positive or negative?
12) Regarding the entrepreneur's human capital (education and competences), how does this affect the chances for the entrepreneur to acquire capital?
13) In the process of acquiring capital from different sources of funding, how important is it to possess a patent on your product/service or at least have a product/service that is patentable
14) In order to acquire capital, how important is it for an entrepreneur to possess a well developed network?
    a. Do you believe that the impact of one's network differs between different types of financing sources?
15) Lastly, on a general basis, how would you describe the availability of capital for Norwegian startups in the early stages?
    a. Follow up on the USA.

# APPENDIX C: Interview Guide - Paul Magne Amundsen

1) Please tell us about your background and experience, and what made you start Technium (education, experience with previous startups, and motivation).
2) Can you give us a brief introduction to Technium and what it does? (Age, stage, employees, and the entrepreneurs behind it).
3) How was your startup financed in the different stages?
4) What were the capital needs in the different stages?
5) Have you ever experienced gaps in funding? (Unable to acquire the necessary capital at the time it was needed).
6) How did you get in touch with investors, or other sources of funding?
7) What sources of capital were the most attractive to you, given how different sources often have different terms, and why?
8) In your experience, how different is the availability of capital from different sources?
9) How time consuming and bureaucratic did you experience the process of acquiring capital from different sources to be?
10) To what extent did different sources of capital place constraints on how to develop your company?
11) In the process of acquiring the capital needed, what did investors look for (team, business plan, technology and patents)?
    a. Which aspects of your startup were viewed as positive or negative by potential investors?
    b. Did you alter the startup according to what you believed investors might look for, when starting the process of acquiring outside funding?
    c. Did you have to change your business plan as a result of the investor's desires?
12) If you have a patent, at what stage did you acquire it and why did you decide to acquire it at this time?
    a. How did you experience the process of obtaining the patent (Price, time and bureaucracy)
13) To what extent was uncertainty (regarding forecasts) a determinative factor for investors' evaluation of the startup?
14) To what extent did you experience that potential investors considered asymmetric information and opacity to be a source of risk? (Explain concepts if necessary)
15) How important have the degree of innovation in your startup proven to be in order to acquire capital?
    a. Have you experienced different requirements regarding the degree of innovativeness associated with your product from different sources of funding?
16) To what extent have you practiced Lean Startup in Technium?
    a. How have this affected your capital needs in different stages?
17) To what extent have you experienced that different investors differ in terms of preferences (with regards to risk assessment, development stage, innovativeness, control, investment amount)

# APPENDIX D: Interview Guide - Jon Trygve Berg

1) Why does Sarsia Seed invest in early-stage tech companies within the fields of Energy/Cleantech and Biotechnology/Life Science?
2) Is it at all a viable option to invest in startups outside these areas?
    a. Why/why not?
    b. To what extent do you miss out on good projects and investment opportunities as a result of the constraining investment criteria?
    c. Do these projects get funded elsewhere?
3) What preferences do Sarsia Seed have regarding the degree of innovation in the startups you invest in?
    a. How is this seen in relation to growth potential?
4) How important are patents to you, or that a technology is patentable?
5) How do personal characteristics among the entrepreneurs affect your assessment of the investment opportunity?
    a. Are there any typical characteristics among those who do and do not get funded?
6) How common is it that you find potential startups to invest in, as opposed to you being contacted by entrepreneurs?
    a. Through which channels does this happen?
7) To what extent do you see opacity and asymmetric information, as a source of risk when assessing an investment opportunity? (Explain concepts if necessary)
8) Why is it that your strategy is to invest such amounts that you obtain between 10 and 40 percent of the shares?
    a. Is this always the case?
9) Does Sarsia Seed's investment in a startup usually cover the capital need at that time? Or do you commonly observe a gap of funding or that co-investors cover the remaining need simultaneously?
10) To what extent doo you experience that the intellectual capital you are able to provide makes you attractive as investors?
11) To what extent do you constrain or guide the startups you are invested in?
    a. Do you experience that this guiding does not align with the preferences of the entrepreneurs?
12) How does exit-strategies vary among your investments?
13) In the ventures that you fund, do you prefer if the startup is practicing Lean Startup?
    a. Why/why not?
14) As early stage, innovative startups are investments of high risk, how does this affect your growth and return rate requirements for the startup?
    a. What sort of time-horizon do you normally plan for?
15) What share of those that apply for funding from you actually get funded?
    a. What are the most common reasons for startups not to get funded after the screening
    b. What share of those ventures that pass the screening-process, do you decide to invest in after conducting a due diligence?
    c. What are most common reason for why projects get rejected after conducting a due diligence?
16) How would you describe the Norwegian market for seed funds regarding risk aversion and investment strategies?
    a. Have you observed any changes, developments or trends the last years?
17) If you consider the Norwegian seed-funds as a whole, how does their range of investment strategies align with the general Norwegian startup landscape?
    a. What are the effects of any mismatch?
    b. Do you believe that it is a sufficient amount of available capital in the Norwegian capital market?
18) How is the performance of your portfolio?

# APPENDIX E: Interview Guide - Gro Eirin Dyrnes

1) For an entrepreneur in the USA, how important is it with a good network when acquiring capital?
    a. Have you observed any differences regarding the importance of network between Norway and the USA?
2) How does size of networks, distance between entrepreneur and investor (number of indirect contacts between them) and strength of ties within networks vary between Norway and the USA both regarding actual conditions and importance?
3) In your experience, is it more, less or equally difficult to acquire external capital in Norway versus the USA?
    a. As a result, is funding gap more common in one of the environments?
    b. (If yes) To what extent do think this can be related to the difference in TEA (explain if necessary)
    c. The share of entrepreneurs that are described as innovative is also greater in the USA. To what extent do you believe this can be related to accessibility of capital?
    d. (Follow up on risk aversion)
4) How would you describe the system for government support in the USA relative to Norway?
5) What are the advantages or disadvantages of a prominent governmental role with regards to startup funding?
6) To what extent do you believe any observable differences are related to the efficiency of the two capital markets?
7) What do you see as the most prominent differences between the capital market in Norway and the USA?
    a. Are there major differences with regards to the composition of different sources of capital?
8) How can differences between investors' behavior and strategy in Norway and the USA be explained through cultural differences between the two entrepreneurial environments
9) What cultural differences are apparent in Norwegian and American entrepreneurs?
    a. How do you believe this may affect their ability to obtain outside funding?
10) On an overall level, are there any differences between Norwegian and American investors regarding risk aversion?
11) Have you experienced that investors in Norway and the USA have different views regarding innovation?
    a. Are there any connection between different degrees of risk aversion and different preferences for innovativeness in Norway and the USA?
12) Are there any observable differences between entrepreneurs succeeding in acquiring capital and those who don't, regarding education and personal attributes?
13) How widespread is lean startup in Norway and the USA?,
    a. How big of an impact does lean startup have on startups' capital needs?
14) Based on your experiences, to what extent do investor place constraints and guidelines on ventures that they are invested in?
15) What are your views on crowdfunding?
16) The last couple of years, we have observed that DNB has become more active in the entrepreneurial environment. How common is this in the USA?
    a. How is this evident in Silicon Valley?
17) In your experience with Americans, how would you describe them culturally and as human beings compared to Norwegians?
    a. How may this affect how the processes of acquiring external capital?

# APPENDIX F: Interview Guide - Per Arve Frøyen

1) How prominent of a role does government support/Innovation Norway play in financing of startups at various stages in Norway?
2) How important is it to you that a startup that you are going to support possesses a patent or a patentable product/service?
3) To what extent do you emphasize the entrepreneur's personal attributes when assessing a project?
    a. Do you find any special attributes to be particularly favorable or unfavorable?
4) To what extent are you able to provide the entrepreneurs with intellectual capital?
    a. To what extent is this valued and utilized by the entrepreneurs?
5) How would you compare the intellectual capital that you are able to provide with the one that other, professional, investors are able to provide?
6) What are the most common reasons why projects are not supported?
7) What share of the projects you support end up failing?
    a. What are the most common reasons for this?
8) Regarding startups that you evaluate, what are the more common sources of funding that they plan to make use of in the earlier stages?
    a. How often does this turn out as planned?
    b. Are there any major trends?
9) On a general basis, how would you describe the Norwegian capital market?
10) To what extent does Innovation Norway fill a gap that the Norwegian capital market does not cover?
11) Lately, DNB have marketed themselves to be a supporter of entrepreneurship and startups. Have you noticed any real affects of this?
12) In your time involved in the entrepreneurial community, have you noticed any developments in attitudes or culturally that has affected how inclined people are to start a venture?
    a. (If yes) are there any corresponding developments on the investor-side?
13) How would you compare the government support for startups in Norway to what they have in the USA?
    a. To what extent do you believe this to be culturally dependent?
14) To what extent do you find Norwegian investors to be risk averse in comparison to investors in other countries, particularly the USA?
15) How low is your threshold for funding startups relative to other sources of funding?
16) How important is it with a good network for entrepreneurs in Norway in the process of acquiring capital?
17) How common do you find lean startup to be in Norway?
    a. To what extent does practicing lean startup reduce the capital needs?

# APPENDIX G: Interview Guide - Kristoffer Lande

1) Please give us a brief introduction to Gobi (Age, stage, employees, the entrepreneurs), and the background and experience of the team.
2) Why did you choose to relocate Gobi from Trondheim to Silicon Valley?
3) How was your startup financed in the different stages?
    a. What were your capital needs in the different stages?
4) Have different sources of capital had different preferences regarding your future development, and has this been different between Norwegian and American investors?
5) In the process of acquiring capital in Norway and Silicon Valley, have you experienced any differences regarding time and bureaucracy?
6) How has the availability of capital differed between Norway and Silicon Valley?
    a. Regarding this, have you experienced any differences between different sources of funding?
    b. On the basis of this, are gaps in funding a more prominent issue in either environment?
7) Are there any differences between Norwegian and American investors regarding risk aversion?
8) In your experience, are there any differences in culture between Norway and the USA that can be viewed as an explanatory factor for differences between the two capital markets?
9) How important did you experience networks to be in the process of acquiring capital?
    a. Regarding this, have you experienced any differences between Norway and Silicon Valley?
    b. Are there any differences regarding the difficulty of developing such a network?
10) If you have a patent, at what stage did you acquire it and why did you decide to acquire it at this time?
    a. How did you experience the process of obtaining the patent (Price, time and bureaucracy)
    b. (If not) how do you sufficiently protect your product, and what is potential investors' stance on this?
11) Which aspects of your startup were seen as positive and which were viewed as negative among different investors, and what were the determining factors for investors?
    a. How does this differ between Norway and Silicon Valley?
12) Have you practiced lean startup?
    a. How does this affect a startup's capital needs and how does investors value this?

# APPENDIX H: Interview Guide - Mark Robinson

1) How would you describe the system for government support, or funding, for entrepreneurs in Silicon Valley?
    a. Given your background from Innovation Norway, are you able to compare it to the systems we have in Norway?
2) What are benefits or disadvantages from having a governmental institution that is so prominent when it comes to early stage financing of startups?
3) Would you say that the prominent role of Innovation Norway is culturally dependent?
4) In your experience, to what extent does Innovation Norway fill a gap in the Norwegian capital market?
5) How would you describe the Business Angel environment, or market, in Silicon Valley? (How many relative to startups and VC companies)
    a. How would you describe it in Norway?
6) How common is early stage venture capital relative to traditional venture capital and business angels?
7) What would you say are the advantages or disadvantages from being funded by a business angel over an early-stage venture capital firm?
8) How feasible is it to obtain debt financing in early stages in Silicon Valley with limited collateral (for instance from Silicon Valley Bank)?
9) In general, how would you describe the composition of capital providers or funders for early stage ventures in Silicon Valley?
10) Would you say that it is easier to obtain funding in Silicon Valley than in Norway?
    a. Does this differ between the different sources of funding?
    b. How does this differ between various development stages?
11) In your experience, why is it important with a good network when an entrepreneur is searching for funding?
    a. Do you have any examples where your network has been crucial for you?
12) What dimensions of networks, such as the size of the network, strength of ties, and distance (i.e. number of links between Entrepreneur A and investor B) would you say are most important?
13) Would you say the importance of network varies between Norway and Silicon Valley?
    a. If so, why?
14) Seeing how Silicon Valley is a larger cluster than the regional clusters in Norway, how does this affect the importance of network?
15) Can you point to any cultural differences as an explaining factor for how investors behave, for instance in terms of risk aversion?
16) Are you under the impression of whether or not funding gap is a more common problem in either Norway or Silicon Valley?
    a. Do you have any thoughts as to why?
17) In your experience, how significantly does practicing lean startup affect capital needs?
    a. Would you say it is more commonly practiced in either country?

# APPENDIX I: Interview Guide - May Kristin Røen

1) Please give us a brief introduction to Pathogenomix (Age, stage, employees, the entrepreneurs), and the background and experience of the team.
2) Why did you choose to start Pathogenomix in Silicon Valley?
3) How was your startup financed in the different stages, and what were the capital needs in different stages?
4) Have you ever experienced gaps in funding?
5) What sources of capital were the most attractive to you, given how they differ in terms, and why?
6) How does the availability of capital differ between different sources of funding?
    a. Do you see any differences between Norway and the USA?
7) How time consuming and bureaucratic did you find the process of acquiring capital to be?
    a. How does this differ between different sources of funding?
    b. What about between Norway and the USA?
8) Of the various sources of funding you have made use of, did they place constraints on how they wanted you to further develop Pathogenomix?
    a. How does this differ between different sources of capital?
9) In the process of acquiring capital, what did funders look for? (team, business plan, technology, patents)
    a. What was emphasized during screening processes??
    b. Did this differ between different sources and between Norway and the USA?
10) Which aspects of your startup were seen as positive and which were viewed as negative among different investors, and what were the determining factors for investors?
    a. How does this differ between Norway and Silicon Valley?
11) Have you ever had to alter part of your business plan as a result of demands from investors?
12) As you have experience acquiring capital from both Norway and the USA, have you experienced any differences regarding time and bureaucracy?
13) How does the availability of capital differ between Norway and the USA?
    a. How does this differ between different sources of funding?
    b. Do you find funding gap to be a more common problem in either environment?
    c. (If the availability is better in the USA) To what extent do find this to be an explanatory factor for the entrepreneurial activity to be higher in the USA than in Norway?
    d. The share of entrepreneurs that are described as innovative is also greater in the USA. To what extent do you believe this can be related to accessibility of capital?
14) Are there any differences between Norwegian and American investors regarding risk aversion?
15) Can you point to any differences between Norwegian and American lenders' willingness to provide loans for startups lacking significant tangible assets and collateral?
16) If you think about research & development, startup and early growth as three different stages, what are the optimal sources of capital in the different stages, and why?
17) Do investors in Norway and the USA have different views on innovation?
    a. How does this relate to risk aversion?
18) In your experience, are there any cultural differences between Norway and the USA than can explain differences in investors' behavior and investment strategy?
19) Can you describe the government support for innovative startups in both Norway and the USA?
    a. What are the advantages or disadvantages of a prominent governmental role with regards to startup funding?
20) Have you acquired patents in both environments?
    a. (If yes) how did the two environments differ with regards to how time consuming and resource demanding this process was?
    b. How do Norwegian and American investors differ in their appreciation of patents?
21) What are your experiences with crowdfunding?
    a. How would characterize this source of funding, w.r.t. time, amount, which stages in which it is the most appropriate and why?