TALLINN UNIVERSITY OF TECHNOLOGY

School of Business and Governance

Department of Business Administration

Oleksandr Krasun

CRITICAL SUCCESS FACTORS FOR DANISH TECHNOLOGICAL START-UPS

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Supervisor: Antti Ainamo, Professor

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TABLE OF CONTENTS

ABSTRACT

There is a rise of technological start-ups around the world and particularly in Denmark. However, the the failure rate for such start-ups is very high. While a few successful cases highlithed in the media appear on a regular basis, a great number of start-ups fail. Success for the start-up can be credited to different factors, therefore it is essential to recognize what factors are critical for success of the start-up and what are not. The knowledge of those critical success factors can benefit fresh entrepreneurs who are about to start their ventures, so they could focus on them and avoid some issues that could arise due to the lack of this knowledge.

This study aims to identify the critical success factors for Danish tecnhological start-ups. The qualitative aproach is being used in this research and the data gathered through semi-structured interviews was analysed according to grounded theory principles. Findings indicates that such factors as having certain personal traits like optimism, pereserverence, drive, creativity, hard-working; being passionate about the product or service, have a strong vision and purpose; right surrounding in terms of team and advisors; getting product market fit as soon as possible; customer orientation; differentiation from competitors; innovation; and finally venture capital investment were identified as critical for success of the start-up.

Keywords: start-up, entrepreneurship, critical success factors, technology.

INTRODUCTION

Nowadays, entrepreneurs are at the steering wheel of innovation and technological breakthrough. Start-ups like AirBnB, Uber, Instagram etc. has drastically influenced everyday life of people and changed the whole experience starting from how people go for a vacation to the way they share news and moments. From FinTech to EdTech, start-ups have been changing the landscape and concepts in each industry, questioning old aproaches and bringing in new fresh ideas that transforms people interactions with products and services.

Due to the coverge of huge start-up successes in media more and more people become attracted to the idea of joining the start-up ecosystem and turning a start-up idea into reality. Every other start-up that hits evaluavion of 1 billion USD sparks motivation of entrepreneurs who are in the beginning of the journey and just started to build their way to success.

There are more creative ideas than ever before, and more and more people become entrepreneurs. Nevertheless, besides high rewards, there is a high failure rate as well. Millions of start-ups fail without reaching success and many people go back to corporate world or decide to pursue other ideas. Therefore, in order to avoid making mistakes and wrong choices it is important to follow advices and recommendations of those who achieved certain success and are willing to share their prospective on what was beneficial for the start-up success or what wasn't much necessary.

Research Background

Start-up scene in Denmark is very dynamic and it has been constantly evolving. In 2019, Denmark solidified its very well-built Small Business Act profile. The Small Business Act for Europe (SBA) is the EU's flagship policy initiative to support small and medium-sized enterprises. The performance of Denmark in six SBA principles is above the EU average. Compared across EUs' "six principles", especially high scores Denmark has in 'responsive administration' and 'internationalization'. Moreover, Denmark is among the top three performers in the EU in internationalization and in access to finance. (European Commission, 2019)

In Denmark, both with the SBA and before the SBA, entrepreneurship encouragement has been a crucial priority for Denmark. A number of policy measures to promote entrepreneurship has been taken since 2008. Some of these policies are making intergenerational business transfers easier or making self-employment an attractive career choice. (European Commission, 2019)

In Denmark, besides national and local help, there are municipalities that provide a basic advice and business-support for companies. All these activities offered by municipalities fall in with the Decentralised Business Promotion Strategy. One of the priorities set up by the strategy is to promote entrepreneurship and strengthen growth ambitions. There are three aims set up by the strategy. Firstly, to encourage Danish citizens or other residents to set up their own businesses. Secondly, to create the conditions in which these businesses will have a better chance of surviving. Thirdly, to encourage start-ups to grow. (European Commission, 2019)

Due to the low administrative barriers it is not difficult to start up a business in Denmark. On the other hand, the survival rate for newly created companies is lower than in other EU countries. There are different thoughts among stakeholders regarding this situation. Some of them find a key to this occurrence indicating a ferociously competitive market in which many companies close due to their uncompetitiveness. Other believe that there is a necessity for more training on running a company. (European Commission, 2019).

"The Danish Industry says, 28% of small starts up fail within the first year. Half of the start-ups disappear within five years. It also is observed that very few small businesses fail after they have survived for 5/6 years. Small businesses fail in the start phase. Those fail before these starts earning." (Khan, 2019). Taking into account such a high rate of failure of new ventures, it would be hugely beneficial for future entrepreneurs who are planning to start their own ventures to rely on recommendations and advices from successful start-ups who can tell what mistakes can be avoided and what are the most important things to keep in mind.

Problem Statement

The research problem lays down in a lack of the knowledge about determinant elements of success for start-ups, analysing Danish technological start-ups. In order to succeed as a new technological venture in the competative market a variety of decision should be made, therefore prioritizing and focusing on the critical ones is crucial for start-ups. A clear understanding of those critical factors

will benefit aspiring entrepreneurs to build successful technological start-ups that can replicate forerunners in the sector. The study will help start-up founders and entrepreneurs to have a clear their focus on the most important areas and avoid mistakes that could fail their ventures. Therefore, in order to succeed in this study and fill the gap of knowledge the factors that are critical for Danish start-ups to succeed should be analysed.

Aim of the study and main research questions

The aim of this research is to identify the critical success factors affecting new technology start-ups in Denmark.

Following are the research questions that this research aim to answer:

•   What are the critical success factors for new technology start-ups in Denmark?

•   How aspiring start-up founders can benefit from the knowledge about critical success factors?

In order to find answers to these questions and to gain deep insight to personal views and opinions, qualitative research method is considered to be applied in a form of semi-structured interviews with entrepreneurs and start-up owners. With the data gained through interviews and information uncovered through literature review, critical factors for new technology start-ups in Denmark are going to be formulated and explained, which will serve as a guidline for entrepreneurs seeking for success with the new ventures in the field of technology in Denmark. It will help entrepreneurs to improve prioritization of areas and avoid making mistakes while concentrate their focus on less crucial factors.

Outline

The thesis is organized in such order, Chapter 1 presents literature review about start-up, start-up growth stages, success for start-ups, critical success factors for success of the start-ups that were found across wide range or literature as well as conceptual framework based on the literature findings; Chapter 2 covers methodology selection, data collection and analysis explanation; Chapter 3 presents the analysis of data collected and discussion around it; finally Chapter 4 presents conclusions of the study and recommendations.

1. LITERATURE REVIEW

In this chapter the author reviews related contemporary literature. In Section 1.1 the literature about start-ups, understanding on what a start-up is, start-up characteristics, types, values, and growth. Section 1.2 covers the growth stages of a start-up development. Section 1.3 presents how to define success for a software start-up. Section 1.4 presents success factors for a start-up. Section 1.5. describes the conceptual framework that is based on the findings from the literature review.

1.1. Start-up

Krejci et al. (2015) argue that a start-up represents a relatively new company with key characteristics of technology and innovation, and it is determined by potential for significant scalability and fast growth. Paul Graham (2012), who is a very successful entrepreneur, venture capitalist and co-founder of one of the most influential start-up accelerators – Y Combinator, has stated his opinion that the factor of start-up being a recently established company is not something that should be absolute. Graham agrees about start-up's rapid grow. He explains that start-ups are ought to be technology based due to the element of growth and rapid change. Steve Blank, a successful entrepreneur, known for developing customer development method that started lean start-up tendency, has identified 6 distinct start-up types: Lifestyle Start-ups, Small-Business Start-ups, Scalable Start-ups, Buyable Start-ups, Social Start-ups, Large-Company Start-ups. (Blank, 2011) All those types have different characteristics and attributes. With the regard to information technology, Cho & McLean (2009) has identified IT start-ups as companies that has a perception of their business providing innovative IT solutions and services which are executed by people with the high expertise. It is also mentioned in the study that the key for the success of the IT firm are people who deliver a good quality of the product or service through the high knowledge in the field.

Some of the values that start-ups provide, mentioned in the Sulayman et al., (2014) study is growth, economic stability, customer satisfaction, improved organizational culture and employment-generation. For example, Lowrey, (2009) in her study based on Kauffman Firm Survey has

indicated thet American business start-ups have brought aproximately a number of more than $575 million in revenue in 2004 when starting their businesses. This number has increased by 53 percent by 2006 with the amount of $879 million. Despite the great value that start-up can provide, it is very common that start-ups fail after some period. There are many factors that can cause a failure for a start-up on a different stage such as not raising enough capital or due to growth elements (Colombo & Grilli, 2005). However, Cowling et al., (2009) has researched that a great part of new technological firm in Germany and UK has survived over a period of five years despite all the difficulties and unstable conditions. After investigation of new technology-based firms' performance in Sweden, Ejermo & Xiao, (2014) claimed that that such companies showed a higher survival chances in comparison to other entrepreneurial companies throughout the years. Moreover, authors also argue in their study that new technology-based firms still have an advantage with the regards to survival probability than other entrepreneurial companies even after controlling for the degree of human capital. (Ejermo & Xiao, 2014)

1.2. Start-up growth stages

Throughout the process of establishment of a start-up and its development authors identify different stages of start-up evolution. From the literature findings, Wing-Ki et al. (2005) mention 6 stages (Preparation for Start-up, Incubation process, Performance measure of incubate, Exit policies, Parental care, Disconnect incubator), Ng et al. (2014) bring up 3 stages (Early stage, Growth and Development and Expansion stage), Bocken (2015) indicates 4 stages: (Seed stage, Young stage, Growing stage and Mature)

Ng et al. (2014) it the study point out that the company set up a key management team in its early stage. In case studies mentioned in the research it helps to take advantage of outer resources in order to build a profound business network. In the growth and development stage start-ups tend to comprehend the variety of assets that should be obtained. Authors mention that for such period the industry experience of a founder is very crucial for the development of the start-up. Finally, in expansion stage, the high management of a venture is likely focused on realigning the technological assets in order to achieve further grow and continue the process of development. In order to reinforce product innovation in the company and to meet customer demands, the management mostly reallocate financial assets to innovation and structural resources. The whole

process is meant to reinforce internal strength of the company and in meanwhile focus on advancing external opportunities. (Ng et al., 2014)

Nevertheless, Bocken (2015) in her study divide the process into 4 stages and looks at them through the prospective of the roles of different actors that support start-ups and provide growing opportunities. Beginning from the seed stage. During this stage new venture are usually raise capital from friends and family, government, and founder's own capital. However, they can use banks, angel investors or crowdfunding as a source of raising capital for the development of the start-up. During the young stage the big role start to play venture capitalists that share with start-ups their expertise, network and knowledge in business, helping to better understand market, recognize opportunities and get to know customers better. Additionally, it helps to make early associations with big key players in the industry and to check interest for product deals and acquisitions. The interest of venture capitalists lays down in hope to make profit while mergers and acquisitions or when the start-up does initial public offerings (IPO). During the IPO, for example, venture capitalists can sell their shares in a start-up and make profit out of it (Gompers & Lerner, 2001). Following the growing stage. During this stage in addition to venture capitalists, governments, institutions, community, and incubators may grant support to ventures. Finally, the mature phase is characterized by the placement of the company's shares on the stock exchange or gaining growing support from institutional investors (Bocken, 2015).

Wing-Ki et al. (2005), have conducted a research based on case studies of incubates in Hong Kong Science Park and they identified 6 stages that start-up goes through. On the first phase (preparation for Start-up), the candidates' personal traits and characteristics are assessed during the entrance evaluation with the focus on entrepreneurship. Following incubation process phase, where the start-up in its on, not too fast pace, is progressing towards the goal. During the performance measure of incubate phase, as it clearly states the measurement of the performance is conducted in order to have an understanding where the start-up is right now and how the performance can be improved. On the exit policies stage, Start-up is being helped by business incubator that provides its expertise and professional knowledge. During the parental care, those incubated start-ups that does not have enough maturity to be able to operate independently, are given an extended period of parental care that strengthen them up and prepare to its competition. Finally, disconnect incubator phase is a phase when incubated Start-ups are ready to turn into an autonomous business and to join the competitive environment. (Wing-Ki, Hong-Man, & Venuvinod, 2005)

In addition to all the above, Chorev & Anderson, (2006), in their study indicated that the majority of the successful technological start-ups eventually become either acquired by a larger company or turn into a public company.

1.3. Defining success for start-ups

Defining success for start-ups can be a difficult task due to the fact that for different entrepreneurs and start-up owners it could mean a different thing. Additionally, each entrepreneur defines its own goals for the start-up and the way a success can be measure.

In the literature, most of the authors identifies that the success of a company directly depends on achieving and developing defined in the research success factors (Skawińska & Zalewski, 2020; Sulayman et al., 2014; Santisteban & Mauricio, 2017) Additionally, success can mean non-dentical on a different stages of the development of a start-up (Santisteban & Mauricio, 2017) Overall, the definition of success ought to be a one of the goals that can be done throughout the analysis in the research.

1.4. Success factors for technological start-ups

There is a significant number of factors affecting success of a start-up described in the literature. This section covers aspects that are found to be the most crucial in the studies. In this section factors were divided into groups: Founders, Industry and Market, Innovation, Resources.

1.4.1. Founders

Founders are the base of the start-up and they play a significant part on the further development of a created venture starting from the beginning stage. There is a notable number of studies that provide evidence linking founding team and success of the new start-up. (Shane & Venkataraman, 2000) There is an importance of commitment to the new project or idea and motivation to pursue it. (Greve & Salaff, 2003) Founders, weather being the only person in the start-up or multiple, has their own backgrounds. From the prospective of academic background, studies from Baptista et al., (2007), Van Gelderen et al., (2005) shows that in contrast to different areas, information technology start-ups have founders who have a high-level education. Moreover, Baptista et al.,

(2007) claim that entrepreneurs who are founding a new venture benefit from the fact of having higher level of education is the capability to learn quickly and acquire new knowledge about sector-specific and managerial experience as well as other required resources necessary for the development of the start-up on the early stage. Colombo et. al, (2004) have discovered that founders who has advatage in terms of entrepreneurial talent and confidence tend to set up operation of a new statup at a greater scale despite equal conditions.

One of the factors also given in the literature is the age of the entrepreneur. Oakey, (2003) point out that not depending on gender, the founder of a new technological venture is usually between thirty-five and forty years old. This age allows founders to participate in the development of the start-up for the next twenty-five to thirty years. (Oakey, 2003)

1.4.2. Industry and Market

There are several factors that affect the success of a start-up and its potential for the development based on the previous experience of the founding team. Frequently new start-ups tend to fail due to an inexperience in management of the entrepreneurs (Santisteban & Mauricio, 2017). Soriano, (2010) concluded the significance of entrepreneurial traits including dynamism, the need for achievement and optimism. Schneider et al., (2007) also mentions about the high importance leadership skills. Additionally, it is shown in the studies that the likelihood of the business success is highly dependable if team members have previous experience in the industry and is backed up by the entrepreneurship literature that there is a correlation between the success of the venture and the business experience of the entrepreneur. (Santisteban & Mauricio, 2017) Studies conducted by Song et al., (2008) also supports the fact that considerable industry experience plays an important role in the success of new technology ventures. The research has shown a direct link between accumulation of bigger experience in marketing and industry and raise of new technology venture performance. Early stage of the start-up is very crucial for the future of the business. In this stage there are many vulnerabilities embedded in the process of development. Baptista et al., (2007) in the research, with the focus on the early stage of the starup, state that two critireas can be very beneficial to incorporate the entrepreneurial human capital attributes – to have a previous work experience in the sector where the new venture is going to be founded and also at minimum some managerial experience. Since, start-ups are vulnurable during the development stage, the it is important to keep up on competition and that drives start-ups to increase innovativeness, survival

and growth. (Santisteban & Mauricio, 2017) Additionally, founders benefit from the wide range of network connections that can be utilize to the use of start-up (Colombo et al., 2004)

Ruef (2002) mentions cultural embeddedness, which, in this regard, stands for amount of experience that entrepreneurs have acquired in the particular sector and so, they tend to base and create ideas related to that experience. In his research Ruef (2002) argues that the innovation abilities can be less used by entrepreneurs with the considerable experience in the industry rather than in whose who have narrow experience. Looking into the sector of start-ups, there is a certain number of start-ups that have one founder and multiple founders. Start-ups that have more than one founders may have different backgrounds and areas of expertise such as technological, managerial etc. Lüthje & Prügl, (2006) in their study bringing up a phenomenon of an interdisciplinary co-operation between people who has a background in economics and in technical field and its positive affect on the success of the new venture. Nevertheless, authors also mention an empirical proof that such people from distinct disciplines tend to avoid close and trustful relationships with people from a different discipline.

1.4.3. Innovation

Almus & Nerlinger, (1999) discovered a correlation between growth rate and the some firm-related factors. It was indicated that the more mature, large companies has much smaller growth rate in comparrison with young innovative new-technology based firms.

Hyytinen et al, (2015) in the study mentions about another correlation between innovativeness and the survival chances. There is a probability of higher chances for start-up survival when new ventures employ innovativeness and therefore increase company's market power, reduce the costs of production, or allows the creation of dynamic capabilities and absorptive capacity. The authors also refer to an advantage that young firms have in terms of innovativeness due to the less fixed procedures and greater flexibility.

1.4.4. Resources

Government support

Carmel, (2003) in his study indicates one of the factors commonly used by economists that affect a success in the industry is government policy and intervention in the marketplace. Looking into

Danish start-up ecosystem and support provided by the government, IRIS Group, (2018) has provided a report where it is indicated that four Innovation incubator operators, in support of Danish government, provide professional guidance, pre-seed and seed funding for entrepreneurs and new, knowledge-based companies. The goal is to empower incubators to invest risk capital to newly emerged start-ups at the early stage and help them to grow during the time when private investors are not yet ready to invest in such firms. Such incubators can give access up to DKK 6 million in finances to such start-ups. It is indicated in the report overall, all four incubators are funded by a national budget grant of about DKK 200 million annually (SIU, 2017c).

With the regard to the rights that government empower incubator operators, for example such incubators are authorized to invest up to DKK 2.5 million in loans or equity to the start-up during the seed funding stage. Such funding is ought to be a support for start-up development activities. However, start-ups that are being granted a financial support need to meet a condition in a form of receiving private investment of 60% or more of the total secondary investment. Furthermore, from 2003, Danish government has introduced four significant innovation strategies in combination of carrying out a variety of governmental initiatives. (IRIS Group, 2018)

Entrepreneurship is seen by a number of goverments in the world as a irreplaceable component that have a positive affect on the economy of the country and keep it competative and healthy (Arruda, Silva, & Costa, 2013). In the study, Arruda et al., (2013) mention the scope of policy referring BEEP – Babson Entrepreneurship Ecosystem Project by Babson College. It is described that governmental institutions see the potential of entrepreneurship that can use the created knowledge in order to produce product that can be eventually introduced to market. Therefore, government encourage and support entrepreneurship in many forms such as eliminating administrative hindrances, execution of encouragements and stimulating business development. (Arruda, Silva, & Costa, 2013)

In their paper, Santisteban & Mauricio, (2017), mention that to our days goverments across the world has recognized the need to create training and supportive programs for entrepreneurs. Instruments that are used by governments in order to expand the growth of the start-up mong the others are: short term aid policies, financial support, introduction of new capitals. Nevertheless, Soriano, (2010) argues in his research that a factor that should be considered in any analysis of new start-up venture is the role assigned to the state in empowering the creation of firms by giving access to funding at favorable interest rates, via tax incentives or with subsidies.

Venture capital investment

Venture capital plays a major role of start-up rapid growth. It has a particularly important part of venture development in the Young and Growing stages of business growth. (Bocken, 2015) Findings of the Bocken, (2015) research showed that among the other factors venture capitalists can provide a great support to the efficient development of the sustainable businesses by giving them successful investment formats as well as providing a great value through the use of their network. Moreover, VC investments support venture businesses that belongs to VC's portfolio firms that can receive a significant employment growth uplift in the period following the first financing round. It is worth mentioning what Bertoni et al. (2011), have pointed out in their research that is also important to separate the *treatment* effect on VC investment of the venture growing from the *selection* effect. That means that VC investors have a skill to choose firm with the traits of high potential upcoming growth. The study showed that extremely youthful, yet generally huge firms are very attracted to VC investors. Another factor that increases chances to receive an investment is a background in management as well as university degree in management or economics. (Bertoni, Colombo, & Grilli, 2011)

1.5. Conceptual Framework

The conceptual framework provides an overall picture and connections between variables that were discovered during literature review. The relationships among personality traits of the founders (dynamism, the need of achievement, optimism, confidence, entrepreneurial, leadership), talent, previous management and marketing experience, previous industry experience, higher education factor, initial motivation, level of competition within the industry, product innovation, business network support, venture capital investment, government support were identified and a number of categorize were created. The representation of conceptual framework can be found in the Figure 1.

Four categories that group variables were identified, which includes: founders' traits and experiences, resources, innovation, environment. The representation of categories, variables and explanation can be found in the Table 1.1.
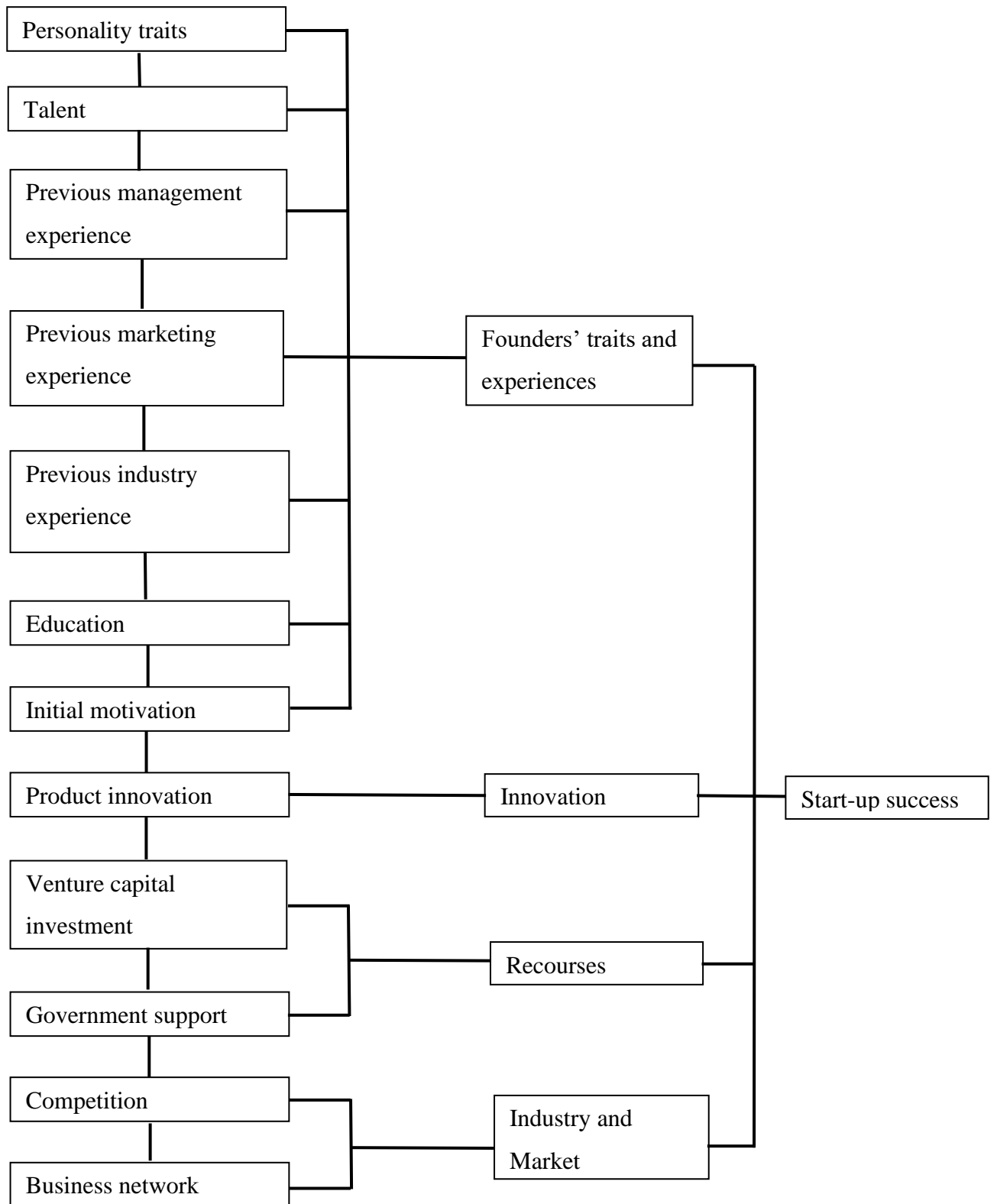
Figure 1 - Conceptual framework
Source: Made by author (Krasun, 2021)

Founders' traits and experiences included such variables as: personality traits of the founders (dynamism, the need of achievement, optimism, confidence, entrepreneurial, leadership), talent, previous management and marketing experience, previous industry experience, higher education factor, initial motivation.

Industry and Market category included such variables as: level of competition within the industry, business network support.

Innovation category included product innovation variable.

Resources included such variables as: venture capital investment, government support.

Table 1.1 – Success variables discovered in the literature

Variable category	Variable title	Explanation
Founders' traits and experiences	Initial motivation of the entrepreneur	The motivation of the founder that shows their readiness to commit and contribute to the project
	Experience in the industry	Entrepreneur's previous experience in the industry the start-up is operating
	Experience in management	Entrepreneur's experience in management
	Experience in marketing	Entrepreneur's experience in marketing
	Level of education	Entrepreneur's level of education
	Personality traits	Entrepreneurs' traits such as dynamism, the need for achievement, optimism, and confidence, leadership
	Talent	Entrepreneur's talent in a particular area
Innovation	Product Innovation	Level of product innovation
Environment	Business network support	Collaboration and support from the network of companies in the same sector
	Level of competition	Intensity or rivalry among competitors of the start-up
Resources	Venture capital	Venture capital investments provided to start-up
	Government support	government policies. funding, programs, educational programs. tax incentives or with subsidies

Source: Created by author, based on literature review

The conceptual framework that was built on 12 factors that were uncovered during the literature review. In the next chapter the study goes deeper into analyzing the gathered data through interviews and extrapolating some meaning and interpretation of it.

2. METHODOLOGY

In this chapter author presents the research methodology and data collection method. Section 2.1 focuses on the methodology for this study. Section 2.2 uncovers the details regarding data collection. Finally, in the Section 2.3 it is described how the process of analyzing the data in this study goes.

2.1. Methodology Selection

To get a deeper understanding of the critical success factors for technological start-up the author uses qualitative research. The methodology for this study was chosen based on a several aspects to construct the study more well-grounded.

The main source of data for the study comes from insights and opinions based on previous experience of start-up founders and entrepreneurs. The quantitative approach is unsuitable due to the fact that used samples' personal experiences and opinions are drastically distinct from each-other. Using chosen methodology each participant's case is used to understand and analyze responses and acquire comprehension on the studies' topic.

The data in this study is collected through the process of semi-structured interviews. Although there is a number of methods which can be used to analyze unstructured data, the author selected Grounded Theory method for the analysis of data.

Grounded theory is presented as an inductive, comparative methodology that comes up with systematic guidelines for gathering, synthesizing, analyzing, and conceptualizing qualitative data in order to construct the theory. (Charmaz K. , 2001) The studied phenomenon is positioned over the methods of studying it in constructivist grounded theory. Grounded theory strategies are used as tools, rather than prescriptions, while the role of researcher to portray data and create categories should be recognized. (Charmaz K. , 2001) Focusing data collection along with looking over and developing analytic ideas is the accent of grounded theory. Consequently, grounded theory

provides great tools for constructing sufficient evidence within the analysis and for interpreting processes. (Charmaz & Bryant, 2010)

Grounded theory advantages incudes several factors. The method offers clear and consecutive guidelines for conducting qualitative research; provides precise strategies for working on analytical phases inquiries; streamlines and consolidate data collection and analysis; improve conceptual analysis of qualitative data (Charmaz K. , Grounded Theory, 2003)

2.2. Data collection

The target group for this study are start-up founders and entrepreneurs. Since most of the views, opinions and experiences of those entrepreneurs are unique, qualitative approach was chosen instead of quantitative approach. Therefore, each case is taken into account and measured accordingly.

2.2.1 Selection of Samples

Danish start-up ecosystem is very diverse and many start-ups that are launched on Denmark soil become successful. The target population for this study are entrepreneurs from those start-ups that managed to succeed in their industry.

Defining what benchmark can be used to determine if start-up is successful and eligible for the research is very important for the study. After reviewing more than 70 Danish start-ups a number of factors were identified and later used for selecting samples for the research. The number of factors and benchmarks is portrayed in a Table 2.2.

Table 2.2 – Factors determining eligibility of the participants for an interview

Factor	Benchmark
Founded in	Must be founded in Denmark
Founders	At least one founder in the founding team should be a Danish national
Years of operation	Minimum of 3 years in operation
Products	One or more product(s)/project(s) in the market
Profit	Must be making profit
Growth	Need to show a sign of yearly growth in terms of revenue, employees, customers.
Number of Employees	10+ employees

Source: Created by author, based on reviewing Danish start-ups

Based on the factors determined in the Table 2.2, 8 participants were selected for this study. One start-up was selected in the study to learn from mistakes of failing along the way. The company has been operating since 2011 and was declared bankrupt two times since then. However, recently the company had finally some commercial success.

2.2.2. Interviews

The interviews were conducted online through Microsoft Teams software due to COVID-19 circumstances. The interviews were conducted on 10th of February to 9 of March 2021. Interviews took approximately between 15 and 35 minutes, and the author received the permission to record and transcribe the interviews for further analysis and use. Interview questionnaire that includes semi-structured open-ended questions is presented in Appendix 1.

Participant Profiles

In total 8 interviewees participated in the interviews. The list of participants is shown below.

Interviewee 1

Interviewee is the only founder of a software as a service (SaaS) workforce management cloud-based solution that combines scheduling, absence management, performance, employee communication, HR, finance and forecasting and more. The company was founded in 2006 and it provides services to small to medium-sized companies as well as international enterprises – mainly within retail and hospitality. The company operates internationally with the headquarters in Copenhagen. Interviewee has been CEO of the company for 16 years.

Interviewee 2

Interviewee is one of the two co-founders of blockchain start-up. Both co-founders were studying together bachelor's degree in Innovation and Entrepreneurship at Copenhagen Business Academy. Their final bachelor's thesis was the business plan for the start-up that was graded the highest score.

Interviewee has been a part of the company from November 2017 to May 2020. After that he decided to leave the company and complete MBA program at Copenhagen Business School.

The start-up was founded in 2017. "We are building a full-reserve bank so we can operate at a fraction of the traditional risk, using regulated cloud-native banking software, interlinked with the world of blockchains and smart-contracts." (ARYZE, n.d.)

In 2019 the company raised 10 million DKK, which is around 1.6 million USD through the Initial Coin Offering (ICO), being the first Danish company to complete ICO on Danish soil.

The company was selected a Top 10 best upcoming fintech in Europe 2019 by Fintech50 and Most Innovative Financial Ecosystem Developer of Europe by Technology Innovator Awards 2020.

Interviewee 3

Together with his partner Interviewee (Current CTO of the company) co-founded start-up in 2018. The company is an efficient solution that automates financial management on the go and gives customers a clear overview of their company finances. The original idea was to build a digital debt collection company, but then partners realized that the product can be broaden much more, so they added reminders, automations, account payables etc. The goal of the company is to automate the entire invoice-to-cash process and offer flexible financing solutions for SMEs. Currently, there are 50 employees in the company and received several million euros in funding.

Interviewee 4

Interviewee is one of the co-founders of a fast-growing content and tech start-up that produces educational masterclasses within esports with a subscription model. The company was founded in 2018 and has customers in more than 100 countries worldwide. Interviewee has a Head of Production position in the company and responsible for content and production. The company closed already three big investments and right now is looking to close another one in spring 2021.

Interviewee 5

Interviewee is a CEO of an IT security start-up specializing in invisible end-to-end web security. The company has declared bankruptcy twice over the course of 10 years since it was founded in 2011. There were several changes in investors of the company and product line has been changed for the third time when Interviewee has joined the company as a new CEO. The company had a number of problems during its journey. The original idea was very interesting for a lot of customers like banks etc., however when the idea was finally executed it didn't really fly. This is what Interviewee has mentioned about the company:

> *I tried to tell it like this, that it was a great idea, but somebody insisted on building a space rocket that could drill underwater and all this kind of stuff, right?*

Just recently, after 10 years the company finally had some commercial success. The company was added in this study as a case that can be used to learn from the mistakes.

Interviewee 6

Interviewee is a co-founder and CEO of the leading Danish online platform for on-demand home services, connecting individuals looking for home cleaning services with top-quality, pre-screened independent cleaners. The company facilitated more than 280,000 cleaning so far for 28000+ customers. The company is listed on First North NASDAQ and have gross revenue yearly of around 50 million DKK. Currently, the company is looking at entering a new market.

Interviewee 7

Interviewee is a CEO of a social enterprise that enables the achievement of the UNSDG's by providing accessible and affordable digital skills education enhanced by online mentorship. The company was founded in 2014 and set up a subsidiary in Bangladesh – a franchise in 2015 and since then it has operated projects not only in Bangladesh but also in Jordan in Bhutan, in Iraq, in Kosovo, and educated more than 12,000 people worldwide in digital skills.

Interviewee 8

Interviewee is a founder and CEO of two start-ups. First company builds apps which solves everyday problems for thousands of families. The second start-up is Denmark's no. 1 shopping and cooking app for families - with integrated same-day-delivery from REMA 1000. Companies were founded in 2016.

2.3. Analysis of Interview data

According to Grounded Theory guidelines interviews were transcribed right away, coded, and categorized. During the analysis relations among the codes and categorized were identified. This section provides information regarding coding, categorizing, and memo-writing.

Coding data

Coding is crucial to the development of grounded theory. It is linking the process of collecting data to undertaking theory development with the purpose to explain gathered data. There are two

essential stages of coding. During the first stage as many ideas as possible are being generated. During the second stage the researcher identifies the most important and relevant codes that can bring the most significance to the analysis. (Charmaz K., 2006)

In this research coding was done in MAXQDA – a software for qualitative data analysis. The author transcrived and coded data from the interviews in MAXQDA software and afterwards identified the most significant and relevant codes.

Building categories

According to Charmaz K., (2006), categories amplify the ideas, events, or prosesses in the study's data and present it in the form of words. A category embrace a common themes or patterns in the group of codes. Charmaz K., (2006) reccommedns to build catgories as conceptualize as possible, while also carry on a consistency with the data.
After identifying the most crucial codes, the relationships among those codes were explored and categories were built accordingly.

Memo-writing

As stated by Charmaz K., (2006) memo-writing is a vital intermidiate action which goes after data collection before the researcher write a draft of work. Memo-writing is a signifacant tecqnice in grounded theory due to the fact that it with memo-writing the researches tries to analyze collected data and codes already early in the course of the research process.
MAXQDA software has a very flexible memo-writing feature that allows the researches to create memos for all parts of data. A significant amount of memos were created during the analysis part which has helped the researcher to form a well-shaped theory regaring factors and inisghts.

3. ANALYSIS AND INTERPRETATION

This chapter provides a detailed analysis of interview observations and results of the study. The gathered in interviews data were analyzed with qualitative data analysis software MAXQDA. Section 3.1. underlines the research results with interview details and analysis of the overall findings.

3.1. Research Results and Discussion

The data received during the interviews was analyzed according to Grounded Theory principles. Some new factors were uncovered during the interviews that were not found during the literature review. The results were grouped into four main groups that included factors uncovered throughout the analysis of interview data. The group Founders included traits; hard work and perseverance; optimism; vision, purpose, and passion; motivation; industry experience; management experience; education; talent; surrounding factors. The group Industry and Market included market; customer orientation; competition; business network factors. Additionally, innovation factor was discovered. Finally, the group Resources included government support and financing factors. Furthermore, based on the participants responds, the analysis results of what the success for start-up is presented in the Section 3.1.5. Appendix 2 consist the link to transcriptions of the interviews. Additionally, a cross-case analysis table that indicates quotes from interviews that best represents participant's answers is provided in Appendix 3. The findings and discussion are presented in the next parts.

3.1.1. Founders

Founders of a start-up play an extraordinary role in the success of start-ups. The importance of a strong founder who is highly motivated and passionate about the start-up was very high. Throughout the study it was clear how the founders played a great part in shaping the organization and its success.

Traits

During the interviews it was discovered that founders in order to succeed with their start-ups need to have certain traits or qualities. Traits such as being ambitious, have a drive, confidence and self-esteem has been mentioned as an important to have for a founder. According to Kirkpatrick & Locke, (1991) drive is a broad term which includes achievement, motivation, ambition, energy, tenacity, and initiative, and it is being determined of one of the key leader's traits.

It is also important to be curious because it can motivate you to learn about knew things related to your field of work, improving your expertise and professionalism. Being an entrepreneur and have a high level of expertise and curious personality usually mean that you start to create new ideas on how to improve and solve complex problems. One of the participants had to say this about curiosity:

> *Curiosity also makes you find new ideas to innovation and to new products, new markets.*
> *Because you kinda just naturally get excited about new stuff you don't know much about.*
> *So you are not afraid of doing stuff because you are curious about what would happen.*
> *(Interviewee 4, 2021)*

Additionally, being a start-up founder means to be ready to work within uncharted waters, therefore the founder needs to be creative and to present creative solutions.

Hard Work and Perseverance

There are certain elements like uncertainty, risk, unpredictability etc. that come to the life of the founder when they stood on the path of entrepreneurship and making a decision to build a start-up. In the world of social media people are constantly bombarded by an infinite stream of information about successful start-ups and entrepreneurs and sometimes it can bring a wrong idea of what being a start-up founder truly means and what comes along the way, while they strive for success. Because if founders want to succeed with their start-ups it eventually comes down to the fact of being willing to work 80 hours per week, being disciplined, remain perseverant and keep on the grind. There are many successful cases in the media about people who made it to success like Facebook or Apple, but the fact is that the overwhelming majority of start-ups fail. The best advice that came from these rounds of interviews was:

I don't think people have the furthest idea of how hard work it is and how difficult it is to build something from nothing. I think the media has way too positive picture of doing this and I think this is, the great thing is probably the most important thing, right? Because you need to pivot and turn around and you need to be able to work in a period where you have no idea on how to get money for the next month. (Interviewee 5, 2021)

It was identified by many participants that without perseverance it is extremely hard to succeed with the start-up:

Talent and intelligence and industry knowledge and all of this is kind of like the foundation. But if you cannot go the extra mile then you just might as well not do it, because it's 10 times tougher than anything you read about in the newspapers. (Interviewee 5, 2021)

One of the strategies that was also mentioned during the interview is to not have a Plan B. It means instead of having a mentality of being worried and anxious and spending precious time on thinking: "What if this doesn't work?", but rather have a tenacious attitude, saying: "It has to work". When an entrepreneur does not have this temptation to quit and do something else instead then he is more mobilized to come up with the right solution and solve the problem.

Optimism

Being optimistic is very important, because to be a start-up entrepreneur means that you are going to operate in the world of uncertainty and all the projections and plans can be affected by certain circumstances the start-up is dealing with, whether it is problems with funding or competition. This is what a particular participant had to say regarding importance of being optimistic:

I think optimism is very important part, because most often things are not going the way you think they should. So yeah, most often things are going worse than you planned, so if you don't have any optimism you're kind of screwed, so I think maybe optimism is a very, very important key factor in succeeding (Interviewee 8, 2021)

However, Morten also have added that on the other hand it is better to be a little bit pessimistic in future forecast calculations. There is a tendency to be overoptimistic about estimated revenues and

sometimes start-ups set a very high bar that can be hard to reach which eventually might create some problems with investors that could be avoided.

However, being positive about every challenge that comes along the way and look at the glass as being half full is a very important trait that founders should cultivate.

Vision, purpose, and passion

Having a strong vision and having plan of where the founder wants to be, what the founder wants to achieve with the company was amplified as crucial factor among participants. There are a lot of distractions and obstacles that are appearing along the way of the start-up and during those hard days a thought of quitting and doing something else may seem like a good choice, however if founders have a clear vision and they are dedicated to it that brings you willpower to go through difficult times, stay focused and stick to the core vision. This is what a particular participant had to say regarding the importance of having a clear vision and dedication to it:

> *I mean, everybody will bring their advice with good intention, but you, there's so much noise and so many other things you could do all the time. And if you don't have something where you feel that this is the one thing I have to do and then leave all the noise around, I think you, my impression is that you would not get it moving (Interviewee 1, 2021)*

Having a clear vision early on as a founder is very important, because you don't have that much to show on the early stage of the start-up. The vision becomes a "story" that people decide if they want to be a part of it, whether it is first employees, investors, or future customers.

The word passion was a very frequent to hear during interviews. Having a deep passion in the idea of a founder, in the area of where their company is going to operate. Building a company or a product without passion can be very challenging, because success does not come overnight, it's a long process that take dedication, hard work and motivation. It was also identified that money does not have such a strong motivation effect as passion and purpose, because working for something greater than yourself help founders better to cope with difficulties along their path. That is why being passionate about the work you do and have a higher purpose is critical to succeed as a start-up. A good example of the importance of passion and purpose was captured in one of the interviews:

I think the first one is to find something that you're very passionate about. As I said before, like it's tough, it's very tough to start a company. There's a lot of rejection. There's a lot of grind. The success is very minimal when you compare it to your effort and there will be many years and maybe multiple start-up companies before you gain any success. (Interviewee 4, 2021)

Being an entrepreneur and building you start-up from scratch is a very hard job. It all begins with an idea and with the belief that certain problem in the world can be solved in a particular, more innovative, more efficient way. The curiosity and enthusiasm on the first stages of the start-up can be easily forgotten during long hours of hard and dedicated work, staying up late to building the company that comes afterwards. In that sense it is important as a founder to remind yourself what was the reason to start it all and what vision was in the founder's mind when there was nothing except an idea. One of the interviewees said:

And you know, keep in mind you're doing this as a labor of love. You're going to be working long hours every week, week on week and you know, just keep reminding yourself why it is that you got into that project in the 1st place and let your passion drive you. Because, you know you're going to be filled with doubts. Did I make the right decision? And you know, hopefully you have a support network that keeps reminding you know what it is that you're doing, what your Change The World vision is, and your vision should let you drive you. (Interviewee 2, 2021)

Motivation

After analyzing interviewees experience with initial motivation to start the company it is clear that there are many different paths and motivations that can lead to the decision of starting a start-up.

One of the participants identified the problem in the market while running another company in completely different area, so once they saw that so many people struggle with the problem, they have spotted an opportunity and decided to tackle it and start a new company providing a solution for it.

Another participant was providing solution for big companies that were willing to pay a lot of money for it. Once he decided that he could transform this solution applying same logic and

provide it as a service for many small companies that could not afford it, but now with an affordable price.

There was a case when the start-up was built from the curiosity and interest to sport and identifying some flaws and its problem of being unstructured the way of advancing to pro level and they wanted to solve this problem and make the process of improving from beginner to professional in a structured and comprehensible way.

One correlation that was noticed between all the answers is having interest in some area, identifying a problem or a spot of improvement and creating a solution. So, an interest in the field, motivated founders to create a solution and improve the process within this field. Overall, initial motivation can bring a lot of energy and eagerness to build the company and succeed with it.

Industry experience

During the interview most of the participants concluded that an industry experience is not a critical factor for success of the start-up. However, having an industry experience can have its advantages and disadvantages. Working in the industry for many years means that the network of stakeholders in the industry of that person is also big, which can be an advantage while establishing a new company in a particular field. Additionally, some young entrepreneurs, who does not have much of an industry experience might be delusional about the importance of the problem and willingness of customers to pay for the solution of this problem. One of the participants has shared his thought regarding this issue:

> *I think that industry experience is extremely important, because you have to solve so, mostly it's about the problem that you are trying to solve: Is this actually a problem that people are seeking a solution with? and to know this you kind of know some you kind of have to have some experience to know if it's an actual problem that people wants to pay money for solving, right? (Interviewee 5, 2021)*

On the contrary, sometimes a long background of industry experience can have a negative effect towards starting an innovative start-up and it can even limit creative problem-solving and make founders use old-fashioned approaches to tackle the problem. One of the participants shared his thoughts:

I think, not industry experience. That's not super important because if you had industry then it's very likely you don't do things in new way and you're limited by limited believes and so forth about industry. But having experience how to run a company, building product, managing sales, hiring people. All that is paramount. (Interviewee 3, 2021)

It was also noted that the need of industry experience is connected to the complexity of the industry or the technology the company operates in. That means that the more complex the problem company is going to solve - the more industry expertise is needed. So, for example if the company is in pharmaceutical or offshore windmills, it is important to have a relevant knowledge or experience. On the other hand, the connection between having an industry experience and willingness to take risk was identified. It is known that younger entrepreneurs are more willing to take risk than older experts who has a wide professional background behind them and who has got accustomed to the companies they have been working for. Therefore, it is significantly important to find a balance between having enough industry experience and being willing to take a risk on a new venture and join the world of uncertainty:

I see this for most of the of the start-ups that I would deem successful that I've been working with or have deep knowledge about is people who are, who have an extremely good combination of actually knowing what they're doing, but also being a fairly risk averse [risk taking], right? So, wanting to take to take risk. (Interviewee 5, 2021)

It is important to mention that industry experience from the standpoint of understanding what the technology cannot and can't do, or how to utilize the technology from the business perspective was mentioned as a very important factor, because it can give you flexibility and space to experiment with it and try to find the best use of it. For example, one of the interviewees said:

I know some of our competitors, they have a lot of business understanding and that gives them certain advantages. On the other hand, if you have more of a business or overall strategic perspective, an understanding of how you could use technology to support business then I think that brings you far and I think is that actually can allow you to maybe look at things slightly differently, in a good way. (Interviewee 1, 2021)

Consequently, having an industry specific knowledge can have its own upsides and downsides.

Management experience

Most of the participants concluded that having a previous management experience is not a critical factor for success of the start-up, but rather a good thing to have. Ultimately, founders need to get management experience from somewhere and many young entrepreneurs just gain it along the way of building a company. It also depends on what kind of company is it on its early stages. If there are only two cofounders who do all the job or several people on the team then management experience would not be so crucial as a factor for success. However, one of the participants also adds:

> *But of course, if you are building a quite larger company with employees from day one. Of course, some kind of leadership experiences is good, but it's also it's back to the same thing I guess as with sector experience. Again, you can do things differently when you don't know how to do it. That could also be an advantage, I think (Interviewee 8, 2021)*

Management experience can save a lot of time and help founders to avoid mistakes in many processes in the company. It can be helpful to have some previous experience and know how to build a good team as well as to know what kind of team you should built. One of the participants went on to give the following advice:

> *I would say that as an entrepreneur, if you're going to be leading the company, you should have some leadership qualities and if you have management experience, that's probably a big thing 'cause a lot of the issues that we ran into was because that we were inexperienced in leadership and managing roles. So, I would say it's rather important. If you have an option, you should try to find someone with management experience. (Interviewee 2, 2021)*

However, the importance of being dedicated to your company, put a lot of energy and hard work was brought out as an example of how lack of management experience can be substituted. Because if new employees joining a start-up and see that the founder believes in the project, makes smart decisions and dedicated to the goal of the company, although he might be not the best manager in the world, they would be still want to work alongside and to be a part of the journey that the company is on the course of.

It is important to point out that some type of companies, like Software as a service (SaaS) for example, have certain guidelines or instructions that can be followed to build certain processes and teams in the company. Therefore, it is important to make some research about the type of the company that founder is going to build, because in some cases even without management experience, founders would not be left with no information or recommendations on what kind of team do they need in a certain stage or how to build a specific process within the team. One of the interviewees said:

> *But my point is when you build a company like ours, which is like a soft as a service, this is a little bit like following a playbook. There is a specific way you have to run support. There's a specific way you run sales. There are basics that there's different teams you need. (Interviewee 3, 2021)*

Education

It was highlighted that if somebody has an idea, they should start pursuing it, building a business out of it and learning the rest along the way. It is not important to have an Ivy League degree to build a successful start-up. The best teacher that somebody can learn from is personal mistakes made in the real-life situations, while building a company. It is important to cultivate a gut feeling that will navigate you through important business decisions and become a tool that you can rely on when there is a moment of a hard choice decision. When asked about importance of education as a factor for start-up success one of the interviewees said:

> *I think a lot more people need to get out of their comfort zone and start businesses and start learning by doing ... So, a lot of the learning I have is from the projects I've done, the businesses I've done that ... So, you need to make decisions based on your gut feeling what feels like it's the right way to go. You don't have any, you know theoretical knowledge where you can look up a textbook and say: What do I do in this situation? (Interviewee 7, 2021)*

Being an entrepreneur means that you will need to acquire a lot of knowledge in many areas throughout development of your start-up. From the practical perspective it is almost impossible to acquire all the knowledge you are going to use, so you could be prepared for any situation and challenge that is going to arise. Therefore, it is very important to be a fast learner and be able to

acquire knew knowledge quickly, so you can implement it in your daily tasks right away. One of the participants said about this:

> *I think being a fast learner is important because as I said, you will need to acquire a lot of knowledge you don't know. You cannot go to school and then just read everything they tell you too and then just be like, OK, I'm ready to be an entrepreneur now. You'll need to do your own studies. You will need to do your own research. And you don't know what it is, so no one can tell you what to do. (Interviewee 4, 2021)*

There are also many skills that are simply not being taught at school which can be critical for start-up founders. For example, skill of "reading people" was identified as very helpful, especially while interacting with investors.

> *It's very much about reading the environment, reading the people that you're sitting in front of and trying to understand what is it that they are actually having as an objective with this meeting and trying to anticipate that, so, but it's not something you can learn it. It's something that ... well, you can learn it, but it takes a bloody long time. But you can't learn it in school, that's for sure. (Interviewee 7, 2021)*

Besides having free education system in Denmark, students have an opportunity to receive government grunt SU (Statens Uddannelsesstøtte) of approximately 6300 DKK, which is around 850 euro per month. In this case, students usually have financial freedom, so they do not have this urge of having a part-time job on the side to sustain their living, therefore they are willing to pursue their venture ideas without worrying of not having financial independence. One of the participants mentioned:

> *One the reasons why I did my education is I had a SU, so I could get some money while we didn't get the salary before we got ourselves in the company. (Interviewee 4, 2021)*

Therefore, being an entrepreneur means that you do not follow a certain curriculum, but rather take a risk of starting a venture and acquire new knowledge during the process. Not a critical factor.

Talent

Throughout the interview talent factor was identified as not very important in terms of success of the start-up. It is good to understand certain things that relates to the product that the company is building or to have talent in programming or management, but talent takes a small percentage from the success. Being a CEO, many times means that the person needs to be good in many things and not just to have a talent and be extremely good in one particular area. When considering a particular talent as factor for start-up success one of the interviewees said:

> *I don't think on my own that there is something that I am, you know, world class at, but I'm very good at many different things. I'm a generalist. I can overview many different projects at the same time. I can process information, I can relate to people, I can talk to people, and I can motivate people. So, I think it's not only about talent. It's about cultivating several things that you can manage at the same time. (Interviewee 7, 2021)*

One of the important tasks of a start-up founder is to surround yourself with talented individuals and experts within the field. Founder can be a generalist and do not have a particular talent on their own, but it is very important to search for talented individuals who would complement skills and competences of each other and drive the start-up to success. One of the participants shared:

> *The thing about building a start-up is that you're going to find people who have all sorts of different talents. If you're not a talented individual, I think you need to find people who are good at things, who have good soft skills who have solid hard skills that they can build on, because if your only talent is being a leader, sure, you can get away with that but you definitely need people supporting you who are good at other things. (Interviewee 2, 2021)*

Eventually, many interviewees have concluded that having certain personal traits can be more beneficial to succeeding as a start-up than to have a particular talent.

> *Yeah, but tenacity I always think is more important. So, talent is one thing, but if you don't have tenacity, it's irrelevant. (Interviewee 6, 2021)*

Additionally, it was mentioned that it is more important to be hard working, be willing to put a lot of hours on what you do, be efficient, creative, and productive instead of having a talent.

One of the participants have provided an analogy with football. While talent could be 10%, the rest 90% is hard work, perseverance, and discipline. Talent will only bring the founder so far, whereas perseverance and discipline will take them the whole way.

Team

Founders should carefully consider their surroundings. The importance of a team was very much highlighted by many participants. Building a diverse team with the various set of skills who are passionate about the vision of the start-up and the end goal that it trying to achieve was mentioned as the most important thing. The diversity of team allows to look at the problem from the different angels and receive relevant insights about it. Once the great team of professional is built on trust and faith then everyone is able be focused on what they are the best at without being worried that some of the areas are missing out.

Additionally, a strong team can make it easier to go through tough times and can motivates you to be responsible at your own deliveries. This is what one participant said:

> *In rough times the team members can help you, you can help them. You are stronger with somebody who can celebrate successes and go through rough times than when you are alone, it can get very tough. (Interviewee 4)*

Additionally, choosing partners wisely was identified as one of the things to be conscious about. "These are people that you're essentially going to be married to for the next couple of years" (Interviewee 2, 2021). Complementing each other personality is what should be carefully considered before making the final decision about the partner.

3.1.2. Industry and Market

Market

Product market fit was determined to be a crucial piece of the puzzle for a start-up, because without the right product market fit no success is possible. It is an essential task for a start-up to know the answer to those questions: Is the product requested by the market? Are customers ready to pay for it? If the answer is no, then those question should be addressed: How to get to the point where

product is demanded, and customers are ready to pay for it? How to get to this point as quick as possible without spending too much money? Since nowadays there a millions and millions of ideas are out there in the market, but it's not just enough to have a great idea and to assume that users are going to pay later along the way. One of the participants shared that a lot of people missing out the fact that they need to have people who are paying for the product from the first days, because start-up environment is not the same as it used to be early one, when it was possible to start a company and reassure investors that first grow millions of free users and find out down the line how to monetize them.

It is very hard to get product market fit straight away, so it is of interest to fail fast in some of the "dumb ideas" the start-up has and make sure that the good ideas eventually succeed, so the start-up can demonstrate that there is an actual market fit.

One of the participants was in to share the importance of finding product market fit as quickly as possible:

> *I think this is one of the most crucial factors, especially when you are talking about you know innovative start-ups, and not something else, right? So, on the innovative start-ups: How do you actually get the market fit as fast as possible? And then, all of the rest of the stuff that's easy compared to that. So, all of this stuff on scaling up and doing big stuff and getting the right people on board and all of this - that's a piece of cake. But getting the core team that will go the extra mile in the beginning, making sure that you get the market fit together with your clients. That's the most important thing. (Interviewee 5, 2021)*

Once you got the product market fit it is very important to add the value to your product along the way. So, instead of believing that the product is great now and people are going to buy it, it is necessary to pay attention to market, to customers and see what value you can add to the solution that you are providing.

Customer orientation

Building a product that is customer centric and having the customer in mind at all times was found a rather vital factor that can help founders to build a better product and to succeed as a start-up nowadays. Additionally, fining patterns among customers was determined to be a significant task

for the founders, since scalability is one of the variables that inherently goes with building a technological start-up. Therefore, using the right approaches and strategies to get the critical traction fast, deliver a solution for customers' needs grant start-ups a speed necessary for scaling up fast. One such example was found during an interview:

> *I'll focus on the customers. That's the only thing I care about. I talk to customers and we make bigger solution that make their life easier… I care about finding patterns among all our customers and basically finding out how can we build a product that scales to thousands and thousands of companies across Europe. Then going through customers, we built solutions, but the number one thing is that is always the customers because those are ones using the product. (Interviewee 3, 2021)*

The whole idea behind building a product is to solve customers' problem. While start-up is growing the more and more processes and tasks comes into play that can distract from the main goal of the start-up – creating a great value for the customers. That is why building some processes, like scaling customer support team, building sales and marketing team, etc. should not distract founders from the essential things, which are talking to customers and trying to know them better.

Competition

No common pattern was identified among participant responses about competition in the market. It is low or high, changing drastically or remain relatively the same, fierce, or mild. An important detail that has been mentioned is that although the competition might be high and fierce, but if the company operates within the high growing market that means there might be place for more key players and therefore more room to maneuver and innovate. It was backed up by the founders who operates in a relatively newly emerged industries like Blockchain or E-Sport. For example, one participant went on saying:

> *I mean, in some kind of sense we had a bunch of competitors, but they were all doing something different. And the thing about blockchain technology is that it's kind of new territory, so there was a lot of room to try out different technologies and do things in different ways and at the same time also innovate on business models, which we did. (Interviewee 2, 2021)*

The most important part is to differentiate from the competitors, so to show product offering as different as possible, to address the same problem with a different method. So, in order to outrun the competition, the company identify its uniqueness and improve elements of business that competitors are not focusing on.

Competition might be different if the company target more than one customer group, for example big enterprises and SMEs. In this case, competition may vary and also approaches of how to target those group vary drastically.

> *I actually don't think so. It's, we've just become more aware of it. The smaller you are yourself, then you, it's just good to get a new customer here and another one there. But as you grow you start realizing or you have to battle competition all kinds of places. (Interviewee 1, 2021)*

Being a start-up means that there some advantages and some disadvantages that the company can have. Such factors like brand name, reputation, industry, and customers decision patterns within the industry may be a factor how start-up can struggle to win customers against the competition. And even though the company could not have competitors within the problem space, other difficulties may arise due to how deals are closed among the companies in the space. For example, one of the participants has described his experience with competition in the cyber-security market sector:

> *Not that we have direct competitors within the problem space, but we have competitors within the budget, I would say. So cyber security has a budget and they can choose this to spend on the right mix of their problems, and they tend to spend it with companies that looks like themselves, right? So, while we don't have any direct competitors, we do have indirect budget wise competitors and these are a major players…(Interviewee 5)*

Business network

Business network in a form of business hubs, networking sessions, entrepreneurship groups and workshops can be very beneficial for start-ups in terms of acquiring new relevant knowledge and gaining some valuable insights that can be implemented within the company. Additionally,

investors and business angels can also provide start-ups with very helpful networking. The task of a start-up founder is to build create a network of mentors and advisors that can be reached when advice is needed, since those decisions going to determine the development of the start-up.

One of the participants went on saying about valuable knowledge that they get from Nordic Blockchain Association network and universities sessions:

> *So, at the time we were very heavily involved with other Danish blockchain companies and made use of the Nordic Blockchain Association network to participate in workshops. Also, together with the ITU&ETU participating in kind of roundtable discussions about the technology and the regulatory landscape. (Interviewee 2, 2021)*

Another participant mentioned about benefits of Copenhagen Fintech Lab they have participated in:

> *We have been visiting a lot of things in this lab, we were out there, sitting physically there for the first half year we had the company, that was a huge help (Interviewee 3, 2021)*

In most of the cases those sessions and network opportunities are not formalized or structured, so it is important to be proactive and dynamic in order to get chances and expand knowledge horizons and increase network of valuable people.

There is a high importance of surrounding yourself with right people whether it is an advisor, mentor or a professional with certain expertise you are seeking opinion in. It is not necessarily should be people from the company, but anywhere else. Reaching those people who are more experienced is very beneficial for the progress of company. One of the participants went on to give the following advice:

> *So as a start-up businessperson, make sure you surround yourself with people that are more experienced, where you can reach out and say: You know I have a situation, I'm not sure what to do. Could you give me advice? And I do that myself with a lot of young start-up people and I don't charge them anything for it because this is what people did for me when I was starting out. ((Interviewee 7, 2021)*

3.1.3. Innovation

During the interview, all participants agreed that innovation is extremely important for success of the start-up. Words like iterate, pivot, and innovate were very common to hear from the discussions with interviewees.

Most start-ups are well-known for its revolutionary and innovative approaches to tackle the problem. For example, companies like Microsoft or Apple have disrupted the industry coming out with extraordinary innovative products. One of the participants shares his thought on it saying that the product role in the company is the most important:

> *That is the only thing we focus on, basically, because we don't have an existence in the world if we don't build something crazy innovative. Of course, you still need to have sales. You need to have marketing. You need to have, you know, HR so people don't quit. You need to have all the supporting functions, but the number one thing in the start-up like ours is having revolutionary product is the only things that's going to make us Unicorn. (Interviewee 3, 2021)*

Sometimes even in the sector of newly emerging technologies like blockchain it is not just enough to build on something that already exist. For example, a participant shared during the interview that at first just experimenting with existing blockchain technology they realized that it was not enough:

> *We quickly found out that that wasn't the case and we had to build something completely new. So, to that sense, in that sense product innovation was Alpha and Omega in our company. We spent a lot of time and resources into innovating on this technology and basically reaching out to partners and universities to really get a good understanding of what the technology could and couldn't do ... (Interviewee 2, 2021)*

However, during the interview, the researcher found out that building something completely new is not the case for all the industries and start-ups. Sometimes customizing and using a technology in a different way can bring a beneficial result and become a solution for certain needs. A participant went on to say:

So, the real innovation is to apply the right technology with the right content that gives the best user experience. Whereas, you know, a lot of this technology that we need, something that You Tube have, for example, their recommendation algorithm. The algorithm is not suited towards you improving as a player that suited towards you finding content you engage with …. So, we need to customize that towards our needs (Interviewee 4, 2021)

Looking from the customers perspective, customers inquiries, and demands are usually a big factor in driving innovation in the company. Every business is dependent on its customers and in order to succeed in the market, outplay the competition and provide the best quality product possible it is necessary to listen to you customers and strive to advance and adjust the product for customer needs. After sharing that product innovation is a top priority in the company a participant adds:

So in the sense that when we meet a new potential customer and we can see there is potentially a good fit and we understand that the things they say that they say: "OK, this is great. But what if we could also do this?" We've been very open to take these discussions because we basically have been striving to make the product better all the time … I believe it matters to have a great product and it matters to better put effort into it. (Interviewee 1, 2021)

3.1.4. Resources

Government support

Denmark is very attractive for its famous social welfare network. From free health care system for all Danish citizens and residents regardless to the fact either they are employed or not to very effective social safety net. Every interviewee has mentioned that they have been provided one or another form of government support during the development of the start-up and it was considered to be a very important factor. "In Denmark we have a very strong government backup system for start-ups." (Interviewee 8)

The most popular government support among the participants was Danish state's investment fund for start-ups - Vex Fund (Vaekstfonden). The fund manages a loan portfolio and investment capital of 12 billion DKK, which is around 1.8 billion USD and provide a various type of financial support for companies. Interviewees has shared that loans during COVID pandemic were very helpful for

start-ups and the interactions with the fund were identified as extremely positive. One of the start-ups managed to receive 5 million DKK as a COVID loan which was very valuable for company at that time. Overall experience working with this fund was described as very straightforward and transparent.

Another government support fund that was mentioned by one of the participants is Innovation Fund Denmark and its grant program Innobooster and Innofounder. "Innobooster is a grant to companies that wish to develop and make a new product or service ready for the market or to improve a process that increases the company's competitiveness and creates growth." (Innovation Fund Denmark, n.d.) "Innofounder is a programme that lasts 12 months with the aim to accelerate the development of your innovative business idea from early stages to the stage where you are ready to go to market or gain investment." (Innovation Fund Denmark, n.d.) One of the start-ups received 1 million DKK support from the Innobooster program with another extension of 500 000 DKK afterwards.

Great social welfare safety net is a great for entrepreneurs to stand on the path of developing their ideas and building a start-up without being feared to be left on a street if the venture doesn't succeed. One of the participants have made a comparison of building a start-up in Denmark to other countries and highlighted a benefits of social safety net in Denmark:

> *I think that actually Denmark is one of the best countries to actually start a start-up… I think, you know, that the protective side of it is so much understated in Denmark, I think you can raise a lot of soft money from government and stuff like that and then you also have a Social Security net that will catch you if the start-up goes wrong you will not have the same thing in the US for example. (Interviewee 8), 2021)*

Besides getting capital support from funds start-ups can gain a lot of valuable insights from government authorities regarding specifics of their area of business. For example, one of the start-ups was the first company in Denmark doing Initial Coin Offering (ICO), in regard to that matter they have managed to get a lot of support from Finance Regulation Authority regarding compliance issues, questions regarding banking license etc. Those interactions with the government were also identified as very helpful for the growth of the start-up.

Educational grant (SU), which is a government grant for full-time students at Denmark is a very helpful tool that can be beneficial for those who want to start developing their ideas without being feared to not have enough finances to sustain their living. The grant provides enough money for student's living, so instead of having a part-time job for money they can have enough time to focus on building a start-up and pursue their passion and interests.

Last but not least, there is an encouragement element when the start-up sees the willingness and readiness of government to support the initiative and provide resources for the growth of the company. In this case, founders can see that the work they do and the company they are trying to build are being valued in this country and it motivates them to stay within the country instead of going somewhere else. One of the participants has shared his opinion on that matter:

> *I think soft funding in the form of grants from government or government owned institutions can help a lot because not only does it provide, you know either access to resources or capital without, you know, without contractual obligations in the form of equity, it also signals that you know the government wants you to be building in this country. (Interviewee 2, 2021)*

Financing

Financing is an essential and critical factor for success of the start-up. Most of the funding identified during the interview were coming from angel investor and venture capital.

As one of the participants pointed out there are different ways of start-up growth. There are companies that attracts venture capital money for extremely fast growth. The point here is to grow big and grow fast. The chances of success in such companies are fairly low, but the potential is very high. An analogy of building a rocket was provided by one of the interviewees about such type of companies. These type of start-ups or rockets require a lot of gasoline, which is referred to money that are coming from venture capitalists. On the other hand, there are company that grow steadily, focusing on turning profit and building a healthy business. When building such companies, the chances of success are much higher than the other one, but also potential of becoming a next unicorn is much less. That is why it is important to distinguish those strategies and decide which one is the right for the company. For some companies fast scaling is rather vital. One of the interviewees explained that for their company cost of serving 100 members is roughly

the same as 100 000 members and therefore fast scaling supported by a lot of capital can give the right traction for the start-up necessary to succeed. Another participant while asked about venture capital investment went on saying:

> *So, in our case it was rather important because we had a lot of product development and you know ultimately, we had found a problem that was so big that our solution that we had thought of to address it, required that we threw a lot of money at the development So for us it was rather important. (Interviewee 2, 2021)*

Generally, it is always better to start with own resources or get it from friends, fools, and family (FFF) instead of giving away some equity to angel investors or venture capitalists. And only if you don't have enough money from revenue streams to pay for some vital parts of start-up development like expanding sales teams, hiring key people of spending money on R&D, only in that case the start-up should look for some venture capital investment.

This was some advice about taking or not any investment for the start-up:

> *So, avoid venture capital for as long as you can, but when you then really need to grow and you have a product and it sells and you have the right team around you and you say: "If I can only get let's say $1,000,000 to get X number of more people or to get more hardware or infrastructure or whatever it is I need or a bigger marketing budget then I can validate that I can make you know 10, 20, 30 times that money from that investment. Then of course go for it. But not until then. (Interviewee 7, 2021)*

Before going on some investments seeking, founders should decide how aggressively they want start-up to grow. Saying yes to venture capitalists means that the start-up will need to provide results straight away in a way of massive scaling and hypergrowth. The question here to be addressed: Is the company ready for that? Some start-ups maybe be not ready for that kind of growth yet.

There are many prerequisites for receiving venture capital money. The start-up needs to have a strong product market fit as well as having actually proven business model. Once the decision to go to venture capital was made it is important to keep in mind that in order to get some venture capitalists attention the start-up needs to tackle the problem that is extremely ambitious and big, because the first thing start-up founders are being asked about Total Addressable Market (TAM)

which should be extremely big. Otherwise, investors will not be interested in financing such ventures.

There are many forms of venture capital as well and it is important to consider while choosing a venture capital firm. Some of the venture capitalists besides money also provide a necessary advices and support. Also, it is important to make a due diligence of the firm and see what areas they are specializing, in this case they could help with some processes like recruiting etc.

Some start-ups that haven not received any money from venture capital yet confirmed that they are thinking about getting venture capital money down the road in order to boost scalability. One of the criteria is to have a really solid product market fit and proven business model. A lot of capital is needed for scaling up and venture capital can provide it.

> *Even go to the bank and loan money. Because a bank loan is not converted to equity. A bank will not come in and suddenly take the power in your company and say: "Okay. Now we own, you know, 57% of your company and we're choosing even though you're the founder and the one that created this business, we're going to fire you because we own the majority of your business." That has happened to a lot of founders. (Interviewee 7, 2021)*

3.1.5. Success for start-up

Final question of each interview was designed to get an answer on what exactly a success for a start-up is. There is no right answer to it because every entrepreneur decides on their own how do they measure success for a start-up. It all depends on the persons vision and the perspective of a person whether it is changing the world by employing of 10 people or a million of people, making a billion-dollar company or receiving a happy email from the customer, as soon as you come close to your vision that can be defined as a success.

Overall, the responses can be divided into two categories one is connected to financial component and the second one is the impact component of success.

Certainly, an impact that start-up make and the level of value that it provides for customers is one of the ways how success can be measured. The idea of bringing together smart people who are working on something interesting that they are passionate about and having an impact is very engrossing. In this case the growth of the start-up is inextricably linked with the impact that the company make, because the more growth the company get, the more customers receive value from the company and therefore the more impact the company provides. This is what one of the participants said:

> *So, I think growth is vital for me, because that is a matter of having impact and getting more and more impact. So, I think if you, so, for me growth is not just about the money, it's also about the more growth we have, the more customers we have, the more users we have, the more people interact with us every day with the results of what we've done and they hopefully have a good experience with it. (Interviewee 1, 2021)*

On the other hand, for some people success is measured in financial indicators. Being cash flow positive was identified as a success for a start-up as well, regardless of whether it is millions krone, euro, or dollars or just couple of thousands. The success in being cash flow positive lays down in the fact that the person proves that they make a business, which is a very hard thing to do. There are a lot of people who fail to build a business that earns money, so proving that you can do it despite all the grind and difficulties that come along the way is a success.

One of the participants has shared an opinion regarding the financial success instead of measuring it in the impact:

> *I know that a lot of people will beginning to look at the "Why" and "Are we doing a difference out there" ... but the fundamental proof of success is - Do we make money? Can we actually move market shares or build market shares? And to customers have something that they perceive the value of so much that they want to pay for it and pay more than you have spent for it on making the product, right? And then this is the ultimate success. (Interviewee 5, 2021)*

A high evaluation was also given as an example of identifying either start-up successful or not. In that sense if the customers are happy, the more users buy product or pay for the service and the

evaluation is high that means there is a value in the work you do. One of the participants went on saying:

> *I would say for me financial numbers is an extremely good number to look at because it's basically when you say like - if that is working with you, if you have a high economic valuation is because you do something right. I would say it's a very good measuring stick. Facebook is more successful than Slack because Facebook has a much higher valuation than Slack. I mean, you can always look at the man who is doing the most good for the world by looking at stock value. (Interviewee 3, 2021)*

4. CONCLUSION AND RECOMMENDATIONS

The chapter provides concluding notes on the research and recommendations. In the Section 4.1 conclusion and review of findings uncovered throughout the study. Section 4.2 provides recommendation for future research. Finally, in the Section 4.3 concluding remarks are presented.

4.1. Conclusion

The goal for the current study was to identify critical factors for Danish technological start-ups. First, the author researched existing literature review about start-ups, start-ups growth stages, and finally success factors for start-ups. After careful literature review, the conceptual framework was formed based on the literature findings that was later used to guide the interview and collect personal opinions and insights regarding the critical success factors. Later, according to grounded theory principles the gather data from interviews was coded, categorized, and analyzed to find the relevant relationships. After thorough analysis of data, the critical success factors for start-ups were identified and explained. Therefore, both research questions: "What are the critical success factors for new technology start-ups in Denmark?" and "How aspiring start-up founders can benefit from the knowledge about critical success factors?" were answered in this study.

Based on the present study results it was clear that founders play a significant role in the success of the start-up and traits like optimism, perseverance, drive, creativity are critical to possess for the founders because they are the ones who steer start-up and choose the directions and lead teams. Founders face a lot of difficulties and uncertainty throughout the path of start-up development that is why being hard-working and perseverant can increase chances to succeed.
Additionally, being passionate about the work, having a strong vision and purpose was determined to be crucial for founders, because it help them to remain on the course even during tough days when a lot of people are ready to give up.

All founders have an initial motivation that make them believe in the idea and start the venture. It was noticed during the study that interest in the field and the willingness to improve the way things are done there motivate founders to pursue their idea and develop solutions that help customers to solve their problems within this field.

During the study it was identified that although having an industry experience has certain advantages, it is not a critical factor for the success of a start-up. Some of the advantages that come with industry experience are the network within the sector and a better understanding that the problem that they are going to solve is actually a problem that customers are ready to pay money for. However, are long-years industry background may backfire in a form of lacking a creative and innovative thinking and rather using old-fashioned way of solving the problem. Overall, it was identified that the more complex the problem is the more industry experience is required.

Having previous management or marketing experience was identified as not a critical factor for success of the start-up. Management experience can help founders to save some time in the process of building teams and setting up some other processes in the company. However, being dedicated to the company, put a lot of energy and hard was classified as more important than having previous management experience.

Another factor that was established by the participants as not critical is a higher education degree. Many interviewees mentioned that it is important to start pursuing the idea right ways without waiting for a perfect moment or perfect set of skills, because most of the things can be learnt on the way and it is impossible to avoid all the mistakes that founders are going to have. There is no defined curriculum that can prepare you to a role of a start-up founder, so it is important to be a fast learner and be able to always find resources with necessary knowledge that is relevant to problems and task that appear along the way. Although if the person decides to pursue a higher education degree, Denmark was identified as one of the best countries, due to its free education system and the opportunity for students to receive a government scholarship that can cover essential costs, so students can focus on developing their ideas without being feared to be financially broke.

Having a talent for a start-up founder was determined as not a critical factor for a start-up success. For example, CEO position in the company many times mean that the person does not need to be world class at something, but rather be very good at many different things. To be a generalist and

be able to overview many different projects at the same time was found to be more valuable than to have a particular talent. Also, as a start-up founder it is rather important to surround yourself with talented people and professionals who can complement skills and become a remarkable team. Overall, it was concluded that having certain personal traits like perseverance, willingness to work hard, optimism etc. are more important in terms of start-up success.

Having a great team is one of the most crucial things for a start-up, because not only it will be valuable to look at the problem from different angles, but also the team support that can motivate you to go through hard times, because success doesn't come overnight, it's a long process that take dedication, hard work and motivation and so it is very important to stay on track and deliver great results.

Getting product market fit as early as possible was determined to be a critical factor for start-up, because no success is possible without the right market fit. Start-up founders should discover whether the product is demanded by the market and if customers are ready to pay for it. The market is full of different ideas, however it is necessary to prove that the business model is really working, and customers are willing to pay for it. It is very important to avoid being delusional on that matter and if start-up determined not to have a market fit make a strategy how to get to the point where it has as quick as possible without spending too much money.

Knowing your customers and continuous adding value to the product in order to solve the customers' problem in a better and more efficient way is critical for a start-up. Customers is one of the most important things that start-ups should be always focusing on, because the start-ups are designed to solve customers' problem, deliver an innovative solution, and being paid for delivering outstanding product or service. All the processes in the start-ups should be complementary, because if the customers are not willing to pay for the product the whole mechanism does not work anymore.

In order to succeed in market, it is very important to differentiate from the competitors. There is different level of competition in different industries, for example in relatively new industries like E-sport or Blockchain there is more space for new entrances, because all the parties are trying to experiment with the technology or product and figure out what part of it, they want to take. However, no matter how intense competition is in the industry it is crucial to show product offering as different as possible, in the same time creating a value for customers. Additionally, it is

important to find the right approach to address customers because some market specific difficulties may arise. For example, in B2B cybersecurity market big corporations with established brand name, reputation etc. has certain advantages selling their products that's why start-ups should dedicate time evaluating competitors and the market to find the right approaches and value proposition accordingly.

Business network was identified as very beneficial for start-ups to acquire valuable knowledge from external environment. Many start-ups have utilized this opportunity attending different network workshops and discussions, learning about regulatory landscape. In this case, Denmark is very supportive and provide a lot of opportunities for learning and connecting. Finally, the network provided by investors and business angels was found very helpful and useful.

Innovation was defined as one of the most critical factors for success. Start-ups by their nature bring innovative and revolutionary solutions into the market, trying to solve customers' problems in unconventional and efficient way. In some cases, it is not necessarily mean that founders need to come up with absolutely new technology, because sometimes customizing existing technology and using it in a completely different way may bring the exact same results as creating an absolutely new one. Nevertheless, it is always important to keep listening customers inquires, because they are the ones who eventually purchase the product or service and therefore keep them running.

There are different types of resources that start-ups can utilize in Denmark. One of them is government support and benefits. Almost every participant in this study has used some type of government support and recognized the significance of these opportunities. Especially in times like COVID it was very important to receive some financial reinforcement, that's why opportunities like COVID loans from Vex Fund – one of the most famous Danish state's investment funds were crucial. Also benefits from Danish educational grant (SU) were highlighted as very important due to the fact that it allows students to pursue their ideas and build start-ups already at university without worrying about finding a part-time job to remain financially independent.

Financing in terms of either venture capital or angel investors was determined to be critical if the start-up decide to scale up and growth quickly. Overall, it was found out that it is better to start with own resources or some capital from family and friends and later when all prerequisites are

met like proven business model and right product market fit etc. then the company need to make a decision whether to go with venture capital money and choose hypergrowth and quick scale up or try to go slow and organically. It was also determined that it is not very hard to get funded in Denmark. There are a lot of possibilities to find investments in Denmark and investors are willing to provide money for attractive and promising projects that show signs of high returns.

Eventually, using the findings mentioned above along with recommendations from experienced entrepreneurs the aspiring start-up founders can benefit while utilizing discovered knowledge and following advices from the reviewed start-up founders that participated in the research. Discovered findings can improve the process of prioritizing of focus areas for future entrepreneurs that can rely on the critical success factors found in the study.

Finally, there was no ultimate definition that could describe success for a start-up, and it varies differently on the vision of the founder. Certainly, in some cases success can be measure in financial metrics, whether the start-up makes profit, passed break-even or have a high valuation. On the other hand, success can be achieved by providing value to customers and making an impact on their lives. Therefore, through growth a start-up can provide more and more value to customers and therefore becoming more and more successful from the standpoint of impact.

4.2. Recommendations for future research

Current research uncovered a lot of valuable insights regarding the success for technological start-ups in Denmark. Yet, there a many way how the study on success for start-ups can be researched even further. One of the areas could be to investigate if start-ups funded by large venture capitalists have higher chances to succeed compare to the smaller ones or compare to business angels' investments.

During the current study it was identified that there are many opportunities for start-ups provided by the government and for instance there are many large start-up incubators owned and financed by the Danish government. In this case, another area of the research could be to measure the impact that start-up incubators and accelerators have in Denmark.

4.3. Concluding remarks

The aim of the research was to identify critical success factors for technological start-ups in Denmark. Throughout the research a considerable amount of data was analyzed through the literature review and semi-structured interviews with start-up founders and entrepreneurs. The data uncovered during the literature review helped to guide the process of interviews. Consequently, gathered data and the analysis with grounded theory guidelines helped to identify relationships among codes and categories to discover what factors are critical for success of a start-up and what factors are not. Additionally, in the discussion section it was explored how those factors affect the success of the start-up.

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APPENDICES

Appendix 1. Interview Questionnaire Development

Opening and Start-up Discussion

Could you please tell me about the company nowadays? I am interested about the progress that the company made so far, could you please highlight some big achievements?

What was the initial motivation to establish a company?

What is the level or priority of product innovation in the company?

Environment Discussion

Could you please tell me about the level of competition in the industry, what is the intensity among competitors of your company?

If we are talking about business network. Is there any collaboration or support from the network in the same sector?

Founding Team Discussion

In your opinion, how important is to have an industry experience while establishing the company?

Do you think that previous management or marketing experience is important while establishing the company?

What do you think about traits like leadership, confidence, dynamism, the need for achievement, optimism, do you think that could play a big role in the success of the start-up? And do you think any other traits could benefit into success of a start-up?

What do you think about the importance of education factor for success of a start-up?

Do you think that having a particular talent is important for success of the start-up?

Resources Discussion

How the company was financed? In your experience, could you please tell me about the role that venture capital plays in start-up growth?

What do you think about the role of government support or benefits in the growth a start-up?

Closing Discussion

Based on your experience,

What are the key factors that you believe contributed to company's success?

What are the most important things that founders should consider founding a start-up? What could be your recommendations for start-up founders?

How would you define a success for start-up?

Appendix 2. URL link to the Interview Transcriptions

https://drive.google.com/drive/folders/1oF354bKoodkpmdQaozYS6i0ULv8hMiuZ?usp=sharing

Appendix 3. Cross-case analysis table

Question	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4	Interviewee 5	Interviewee 6	Interviewee 7	Interviewee 8
Initial motivation	I wanted to bring that together [automation of manual tasks] as a service, so that especially smaller companies could actually tap into. A quite advanced solution even without having to pay a lot for it.	We were really fascinated by blockchain technology and the timing was perfect.	Our original motivation to start was to solve our own pain to solve this whole thing about that collection, which might want to start with debt collection.	We want to share the knowledge of the pro players because there are no real coaches in E-sport, because the whole industry is so young that there haven't really been established some verified and trustworthy coaches	-	Yeah, so we were a bunch of tired dads who went looking for cleaning and found it very hard to book cleaning outside the black market. So we thought we solve that problem by digitalizing marketplace where people could meet and make a contract together.	-	We are a family with kids ourselves. So yeah, it was kind of obvious that yeah, we would do something that we needed ourselves.

Product innovation	It's been at the top priority all the time actually.	product innovation was Alpha and Omega in our company. We spent a lot of time and resources into innovating on this technology …	That is the only thing we focus on, basically, because we don't have an existence in the world if we don't build something crazy innovative	I think where we do the real innovation is on a content perspective. We do a lot of product development within our content.	fundamentally we have some very strong core technology that we have the patents on	It's very tech heavy platform, and it's pretty complicated actually	Product innovation for us is very much on creating digital courses that are innovative that are entertaining and are above all that are fun to to take.	We kind of innovate and an iterate very much with the product. Company we have, features a quite unique so we need to develop new features more or less every week to keep the app the best
Industry competition	In different markets the same kind of competition is very scattered, so there isn't an enormous amount of small vendors in the local markets.	The thing about blockchain technology is that it's kind of new territory, so there was a lot of room to try out different technologies and do things in different ways	I don't care about my competitors because the competitors doing nothing. The competition is not using smart software, the competition is not using any intelligent solutions and that is a problem	I think it's low. I would say that there's an industry, a new industry at which all are evolving around helping players improve. So, a lot of people do that differently.	while we don't have any direct competitors, we do have indirect budget wise competitors, and these are a major players	In Denmark, the only competitor we have actually is the black market	it is hugely competitive. And so, for us it's extremely important to show our product offering as different as possible	So, when we started out with the new company, the competition wasn't very much, because nobody actually did what we did

Business network	So, there is not a lot, we do not have a industry network which is actually a pity	at the time we were very heavily involved with other Danish blockchain companies and made use of the Nordic Blockchain Association network to participate in workshops.	We have some of the most famous business angels in Denmark, which of course also gives some network.	I would not say that there is anything structured, not anything that we use.	-	We have gotten a lot of help and we are providing a lot of help to other entrepreneurs now	There's plenty of free opportunities out there for you to network and learn without it costing you anything	We don't participate. They might exist. I don't know them.
Importance of industry experience for the founder	I don't think that's very important	… if you're a pharmaceutical company, you should probably know what kind of medicine will kill people and what won't, but for other things, I think it's maybe not as important.	I think, not industry experience, that's not super important because if you had industry then it's very likely you don't do things in new way and you're limited by limited believes	I don't think it's the most important. I think the industry knowledge you will definitely gain overtime.	I think the more complex the solution or the more complex the problem you are going to solve, the more industry expertise you need	It depends on what kind of business you're building. So I think experience is always important.	I think with any type of business, if you have an idea - do it. And then what you need to learn, you will learn along the way.	if you go into a business with no knowledge at all about how the business is running, of course you have disadvantage but it can also be advantage in a way that you might go in there with more open eyes

Importance of management and marketing experience for the founder	If the first hires you make, if they can see that you believe in it and they can see that you make some smart decisions, then you may not be the best manager in the world, but they want to tap into.	I would say it's rather important	When you build a company like ours, which is like a soft as a service, this is a little bit like following a playbook	-	-	It's always nice with experience, but I don't think it's a critical factor	What you need to learn, you will learn along the way.	I think yeah, of course it's important because if I should start a new company today from scratch, I would of course do something different. But on the other hand, you need to get experience from somewhere.

Importance of a particular talent for the founder	I think that if you have something that drives you and where you think you have some insights that not everybody, well, where you have a little bit more talent than someone else, then I think that is a, if you can somehow build your product […].	If you're not a talented individual, I think you need to find people who are good at things, who have good soft skills who have solid hard skills that they can build on	Not really, I think. As everyone would say, I think when it's really, really important is more your personal traits	I wouldn't necessarily say it's a talent	Talent and intelligence and industry knowledge and all of this is kind of like the foundation. But if you cannot go the extra mile then then then you just might as well not do it	So, talent is one thing, but if you don't have tenacity, it's irrelevant.	I think talent is maybe 10% and 90% is hard work, perseverance and discipline. Talent, you know, only gets you so far, whereas perseverance and discipline will take you the whole way.	Yeah, very much, but talent, it's not necessarily coding or a managing or marketing or whatever. It could also be creativity, ideas or just patience and strength to work a lot.

Importance of possessing a higher degree education for the founder	-	No, not really. It's rather important if you're trying to convince people of your credibility.	So I think education is important. I do not think it's a prerequisite to succeed. Of course, I think there's many examples of the opposite	I don't think so … I think that what's unique about entrepreneurship is that you acquire the knowledge that you need. You don't follow a certain curriculum.	-	So it's a question of the person you are and how willing you are to learn	A lot of people are educating themselves from here until they have an MBA which I believe is a mistake …	So I think school is important, but you can also of course succeed without.
Importance of specific personal traits of the founder	For me it also has been, again, this is very subjective, but I think that not having a Plan B, so actually not spending all the time of thinking: "What if this doesn't work"	I think curiosity, ambition, motivation and drive are very important	Which is you have to be able to be really, really hard working as many hours you have to be efficient to be productive	I think curiosity is important because it makes you naturally want to understand the users better.	I think you need a deep, deep, deep passion	Tenacity is important as well, keep on the grind and so you succeed.	So, you have to hard work, discipline, flexibility and being positive.	I think optimism is very important part because most often things are not going the way you think they should

Financing of the start-up	So I think there is a story out there about getting investment that is vital and getting somebody to buy some of your company in order to grow fast, which I think is not fully true. It's true for some.	I think investment is it's important if you're trying to do something that's rather big but you can't patch up with your own revenue streams.	In terms of the role of VC in a company like ours, there everything because we are a growth company and we are growing at all costs. We are growing unhealthy. We waste a lot of money because we grow extremely fast.	Company like ours, it's difficult to see how can we scale this fast without getting capital, because we are a business that works very well on scale, so the cost of us serving 100 members on monthly subscription and 100,000 members.	I think it's an extremely complex question on how to spend the money and went to front the money, because as in as a founder you won't want so as much money in as fast as you as you can normally, but in reality you probably don't need it and you will spend all your money on the wrong stuff	... we got listed on First North NASDAQ	And so, avoid venture capital for as long as you can, but when you then really need to grow and you have a product and it sells and you have the right team around … Then of course go for it.	I think venture money could be good for us somewhere down the road. but you need to have a really, good and strong product market fit and have a really proven business model before you can attract venture money. But I think they are really important in scaling too.

Government support	So actually the first, the seed capital I got was actually a partly publicly owned seed venture fund.	We did have a lot of interaction with the government and they were mostly helpful.	They are super helpful and we have been utilizing a lot ourselves	The most important resource that all of our Co-founders used was SU… it's short for a government education support.	It's also an extremely controversial thing.	I think Denmark is one of the best places to start a business, 'cause you have this social safety net.	and I have to admit that that experience, working with Vaekstfonden in Denmark has been extremely positive.	I think in Denmark we have a very strong government backup system for startups.
Success for start-up	If you could do that [impact], and having a good financial situation and you can end up having a great product, happy users, high growth, earning money - that's a success for start-up.	It depends what your what your vision is, because I feel like as soon as you start getting close to what your first vision was then you can consider yourself a success.	Then the success for me is basically that we will, you know, build a company with many thousands of customers that is happy.	I think that when you have paying customers that would be really sad if your company didn't exist - that's a success in itself.	the fundamental proof of success is - Do we make money? Can we actually move market shares or build market shares?	Some measure success in how much money you make and others in the good you do in the world. So, I think that's very individually.	It was just being with the right product, at the right time in front of the right audience.	Yeah, it's of course very different, but I think when you are cash flow positive.

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