SCALING CHALLENGES IN DIGITAL VENTURES

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Abstract

The number of startups is on the rise, specifically digital startups with products entirely based on software. These companies are facing a resilient challenge when it comes to increasing their user base, revenue or market share. This process is called scaling, which is an essential part for every startup in order to establish themselves in the market. While there are several generic models focusing on scaling a business, there seems to be a lack of scientific research focusing on the challenges during the process of scaling. This paper describes a qualitative study focusing on purely digital companies which have scaled or are trying to scale. Resulting in finding several distinct challenges and barriers related to scaling digital companies, by comparing and contrasting growth literature with the data generated by this study. Besides these challenges, our findings suggest that B2B and B2C companies are facing different challenges during their scaling processes.

Keywords: Scaling, Scaling Challenges, Digital Ventures, Digital Companies, Digital Businesses, Growth, Entrepreneurship

1 Introduction

According to the Kaufman Index of Entrepreneurial Activity (KIEA), which measures the entrepreneurial rate in the U.S., the number of entrepreneurs in our society is well above the dot.com bubble of fifteen years ago (Zwilling, 2013). Leading to more entrepreneurial activity especially in the area of technology. These ventures are called digital startups and are theoretically able to penetrate markets across the globe (Skog, Wimelius, & Sandberg, 2018). This theory seems to have some truth behind it if we are looking at firms such as Apple, Google or Facebook who managed to establish a foothold in numerous countries around the globe. These companies began very small but started to grow rapidly. Growth is an incredibly important aspect to these modern companies. In common business dictionaries, firm growth means to add resources at the same rate as the company is adding revenue (Growth vs. Scaling, 2014). However, another term especially associated with digital companies is called scaling. Scaling is defined as adding revenue at an exponential rate while only adding resources at an incremental rate (Growth vs. Scaling, 2014). There are several methods as to how entrepreneurs could build and scale a company such as the scaling lean approach by Maurya (2016), or the customer discovery model by (Aulet, 2013). However, the literature usually only provides a generic and broad guide about the necessary steps to scale (Gupta, 2017). According to Gupta (2017), most of the documentation regarding how startups grow or scale, has only been available in form of blog posts or conversations with founders up until 2008-2010. This is an unfortunate fact for businesses because the process of scaling is essential for every company. Scaling begins after a startup has managed to find a so-called problem-solution fit, suggesting that the product provides a sufficient solution for a problem in the society. The scaling process focuses on engaging with the market to increase elements such as the user base, the market share, revenues, and the value of the company. However rather few to almost none academic research papers have investigated the process in more detail. More specifically what
challenges these companies face while scaling their digital product, which constitutes the main reason for this study. The lack of research in this field leads to the following research question:

What are the challenges in scaling a digital company?

Why is this research question of importance? Investigating barriers and challenges related to scaling does have several positive implications. Practitioners, such as for example business owners could rely on fact-based research helping them scale their business by avoiding potential pitfalls. Researchers on the other hand might have a starting point to conduct future research in this field.

2 Related Research

Entrepreneurs, Entrepreneurship, startups and many more buzzwords are receiving increasingly more attention in our society, but what do these key words express? While there are many definitions and various research streams dealing with the question of entrepreneurship (Drucker, 1985) (Stevenson, Roberts, & Grousbeck, 1989) (Shane & Venkataraman, 2000), the definition by Stevenson (1990, p.8) has been generally adopted: “entrepreneurship is a process by which individuals–either on their own or inside organizations-pursue opportunities without regard to the resources they currently control (Stevenson, Roberts, & Grousbeck, 1989)”. The tool in order to become successful is to make use of innovation processes, which continuously look for new ideas and are generally challenging the status quo of how we are doing things (Tidd & Bessant, 2013). A well-known modern entity to challenge the status quo are the so-called digital startups.

These type of startups are founded by so called digital entrepreneurs, whereas the term “encompasses the diverse opportunities generated by the Internet, World Wide Web, mobile technologies, and new media,..” (Davidson & Vaast, 2010, p. 1). As mentioned before digital startups and digital innovation has accelerated at unprecedented rates, and if we are looking at the opportunities the digital world can offer entrepreneurs, it should not come as a surprise (Nylén & Holmström, 2015). If we are only focusing on ventures where the entire business is digital, including production, the goods or service and the supply of it, we can identify a variety of opportunities laying in digital ventures (Hull, Hung, Hair, Perotti, & DeMartino, 2007): firstly, digital goods can be modified easily and quickly, based on, for example, a marketing campaign and its resonating feedback. Secondly, the ease of distribution where products can be distributed around the world quickly and cheaply using the web. This seems incredible, considering how customers were relying on their local merchants in the past. Today huge amounts of products are available almost instantaneously. Fourthly, the workplace has also shifted since digital entrepreneurs can reach and interact with potential employees all over the globe without relocating their employees. Next to these benefits, IT businesses or tech companies are having another major advantage. These kinds of ventures are having a simple yet important premise, the theoretical potential of exponential growth and the ability to be rapidly scaled as identified by Skog et al. (2018). Within this realm of digital entrepreneurship this study will look specifically at one essential component which is necessary for any kind of digital venture to succeed, the concept of scaling. However, if we are zooming in on the
meaning of scaling, it can often be confused with the term growth. Growth and scaling are two overlapping concepts that describe similar albeit distinct processes.

2.1 Digital Scaling and Growth

As previously mentioned scaling and growth are two different things. The common business dictionary defines firm growth as adding resources at the same rate as the company is adding revenue (Growth vs. Scaling, 2014). This model is for example occurring in professional service business models where, when the company gains a client, the company needs to hire more people to service said client. Which adds revenue at the same rate as they have been adding costs. The company has technically grown in size.

On the other hand, the definition of scaling derived from common business dictionaries, and used throughout this particular study is the following:

“...scaling is about adding revenue at an exponential rate while only adding resources at an incremental rate” (Growth vs. Scaling, 2014)

Bigger tech companies such as google have demonstrated the concept by adding a number of customers in a quick pace while only adding few additional resources to service these customers. Resulting in a rapid and tremendous increase in their profit margin over just a few years. A pragmatic way of understanding the concept of scaling is to look at how the delivery of a product could be automated in a way which would allow you to produce the product faster and cheaper for every added customer (Growth vs. Scaling, 2014). The more efficient the mechanism for mass-producing the product or repeating your business model is, the more scalable a company may be (Growth vs. Scaling, 2014).

Scaling aims to add exponential value, usually by replicating a business model while adding only incremental costs. While we established common ground as to what scaling means, we have not yet established at which point a startup should consider to scale. One of the founding fathers of the lean methodology Steve Blank, established an operational definition of a startup, emphasizing that it is an organization specifically formed to search for a repeatable and scalable business model (Blank, 2010). “He then emphasizes the transition between “startup” and “company” as a distinction between “search” and “execution”” (Gupta, 2017, p. 27).

According to Blank (2010) a startup transitions into becoming a company when the following conditions are fulfilled: the startup acquired enough market share to be viable in the market; the startup surpasses its breakeven cash-flow; and it has gained a significant amount of influence on the market when it comes to pricing, its offer, or its positioning.

The concept of scaling has not been discussed extensively in scientific journals, most documentations about scaling digital products have only been available in blog posts and through conversations with founders until 2008-2010 (Gupta, 2017). Meaning that the question arises what is known about the concepts of scaling in todays society. There are according to extant literature several models focusing on scaling and firm growth. These models are frequently cited, promoted and partly adopted by entrepreneurs as instruments for scaling.

The most traditional model in the area is the so-called investment-based model. This model has been around for many years and emphasizes a traditional startup growth cycle. Each stage is defined after the sought-after investment round (pre-seed, seed, pre-series A, series-A-B-C).
This model has according to Gupta (2017) two major flaws: Firstly, the labels are descriptive instead of predictive, and focuses exclusively on raising capital with almost no consideration to customer acquisition or other aspects of the business. It secondly assumes that the organization has a negative revenue at the beginning, the so called “valley of death”. It however doesn’t provide any insights as to how to turn the situation towards a positive outcome.

The second model focusing on pre-market-entry development such as the problem-solution fit (PSF), product-market fit (PMF), and validation part of the business model are called stage-gate models. These models have a big advantage in tracking the pre-conditions which need to be done in order to scale, as for example targeted by the Investment Readiness Level model developed in (Blank, 2013).

The so-called customer discovery models are furthermore focusing on finding and refining the perfect fit, between the initial customer persona and the value proposition of the offered service/product (Gupta, 2017). One example model falling into this category is the Disciplined Entrepreneurship model by Aulet (2013).

The last model type found in extant literature are so-called execution models, which “…measure the ability of the organization to produce repeatable, scalable and quality results.” (Gupta, 2017, p. 23). These models are for example trying to describe critical factors needed when it comes to the team and the leadership to keep the execution performance on a high level no matter the external environment, such as for example the Predictable Success model described in (McKeown, 2010).

Most of these models have different definitions of how scaling should be measured. The metric which seems to be the dominant one so far has been introduced by Ash Maurya in his book “Scaling Lean” (Maurya, 2016). According to Maurya (2016, p.21), “Traction is the goal” and the adopted metric for scaling. What does traction mean? Traction means different things to different people but according to Maurya (2016, p. 26) it is defined as the following: “Traction is the rate at which a business model captures monetizable value from its users”, which should signal business growth as well. Whereas monetizable value is not the same as revenue, since revenue can be viewed as an after-effect of value creation and is unfortunately not all actionable by itself. Entrepreneurs need to, according to Maurya (2016), uncover the key activities of their users which in turn indicates future revenue. An example from Maurya (2016) is the case of Howard Schultz, who owned a coffee shop in Seattle. He realized that after his customers ordered a coffee, they stayed at the venue by pulling out their laptops to work there. Other store managers might have gotten annoyed by their customers behavior by not leaving the venue after they purchase a drink. Howard Schultz however realized that the lifetime value of these customers was higher than their typical customers, which resulted in him realizing that the time spent in the store correlated with the money spent for beverages and coffee. This insight resulted in Howard Schultz creating a multi-billion-dollar company which came to be known as Starbucks.

As mentioned in the previous chapter the number of entrepreneurs is on the rise according to the Kaufman Index of Entrepreneurial Activity (KIEA). Venture capitalists and entrepreneurs have realized that digital technology, such as apps, web 2.0, the Internet of Things, Industry 4.0 have the potential to be highly scalable with low and steady fix costs, but also almost negligible marginal costs (Gupta, 2017). These software companies thus have the potential to capture a large and valuable market with low adoption friction and high retention
rates (Gupta, 2017). Looking at the case of for example Spotify, which is a digital platform making it possible for its users from all over the globe to listen to music for free. This digital platform for example carries unprecedented possibilities for rapid growth according to Skog et al. (2018). “As demonstrated by firms such as Apple, Google, and Facebook, digital platforms enable platform-owners to cultivate masses of external contributions from distributed and diverse actors, and ultimately to dominate whole industries.” (Skog, Wimelius, & Sandberg, 2018, p. 1). Digital technology has the potential, due to its generative features, to penetrate markets on a global scale, which might be the reason for many entrepreneurs to pursue a career in the tech space Skog et al. (2018). While there are more and more startups popping up every day most of these startups are unfortunately failing, furthermore described in the next section.

2.2 Barriers for digital scaling and growth

According to (The Ultimate Startup Failure Rate Infographic, 2018), 90 percent of startups fail. This number is repeated in private conversations and on public stages. The authors of (The Ultimate Startup Failure Rate Infographic (2018) referred to a study conducted in (Mansfield, 2016). The study states that “A bit more than 50 percent of small businesses fail in the first four years.” (Mansfield, 2016, p. 1). According to (Griffith, 2017), who quotes the Cambridge Associates company, a global investment firm based in Boston, stating that the failure rate of startups has not risen above 60 percent since 2001. The data is based on tracking the performance of venture investments in 27,259 startups between 1990 and 2010 (Griffith, 2017). It seems the industry is however somewhat aware that startups are having a tough time in establishing themselves. This data looks however at startups who already received some form of funding which might make them already successful to an extent. It does however not include the numerous startups who are already failing in the beginning and in the scaling stage. Thus, making this research field especially appealing for younger entrepreneurs.

While there has been as evident in the preceding section, a number of publications and a lot of buzz in blogs surrounding growth and scaling, plus a significant number of models scaling a digital company, an important aspect has been neglected. A review of extant research on scaling revealed that there are only a few empirical investigations targeting potential barriers for scaling. More precisely what challenges and issues arise inside the companies trying to scale their business. And in fact, by reviewing the literature the author could not find scientific papers empirically investigating challenges or barriers related to scaling a digital company. However, broadening the approach revealed that there are studies related to firm growth. Although as previously suggested, scaling and growth are partly overlapping concepts that describe similar albeit distinct processes, plausibly at least findings from growth studies could be applicable to scaling as well in terms of potential challenges and barriers.

Academia began to research firm growth due to the high failure rate, for example the author of (Cressy, 2006) states that “most firms die young”. Researches have aimed to identify and predict certain characteristics of firms with the potential to grow, such as the education or experience of the founder, the firm size and the organizational development stage (Doern, 2009). To characterize firm growth, so called barriers are frequently identified to predict how likely it is for the firm to grow (e.g. (Orser, Hogarth-Scott, & Riding, 2000); (Pissarides, 1999)). Barriers are broadly defined as either internal or external conditions, constraining or hindering the growth of firms (Storey, 1994). While several authors have discussed growth barriers in
their literature reviews (e.g. (Davidsson, Achtenhagen, & Naldi, 2005); (Smallbone & Wyer, 2000); (Deakins, 1999)), the barriers themselves have been given only modest attention within these reviews (Doern, 2009). While there are as previously suggested several models for scaling a digital product or a digital company, these could perhaps as well, by twisting and turning, identify distinct barriers for scaling. However, these models do not focus specifically on challenges and barriers for scaling digital companies. They instead provide rather generic advice regarding some necessary steps needed in order to scale or find a problem-solution fit, or product market-fit. This could however provide a general idea as to what entrepreneurs might be facing. Thus, potentially suggesting one or two ideas for a theme related to scaling. It furthermore verifies and validates to what extent growth literature could be applicable to aspects of scaling.

The literature research concluded in finding, and using a study developed by (Gill & Biger, 2012), which relates to barriers and challenges of firm growth in the Canadian market. The paper provides a detailed literature analysis about empirical studies on the barriers to small business growth and can be found in appendix A. The literature analysis conducted in Gill et al. (2012) resulted in identifying small business barriers and challenges in various countries such as Zambia, Canada, Hong Kong, Slovenia, Nigeria, Kosovo, Egypt and Malaysia. Their literature analysis identified five broad themes related to growth barriers, which were: the lack of financing; the lack of managerial skills; market challenges, regulatory issues, and aspects of a small business growth plan.

After conducting the literature analysis, the authors of Gill et al. (2012) used a quantitative study focusing on Canadian small business owners (organizations with less than 150 employees) to verify their hypotheses. They surveyed 219 participants through personal visits, emails or phone calls. “These small business owners’ perceptions and judgments are the basis for our findings...” (Gill & Biger, 2012, p. 11). The authors of Gill et al. (2012) then analyzed the responses of the survey and concluded that there are indeed barriers for small businesses growth in Canada. The identified barriers are the following (Gill & Biger, 2012):

- the lack of financing
- market challenges
- regulatory issues

To summarize, there seems to be a lack of scientific literature when it comes to scaling challenges in digital businesses. The available literature focusing on scaling, has its main focus on providing generic guidelines as to how companies could scale their business. These guidelines might illustrate, by twisting and turning, potential barriers to scaling but are rather generic and do not mention specific scaling challenges in digital companies. Due to the lack of scientific studies related to scaling, the literature analysis has been broadened by including studies related to business growth. Furthermore, investigating the differences between growth and scaling could foster the research field. The broadened literature analysis, including studies related to small business growth, found a study conducted by Gill et al. (2012) focusing on specific challenges related to small business growth. The study furthermore provides a detailed list of challenges related to small business growth and has therefore been selected to provide core insights for this small-scale thesis.
3 Method

The aim of this small-scale research is to explore and identify potential challenges in scaling a digital business or digital product. In order to identify relevant material for this study, the author engaged in a systematic review of existing research related to scaling challenges, digital growth and entrepreneurship.

In order to continue with the study a decision upon the approach of conducting the research needed to be made. There are two research approaches available, one is the qualitative approach, and the other is the so-called quantitative approach. The quantitative research approach described in (Garcia & Quek, 1997) emphasizes quantitative data as the primary way of explaining phenomena. The approach furthermore argues that this method builds on the assumption that there is an objective reality. This could be identified through testable hypothesis such as a statistical analysis. While on the other hand qualitative research focuses on the investigation of processes and meanings, but also “…attempts to develop in-depth understandings based on a constructive approach where no clear-cut objectivity or reality is assumed” (Wimelius, 2011, p. 79). According to (Strauss & Corbin, 1997) interpretation of issues about experiences, cultural phenomena and social interactions are best conducted using a qualitative research approach.

There are furthermore various ways of doing social science research, such as experiments, surveys, archival analysis, histories, and case studies (Yin, 1994). Each strategy has certain advantages and disadvantages, according to Yin (1994), choosing a strategy depends upon three conditions: (a) the type of research question, (b) the control the researcher has regarding actual behavioral events, and (c) the focus on contemporary as opposed to historical phenomena. These three conditions help determining which research strategy might be the most appropriate for this case. The author in Yin (1994) suggested that the type of research question is of importance. The type used in this research is a “what” question which can be interpreted in two different ways. Either the “what” question is exploratory such as “What are the ways of making schools effective?” (Yin, 1994, p. 5), implying that the question is a justifiable rationale for conducting an exploratory case study. With its goal laying in developing a hypothesis, but also to uncover potential opportunities for further research. Or on the other hand a question such as “What have been the outcomes from a particular managerial reorganization?”, which implies rather a “how many or “how much” inquiry (Yin, 1994, p. 5). The author in Yin (1994) suggests that the second type favors more likely surveys or archival strategy’s, whereas the first one suggests no particular strategy since any of the five strategies can be used. The author of this research paper is interested in tracing operational links over time by asking questions of “how” and “why”, instead of looking for frequencies suggesting “how much” questions, hinting that a case study might be a good decision. The conditions (b) and (c) suggest a case study when relevant behaviors cannot be manipulated, which is the case by using experiments as a research strategy. A case study furthermore has as opposed to the historical strategy, two additional sources of evidence: systematic interviewing and direct observations (Yin, 1994). While the “case studies and histories can overlap, the case study’s unique strength is its ability to deal with a full variety of evidence-documents, artifacts, interviews, and observation-beyond what might be available in the conventional historical

1 The complete set up of papers and the process that I went through is described in appendix B
study.” (Yin, 1994, p. 6). This seems to be fitting regarding the aim of this study, since the researcher is not able to influence any kind of behavior of his participants but is interested in researching specific phenomena in a real-life context. However, the selection of the case study begs the question of what defines a case in this paper. While a case can be many things, the author argues that the case for this paper is scaling digital companies. Whereas the phenomena in question is the scaling part of digital startups and more specifically the barriers and challenges in scaling these specific types of companies.

3.1 Data Collection and Sampling
The primary data source was based on interviews, but to conduct the study I furthermore used a secondary data stream which were for example press releases, blog posts or books related to the companies.

The first phase of this study was to acquire an extensive repertoire of knowledge about concepts and potential frameworks but also of the vocabulary in the startup field using secondary data sources. This was done by executing an extensive literature review about scaling, entrepreneurship and growth in scientific articles, books and blog posts. Resulting in a fact-based problematization of the research area.

The second phase focusing on acquiring the data for this study, consisted of deciding upon a data collection method. The qualitative research stream offers two distinct methods, naturally occurring and generated data (Lewis, 2003). Whereas the main methods involved in working with naturally occurring data are observation, documentary analysis and conversation. On the other hand, the main types of generated data are in-depth interviews and group discussions (Lewis, 2003). The author decided to use generated data instead of observed data, due to the following facts derived by Lewis (2003, p.56): “generated data allow participants to describe the personal or organizational contexts in which the research issue is located and how they relate to it”; generated data collection methods provide the study participants (interviewees) a direct and explicit opportunity to convey their own meanings and interpretations through the explanations they provide, whether spontaneously or in response to a question.

After selecting the generated data method, the data collection method needs to be considered. The in-depth interview seems to be the most suitable one. The in-depth interview intends to combine structure with flexibility, meaning that even in the most unstructured interviews the researcher has some sense of the general themes he or she wishes to explore (Legard, Keegan, & Ward, 2003). The authors in Legard et al. (2003) identified several key features of in-depth interviews: The in-depth interview provides the opportunity to fully probe and explore responses and answers of the interviewee which fits to the overall approach of the research. Secondly the interview is interactive in nature and it is more of a discussion where the researcher asks initial questions to make the interviewee talk freely. Thirdly the researcher is able to use a range of techniques (for example probing) to achieve a qualitative answer in terms of penetration, exploration and explanation. Which is an important element for this research due to its intentions of uncovering other aspects such as feelings, opinions and beliefs which in turn furnishes the explanatory evidence necessary for qualitative research. This approach has been chosen since the process of scaling a company is a complex process involving many factors in different levels. Thus, the qualitative in-depth interviews are being
considered the best approach to gain in depth knowledge (Patton, 2002). The interview guide and its questions were developed by the previously conducted research, especially by considering the identified barriers to small business growth in Gill et al. (2012). This approach can therefore be labeled as theory informed since both, the data collection and data analysis process were theory guided.

The sampling and selection of the interviewees turned out to be a bit of a challenge. The first approach relied on contacting the local incubator for a list of companies who have been undergoing their program and are still alive ranging from 2012 until 2017. The incubator was unfortunately not willing to provide that list but referred the author to the website were a similar list of companies was displayed. The author investigated the list of companies to specifically search for digital companies matching the following criteria: the company product or service is purely digital; the product does not consist of any hardware; the company spans from B2B to B2C segments; the company has scaled or tried to scale; the company should still be alive; and the company should be at least one to two years old. A list of thirteen companies matching the above criteria has been selected. The goal was to talk to the founder and/or CEO of the company or the person responsible for the scaling process. The potential participants were then contacted through a personalized email or LinkedIn message. Unfortunately, only three companies were able to make the time for the interview. Since the previous approach did not seem to work properly the author asked the CEOs who agreed to participate for referrals and contact information from other potentially fitting companies. This resulted in conducting four more interviews with CEOs and one head of project. Leading to a total of eight conducted interviews from companies operating in a broad span of areas such as financial tech, tourism, advertisement, etc., with an overview about the role and company illustrated in table 1. The interviewed companies where based around the globe and since the author lacked the resources to conduct the interviews in person, a video-chat application was used instead. The approached companies found by a referral had to match the same criteria as previously described. The selection of five B2C and three B2B companies was not intended, it surprisingly happened due to the difficulties in finding CEOs to.

A theory informed interview guide has been developed consisting of several broad themes based on understanding broader challenges in the concept of scaling, and extensive knowledge regarding digital companies. The interview guide can be found in appendix C. Every interview started with a general theme regarding the role of the participant, general information about the company and a discussion about the digital product the company has to offer. After completion, two other themes have been discussed focusing on growth/scaling from a general point of view and challenges faced by digital businesses. The last theme consisted of an open theme where the participants could discuss freely about their thoughts regarding scaling or any other aspects in the digital realm. The previously mentioned semi-structured interview approach has been followed to enable an active discussion and room for follow-up questions.

Before the interview was conducted, the participants were asked if recording the interview would be ok since the recording will be deleted after the study (Bryman & Bell, 2015). Anonymity for the study was offered to every interviewee to ensure that the participants can answer the question truthfully. The overarching goal, the purpose of the study, and how the data of the interview will be used was once again described to ensure that the participant is well informed (Legard, Keegan, & Ward, 2003).
The method used to analyze the data was a thematic analysis because of its simple, relatively straightforward, and flexible approach. The method itself is furthermore searching specifically for themes or patterns in qualitative studies (Braun & Clarke, 2006). The reason for selecting this method was that, besides the previously mentioned benefits, the approach is fairly easy to learn and accessible to researchers who are new to qualitative research (Braun & Clarke, 2006). The thematic analysis method used in this paper is based on the guidelines described by Braun and Clark (2006), which consists of five distinct steps. The first step is to transcribe the data, and if necessary translate the content into the English language. After doing so the transcribed texts are read and initial ideas regarding the data will be developed. The second step lays in generating initial codes, where interesting features of the data are being highlighted in a systematic way. The codes represent the features of the data. The coding was done using a theory informed approach, meaning that the identified challenges to small businesses from Gill et al. (2012) were considered. The coding process was then carried out using a compare and contrast approach. The third step focuses on collating codes in potential themes and gathering all relevant data under the potential theme. The original themes, the challenges and barriers established by Gill et al. (2012) were market challenges, regulatory issues and lack of finance. The codes were collated if they matched to these themes. If not, other broader themes were created to describe the coded data. The fourth step included reviewing the themes by specifically checking if they are working in relation to the coded snippets, but also if the themes are working regarding the entire data set. The fifth step included the naming and defining of the themes. If a theme was somewhat unclear or did not match the codes or the case, the definition and name of the theme had to be adjusted. The last step, step number six, focused on producing the report which includes the analysis and the compare and contrast approach in regard to the related literature described in section two. After going through each of those six steps iteratively, the author ended up identifying six broad themes regarding the challenges and barriers of scaling digital companies.

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<th>Respondent</th>
<th>Role</th>
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Table 1: Overview of the conducted interviews

### 3.2 Data Analysis

The method used to analyze the data was a thematic analysis because of its simple, relatively straightforward, and flexible approach. The method itself is furthermore searching specifically for themes or patterns in qualitative studies (Braun & Clarke, 2006). The reason for selecting this method was that, besides the previously mentioned benefits, the approach is fairly easy to learn and accessible to researchers who are new to qualitative research (Braun & Clarke, 2006). The thematic analysis method used in this paper is based on the guidelines described by Braun and Clark (2006), which consists of five distinct steps. The first step is to transcribe the data, and if necessary translate the content into the English language. After doing so the transcribed texts are read and initial ideas regarding the data will be developed. The second step lays in generating initial codes, where interesting features of the data are being highlighted in a systematic way. The codes represent the features of the data. The coding was done using a theory informed approach, meaning that the identified challenges to small businesses from Gill et al. (2012) were considered. The coding process was then carried out using a compare and contrast approach. The third step focuses on collating codes in potential themes and gathering all relevant data under the potential theme. The original themes, the challenges and barriers established by Gill et al. (2012) were market challenges, regulatory issues and lack of finance. The codes were collated if they matched to these themes. If not, other broader themes were created to describe the coded data. The fourth step included reviewing the themes by specifically checking if they are working in relation to the coded snippets, but also if the themes are working regarding the entire data set. The fifth step included the naming and defining of the themes. If a theme was somewhat unclear or did not match the codes or the case, the definition and name of the theme had to be adjusted. The last step, step number six, focused on producing the report which includes the analysis and the compare and contrast approach in regard to the related literature described in section two. After going through each of those six steps iteratively, the author ended up identifying six broad themes regarding the challenges and barriers of scaling digital companies.
3.3 Ethical Consideration and Limitations

The conducted interviews were recorded after receiving permission from the respondent. The participants of the study had been informed that the recorded interviews are only being used for research purposes and are only viewed by the author of this thesis. An important aspect of this thesis was to ensure that all personal information regarding the companies approaches to scaling are hidden. This is important since talking about successes and failures during the scaling phase is a critical and delicate topic. For this reason, the only information provided from the participants are their job titles and their respective fields in which the company operates in. The interview guide has not been sent to the participants beforehand, because the goal of the study was to freely discuss about the barriers and challenges related to scaling. Sending the participants the interview guide prior to the meeting could have potentially biased their answers.

This is an exploratory study to determine the barriers and challenges of digital companies during their scaling process. The study is limited due to its short period of time and small number of interviews, which implies that drawing generalizations from this study should be done with care, since the study aimed to uncover potential barriers of scaling. These barriers need to be verified with a bigger sampling population. Furthermore, the selection of the study from Gill et al. (2012) focusing on the Canadian market might be limiting this study with its data input to a single country. This suggests that barriers which have not been mentioned in this paper can exist in other countries.

4 Results

This chapter presents the empirical results under the various conceptual themes which were derived from the analysis of the data, which constituted to six themes in total. The first three themes stem from extant research on small company growth and were present in the specific empirical data derived from this study as well, albeit with some particular challenges. The other three themes are direct results of the conducted study and were defined as user acquisition and onboarding, language and localization, and lastly pivots while scaling.

4.1 Market Challenges

This theme focuses on the challenges in scaling a digital product specifically looking at market barriers and challenges which need to be overcome in order for the company to gain a foothold and establish a strong market position. Many of the generic challenges presented in the study explained in 2.2, could be confirmed within this empirical study as well, such as the tough market competition. However, the analysis of this also revealed that there seems to be a difference when it comes to market challenges in the digital realm.

The CEO of company Theta mentioned that the barriers of digital products are generally rather low, which encourages competition since software can be built rather cheap and fast, as opposed to for example a hardware product. This constitutes to a unique market challenge specifically for digital businesses because it seems that software can be replicated easier than a hardware product. Thus, making it possible for competitors to copy an already existing and functioning business model. Respondent Theta also mentioned that due to the fierce
competition faced in the digital environment the scaling challenge might be just as difficult as scaling a hardware company:

“In digital anyone can do it since the barriers are lower, that means however that the competition is super fierce. In the end it is probably equally hard as scaling a hardware product.” - Theta

The CEO of company Delta for example acknowledges the fact that his/her companies business model does have a low barrier to entry and a number of competitors in the market. Meaning that acquiring a high share of wallet, the percentage of how much a customer’s wallet is able to buy, is challenging. So instead of trying to fight the competitors he/she adjusts his/her strategy accordingly and aims, instead of scaling in a slower, more sustained and controlled pace, he/she tries to acquire as many users possible in a short period of time to boost the return on investment (ROI).

“...we have a low barrier to entry and a weak defense position in the market.”
- Delta

The analysis thus reveals that there may be differences in market challenges between companies aiming for a B2B market and companies aiming for a B2C market.

According to the CEO of Delta working in the B2C segment, who mentioned that one challenge he/she is facing is trying to establish a foothold in a market segment with incredibly fierce competition. In this market the players compete according to the CEO, over every single potential customer. Thus, creating an incredibly difficult scaling challenge because even though the B2C market has a lot of potential customers, it seems that there is a limit as to how many customers and how many players can co-exist in a market without crippling each other, said the CEO of Delta:

“Especially in the European market these users are one of the most expensive of our users since we are dealing with huge competitors in a way such as expedia or price line. But you are also competing with other companies and big brands because these people have purchasing power. What ends up happening is that on the one hand you have a fairly small population that would qualify to claim that compensation our product offers, and then you have a bunch of advertisers running after your audience.” - Delta

As the previous respondent mentioned, entering a market where competitors were able to establish themselves seems to be an extraordinary challenge. The head of project from company Epsilon mentioned the difficulties they had when launching their software into a new market. The head of project said that if the company scales to a different market, which is in this case a new country, they are required to build up their project from scratch, since every market is different. This becomes even more challenging if there are already existing players, who do not want another one competing for the same users. Suggesting that these companies will fight to keep their market position:

“Since the projects are always beginning from zero since it is a new market place you always need to start investing a lot of resources to get the website rolling, which becomes even more difficult when there are already established players.
Because the existing competition for example will fight as hell so we can’t establish a foothold in the market.” - Epsilon

To summarize, many of the respondents expressed that generic market challenges such as the fierce competition identified in the introduced study in 2.2, seem to apply to digital companies as well. The respondents nevertheless also expressed that market challenges might be even harder due to the low barriers of digital businesses, since software can be replicated rather easily. However, an important observation made in this theme is that there seems to be a difference in how B2C and B2B companies experience market challenges.

4.2 Regulatory Issues

Regulatory issues identified by extant research concerns issues such as for example taxation or high licensing/registration fees. The latter is focusing on licensing costs for e.g. having the rights to do business. The interviewed companies in this study did not mention any taxation challenges but did bring up a licensing issue and other aspects of regulatory challenges concerning governmental aspects. One of which were specific laws in each country because so far there is no general user or data protection law applicable for every country. The head of project from company Epsilon mentioned that a lot of resources need to be spent into finding out the specifics, about the legal terms before scaling to another country, since if something goes wrong the company might face serious trouble for not following certain rules and regulations.

“The legal parts are definitely something to consider. Because every country has different legislations and laws so there is no generic template we can use, meaning that we have to put a lot of resources into figuring out how we can build our product and what we need to consider while building it for the destined country. For example, looking at the addiction rate and how much money gambling people might lose.” - Epsilon

This seems to be a time-consuming challenge which needs a lot of resources therefore potentially slowing down the pace of a company which is trying to scale. The head of project of company Epsilon furthermore mentioned that in some countries the market is strictly regulated meaning that no other European player is allowed to enter. One example he provided was that the market in the UK for example is the complete opposite, thus allowing any other player into the market. Investigating and categorizing these legislations might cost, in addition to money, a lot of time. Which is one of the most crucial and sparse resource in the startup sector.

The CEO of the financial tech company Alpha mentioned that a big challenge, which has also been identified by extant literature, is still the barrier of licenses. Thus, implying that companies’ businesses are still dependent on getting some form of governmental permission to conduct their business. This constitutes to a huge scaling barrier because if the government declines the request for a license the company seems to be in serious trouble. He mentioned that it is however not a question of price, instead it is more a question of being allowed/able to receive the license due to governmental regulations, which puts a huge barrier in front of any company which is trying to scale their product. He mentioned the following:
“I think the other barrier is legal, there’s intense barriers to entry internationally in the financial service, it is one reason why for example stock wipes is not in the united states, it is because they can’t get a license.” - Alpha

Regulatory aspects can be heavily influenced by the current head of state and the represented government. These entities can cause a great deal of uncertainty. The CEO of company Alpha mentioned that the current situation in the United States, with its current head of state is going to get worse before it is getting better, meaning that there might be some crippling changes in the economy thus creating unpredictable barriers for businesses while scaling. Furthermore, since in some cases governments seem to generate a high amount of uncertainty for companies working with a successful business model, for example advertising companies which are storing user data for targeted marketing, might find their entire businesses crippled by a governmental regulation. The CEO of company Delta mentioned the following:

“Another potential risk is that regulations declare that you can only have the data of the user for the transaction, which would cripple digital companies, for example looking at the advertisement segment.” - Delta

The key take aways from this theme are that the study could confirm some generic regulatory challenges identified by extant literature in the digital realm as well. One of which is that companies who want to scale to another country need to invest considerable amount of resources to investigate country specific legal terms. Resulting in a huge barrier for scaling since it slows down its process. Governmental institutions can affect businesses heavily due to potential policies and data laws. They furthermore have the power to short stop the scaling process entirely by not giving out a license for conducting business in the desired market/country. An observation made in this theme is that digital technology with its potential to reach global markets seems to be somewhat constrained by country specific laws and regulations.

4.3 Lack of Financing

While dedication and willingness to build a business is often an important aspect of entrepreneurship it does unfortunately not pay the bills. This theme is about the lack of financial support, or funding as entrepreneurs would say. Extant literature has identified that the lack of financial support from the government, difficulties in getting business loans from banks, lack of sufficient collaterals to secure bank loans, and the lack of enough money to operate a business, are challenges which need to be overcome in order to grow a business. While the interviewed companies did mention various points related to the lack of financing, they did however, not mention aspects related to getting business loans from banks or a lack of sufficient collateral.

According to the CEO of company Zeta, who acquired funding from a European Research Fund and from a conventional venture capital fund mentioned that accessing money is challenging, especially when a company tries to raise money from research grants or venture capitalists. She furthermore explained that the reason for this is that the company needs to apply for several research funds in order to get one fund accepted. The same applies according to her to raising funds from venture capitalists, where the process of making a sufficient term
sheet takes a considerable amount of time. This constitutes to a significant scaling challenge since the money might be needed to pay for increased server load and development costs in order to maintain the current scaling process:

“Getting research money is hard because you need to write lots of applications and I mean if you get one application accepted out of five that is good. It is the same thing with raising venture capital, it is a long process. You have to give them a fair but appealing share and you have to go through the due diligence and stuff. And once you have them on board the work only got started because they want to get to know the company. It is tough and a lot of work.” - Zeta

While establishing funding seems to be a challenge in and by itself, it does however help according to the CEO of company Zeta to mature the technology. But also, to scale without worrying to much about profitability and rather being able to focus on driving sales and spreading the word.

The CEO of company Gamma however, who has not received any outside investment, is currently facing resilient challenges while trying to scale his company. His lack of funding results in him not being able to pay a salary for potential employees, which basically implies that he needs to ask people to work for free. While this could also be defined as a growth issue and since growth and scaling are two different things, it could be argued that this is not related to any kind of barrier or challenge in the concept of to scaling a digital company. The author decided to include it in this theme because even though the matter does constitute to a growth issue, the implications are a challenge related to scaling a digital business. Since finding talent to help the CEO of company Gamma scale his business becomes tremendously challenging. This manifested by him mentioning the following:

“When you don’t have the funding to pay talent, because my company is very much bootstrapped, and when you don’t find a big enough audience to pay for the service, then you have a big issue.” - Gamma

This reveals a big issue which seems to be faced by companies who are trying to scale. Since these companies might lack the funding required to pay a salary for talent which is helping the company to scale, because not every startup is eligible to receive research funds, venture capitalist funds or angel investment. These companies are faced with the challenge of finding and giving potential employees something to compensate the lack of salary, such as for example equity. Furthermore, the lack of funding constitutes to a variety of issues during the scaling process according to the accumulated data of this study. Besides the previously mentioned talent recruitment issue, which is in a sense necessary to share the work load of scaling a digital company.

The other arising challenge due to lack of funding, identified in this study is to be able to pay for user acquisition channels during the scaling process. More specifically the time it takes to take care of these aspects of the business as well, because if the company is a one-man company then there simply is not enough time or focus left to take care of this part as well. The CEO of company Eta mentioned the following about the time issue, which is a difficult challenge in the concept of scaling, which could be according to the generated data, eased up
by using funding resources. Thus, implying that the lack of financing can slow down the pace of the scaling process tremendously.

“When you are a small company then time management is the hard part. Finding out where to spend your time is difficult.” - Eta

This theme identified that funding is also an important challenge in the digital realm. While there are several methods of acquiring money for a company not every company is eligible to do so. The process of accessing money is time consuming and challenging. However, once funding has been secured it can help mature the technology by focusing on improving the product instead of worrying about sales. Implying that funds do help in scaling a product since it furthermore allows companies to hire talent which aids the scaling process. The key take away in this theme is therefore, and that comes as no surprise, that the lack of funding consumes time, which impacts the scaling process. The lack of funding furthermore may lead to various growth strategies as opposed to scaling strategies.

4.4 User Acquisition and Onboarding

This theme has been generated purely on the data provided by the interviews. User acquisition and onboarding challenges have been echoed by several respondents of the study. Whereas user acquisition are looking at challenges involved in acquiring a user, from reaching out to a user where he first sees the product to him arriving at the website. This directly transforms then into an onboarding challenge where the potential user who already expressed interest, is set up to use the product or service.

According to the CEO of company Beta who talked about the aim of scaling a business, which is to replicate the business model to another market where users need to be hooked and convinced to use the proposed service. He furthermore mentioned that before a channel, to deliver the message can be selected the channel in question needs to be evaluated, but also the message itself needs to be developed. According to company Betas CEO and several other participants of this study, defining and delivering a clear value proposition to a specific customer is a challenge related to scaling.

“One challenge is to simply be noticed, and the second one is trying to explain the value proposition to people, like; what problem do you solve that I need to pay for?” - Beta

According to the CEO of company Beta who mentions that the value proposition for his own company is fairly straightforward, seems to have significant barriers and challenges related to making customers reflect upon the problem, its difficulties and time consumption, and how the proposed service might help solve it. This constitutes to a scaling challenge since entrepreneurs need to overcome the barrier of delivering a clear and compelling message about their products or services to a wide span of people. The CEO furthermore mentioned that the scaling challenge of delivering the value proposition sufficiently and clearly is an issue for any kind of tech company.

After a clear message has been found the question of choosing a channel to deliver the value proposition to relevant customers arises. This is a necessary step in the concept of scaling since the entrepreneur needs to consider each channel and its specific audience. But also aspects
such as the ROI are of importance. The challenge faced by the participants of the study was grounded especially in finding a cost-efficient way of finding the right channel to reach the companies potential customers. According to this study, the B2C companies have a number of channels to choose from, which results into an issue of spending a lot of resources and time in finding and evaluating channels until the best of them been determined. The CEO of company Delta supports the echo from various other respondents of the study. He furthermore also mentions that in order to scale and reach sufficient users it is important to own the channel meaning that there is no other player using the same channel as well:

“The problem is finding channels that work and converting new users into customers.” - Delta

“...find a channel which you own and where you don’t compete with, which are for us travel agencies and companies whose staff is frequently traveling.” - Delta

The previous challenges were derived from the respondents in the B2C customer segment. According to the collected data, user acquisition seems to be even more challenging for the B2B companies in this study. The CEO of company Zeta mentioned that they are partnering with tech savvy influencers who have several followers in the area. Her reasons for that seemed to be that B2C companies have the luxury of using established channels such as Facebook to conduct a targeted ad campaign. The same cannot be said about the B2B companies in this study because according to the generated data, B2B companies find it quite difficult to select and reach out to potential customers. The lack of potential advertisement platforms which are used by B2C companies, such as Facebook or a standard TV (both are almost entirely B2C focused) raises the question of how these companies can reach B2B clients. All three B2B companies echoed that in order to scale they need to establish some kind of partnership with various other entities to reach potential customers. This constitutes to another barrier for scaling since the channel selection can become time consuming and difficult.

“Finding the right communication channels so that we reach those persons that would be interested in our product. That would not be everyone but for example tech savvy influencers or someone who is working in the publishing ad side. So, finding the right channels is a big issue.” - Zeta

According to the respondents in the B2B segment scaling to a new market begins with establishing a local reference case. This case is then used to establish themselves in the new market and furthermore to showcase that the product or service works. These reference cases are, according to the CEO of company Zeta, necessary to scale their businesses and gain traction in the market. The CEO mentioned that they established a foothold in the Swedish market by acquiring a big customer, which makes it now easier to contact other companies in the segment:

“For us to scale we need to have a local reference case. We have traction on the Swedish market I mean we have a big customer so that makes it easier to find new customers. But now we are going to the UK so then we need to find a new reference case.” - Zeta
It seems that the clients of the B2B segment are rather hesitant when it comes to new technology and therefore need a proof of concept first. This is a huge scaling issue since acquiring this first reference case can become a tremendously difficult, resulting in potentially slowing down the entire scaling process.

After reaching out and being able to create some kind of interest of potential clients, the so-called onboarding process begins. The CEO of company Alpha described onboarding as someone who is reaching out to a potential user and assists the user during the registration and set up process:

“Someone reaches out to you and then assist you with the rest of your registration, it is called onboarding.” - Alpha

This onboarding process has echoed heavily from the B2B companies coming from a more academic background. Meaning that these companies did not build a product based on the problems of specific customers. Their current product is rooted from conducting academic research which resulted ultimately in a sellable service or product. The issue for these companies in terms of scaling seems to be that the onboarding process can take a lot of time due to distinct client customization. The CEO of company Eta described the dream scenario when it comes to onboarding:

“If you have some kind of product such as Spotify, then it is very easy to distribute, you don’t have any integration work. It is just a push and getting it to new users and you are done. Obviously, that is the dream scenario with the easy onboarding.” - Eta

Even though Spotify is a B2C product, it clearly shows what the dream onboarding scenario should be. According to the CEO of company Eta and the CEO of company Theta who both seem to share product challenges in terms of the required onboarding processes, are mentioning that each client needs to be contacted specifically in order to deliver a customized product. This barrier of onboarding limits the speed of the scaling process greatly, especially since the notion of digital technology defined by extant research emphasizes the easy distribution and use of software products and services. This does not seem to be the case since according to the accumulated data, there seem to be different barriers when it comes to the distribution of digital products. More specifically there seems to be a difference as to how easy it is to scale a product due to the onboarding challenge:

“We have to custom integrate our product for every customer, so you have even among digital products a broad span of how scalable a product is. We can for example go from requiring a lot of integration to just a push of a button to get the customer started.” - Eta

“We don’t have super easy onboarding we need to contact people since our product is a B2B product and that takes time.” - Theta

To summarize, this theme identified that it is hard for companies to be noticed and to reach potential customers. This seems to be especially true for B2B faced companies due to fewer customer channel opportunities, since B2C companies can rely on huge consumer faced
platforms such as Facebook. This constitutes to a scaling barrier since the question of reaching out to potential customers seems difficult. Furthermore, the question of creating and defining a compelling value proposition which hooks the customer but also explains the problem can be challenging. Lastly the process of helping a customer use the company’s product varies from company to company but seems to differ from a broader point of view between B2B and B2C companies in this small-scale study. Suggesting that the key observation in this theme is that while digital technology is able to reach out and be used by actors all around the globe, companies in the B2B segment, with its needs to provide customized products, are facing a huge scaling challenge.

4.5 Localization and Culture
This theme is derived entirely from the accumulated data and focuses on the distinct challenges of language and cultural aspects while scaling to different countries. More specifically there seems to be a difference in simply translating the language of a product to fit a new market versus localizing the products language. While the translation of a product can be easily done using the internet, thorough localization of a product seems to be challenging since it requires various resources. This theme is furthermore highly relevant since many of the respondents highlighted that the theoretical reach is not a challenge per se for a digital company, because it is rather cheap to reach potential customers through the internet and since, at least according to theory, a digital product can be easily copied and implemented in different countries. Thus, begging the question as to how can language and culture become a challenge for scaling? Well, some participants identified that there is a language and cultural barrier when scaling a product to another country. Looking for example at the head of project from company Epsilon who mentioned that in order to scale to a new market the company needs to employ a native speaker of the country to ensure that the product specifics align with the local language and culture. Because according to the head of project there seems to be a difference in speaking the language versus being a native speaker who is aware of local slangs and phrases. This language and cultural issue resonated in the responses from other participants as well. For example, the CEO of company Alpha also identified that a significant scaling barrier is in fact language and other cultural aspects:

“But the barrier for scaling is language. And that’s why I think Spotify is such a brilliant example, because Spotify is independent of language. And that’s where I think that company Alpha has such a tremendous advantage because we can perform an analysis of a Chinese company just as easily as we can perform an analysis of an American company. So, I think that, to me, it’s a language issue, and that’s why my idea is that if I can eliminate language, then I can make it a global concept.” - Alpha

The CEO of company Alpha implies that if a startup is able to eliminate the language barrier it is able to penetrate and scale on a global basis. This would then align with extant research and the promises that digital technology has the ability to accomplish global penetration. While localization of a product is a difficult barrier to scaling, there is another barrier identified by this study, which must be overcome during the scaling process, the so-called cultural aspects. Cultural aspects can be for example local analogies and how content
should be delivered. This is a difficult challenge while scaling since it is very much up to the specific country and culture. The CEO of company Alpha mentioned that for example in the United States one way of delivering content can be by using fantasy football metaphors. According to him fantasy football is a big deal in the U.S.A and might make it easier to understand the proposed product. Whereas in China, with the biggest social network game being an online farming game, analogies towards farming might be a better fit to make the product more compelling:

“For instance, in the United States fantasy football content analogies might be much more appealing .... Whereas the biggest social network game in China is called happy farm. So, it’s very possible that culturally the plant and the pot image might be very effective in China, instead of the United States with its kind of macho culture.” - Alpha

This suggests that while it is easy for a digital company to penetrate a global market from a technological point of view, the country specific culture needs to be considered while scaling the product as well. This requires a connection to a native inhabitant of the specific country who can provide information about the cultural background. Therefore, hindering or creating time friction in scaling a digital product.

4.6 Pivots while scaling
This theme is derived from the accumulated data from the participants and focuses on the core principles of pivots during the scaling process. To clarify a pivot defined by extant literature implies to adjust or change elements of an existing business model in order to improve a product or service. In an early stage of a digital company the founder has almost infinite possibilities he/she could peruse but is limited to the amount of time he/she and his/her team is able to contribute. These people might spend months or years in the creation or development phase and then most likely the same amount of time to find a matching market. However, several participants mentioned that finding and building the right product, and then finding the right market is incredibly challenging. Hence designing, implementing and launching a digital product is, based on the aggregated data in this study an explorative process, which has implications for scaling as well. The CEO of company Eta mentions that you never know what people want, meaning that doing something new is always a challenge since there is no existing blueprint for that. This constitutes to two challenges. First, it implies that deciding as a startup founder when enough data has been accumulated, and enough tests have been conducted in order to be reasonably certain that the product should be scaled, is challenging. Implying that there is a scaling challenge even before the company has tried to scale. The pre-scaling challenge here seems to be to decide whether the company is ready to scale. The second barrier, which seems to be related to the pre-conditions of scaling, is the lack of data in order to decide if the company should scale or if the company might need to pivot their business model.

“The reason is because you never know what people want, and we do something which hasn’t been done before so you don’t have a blueprint for what you should do.” - Eta
“The unproven grounds are the most difficult things.” - Eta

The CEO of company Delta accomplished to acquiring sufficient data from his customers, he however seems to face another challenge which is concerned with making sense out of the collected data. Since according to him the more data you have about your customer the harder it gets to further understand the customer. This constitutes to two more scaling challenges. While on the one hand it supports the challenge of deciding how much data is enough data to potentially edit (pivot) the business model as concluded from the input by the CEO of company Eta. And secondly, the process of making sense of the data seems to be a challenge in and by itself considering how much data can be accumulated from a customer. The CEO of company Delta furthermore mentioned that ideally the data is clear enough to adjust the companies’ strategy, which is according to him the selection of for example markets or features.

“The more users you acquire and the more knowledge you acquire the more data you are going to have, and the more data you have the more difficult it might get to understand your customers.” - Delta

The CEO of company Delta mentioned that to make sense of the accumulated data, every company needs to define specific and tailored metrics by themselves, in order to measure if the company is doing well. In the case of company Delta, the important metric seems to be obtaining users in a short period of time. Meaning that the company focuses on setting a goal to acquire a number of customers in a time frame and then, after the goal is reached the metric changes. This reveals another scaling challenge because it seems that selecting the right measurement values or key performance indicators (KPIs), while scaling the business is dependent on the decisions of the management. Implying that there might not be a one-metric-fits-all approach to measure a company’s performance.

“The one metric that matters most to us is acquiring new users in a short term. I have to make this clear because the metric which matters is not the company vision. So, the metric you have to choose must be something which you can focus on for 2-3- months, e.g. we want to get one hundred thousand users for the next following months.” - Delta

The CEO of company Zeta talked about pivoting their product from a premium product to a mass product in order to increase their reach. This transition or process of changing an existing functioning business model, is according to her incredibly challenging. Because according to her, it is rather easy as a small firm with a limited number of customers but becomes difficult as soon as the company has grown formidably. Company Zetas CEO also mentioned that at first it is tempting to work with a premium business model to keep the number of customers low to improve the service. The CEO however furthermore states that in doing so you might get stuck with that model since you need to accommodate a lot of features. This seems to uncover an incredibly interesting scaling challenge since the company seems to have enough data in order to make the decision and change the business model. But doing so seems to be challenging because the company needs to select the most generic features from the pile of products they seem to have developed. Furthermore, comments from the CEO of company Zeta seem to uncover that there exists a path dependency challenge once the company has partially scaled. Implying that once the company has reached out and acquired
its first bunch of users, but then decides to pivot based on for example new data, changing the business model seems to become even more difficult since the company needs to consider its already existing user base.

“The biggest challenge right now is about generalizing from individual cases to a model that can be repeated, again and again and again. Because it is pretty easy when you are small, then you have your few customers...” - Zeta

“It is tempting to work with a premium model first where you can charge a lot. Then you sort of get stuck in that, because you need to be accommodating a lot of specialized features. So, to make this transition from a premium product to a mass product, that is hard if you don’t have a very big pile of cash to begin with.”

-Zeta

To summarize, several respondents expressed that understanding the customer by acquiring enough data is challenging in the early stage of a startup with a limited number of users. However once that challenge of accumulating enough data has been overcome the next challenge seems to be to make sense of the data. Implying that drawing conclusions from the data is challenging since company specific KPIs, which according to one respondent must change over time, need to be identified. Lastly generalizing an existing premium business model by reducing the functionalities in order to increase the reach seems to be incredibly challenging. An important core observation from this theme is that if a company has already scaled to an extent, it might fall into a path dependency challenge because the company needs to consider how potential actions/pivots affect the already existing user base.

5 Discussion

This section will discuss and compare the core results and insights from the conducted interviews of this small-scale study with the studies introduced in the related research chapter.

5.1 The transparent line between growth and scaling

As introduced in chapter two scaling and growth are according to common business dictionarities two different things (Growth vs. Scaling, 2014): Growth suggests that a company is adding resources at the same rate as it is adding revenue; While scaling implies adding resources at an exponential rate while only adding resources at an incremental rate. The definition seems clear from a theoretical point of view. However, as this study revealed, some of the core challenges found in the general growth literature identified by Gill et al. (2012) have also been confirmed to be applicable to some extent to the concepts of scaling a digital product. One example was that in order to scale the CEO of company Gamma needed more talent to help him handle the workload. While this constitutes to a scaling issue, the cause of the challenge is rooted in the lack of finance and its resulting problem of not being able to hire more employees identified by Gill et al. (2012). This could imply that digital companies are not as special as the public portraits them, because they might be, according to the results of this study, in the same way limited by the capabilities and constraints of every other human
entrepreneur. Extant literature such as (Brown, Mawson, & Mason, 2017) suggests that companies classified as high growth firms (firms with an average annualized growth greater than 20%) employ on average 1-19 employees to keep up the pace.

What does this mean? Well the results in combination with extant literature suggests that it is quite difficult to draw a clear line between growth and scaling. While the definition for each is quite clear, in practice however the aspects of growth and scaling seem to blur together. This implies that it is difficult for any kind of entrepreneur to state that his or her company is currently scaling or growing right now.

5.2 Scaling challenges in relation to B2B and B2C
The related research chapter introduced a paper by Skog et al. (2018) mentioning that digital technology has the theoretical and unparallel potential of exponential growth. Digital products possess furthermore the ability to be rapidly scaled to penetrate the global market. This statement might sound convincing from a theoretical point of view while only looking at the theoretical capabilities of technology, which embody that no physical product can, according to theory be replicated in a similar fashion. However, this small-scale study suggests that scaling is furthermore associated with a number incredibly difficult and interrelated challenges specifically associated with digital products. The author of Gill et al. (2012) identified that there are regional differences when it comes to growing a startup, such as the lack of financing in Hong Kong (Moy & Luk, 2003), as opposed to the high collateral requirements in Slovenia (Bukvic & Bartlett, 2006). As identified in chapter 4.5 focusing on localization and culture that even though the technical aspects to accomplish global penetration are present, there are barriers and differences in language and cultural aspects. These need to be considered while scaling a digital business. Implying that while the theory might be correct in stating that digital products are capable of rapidly scaling, the reality seems to be, that scaling is still quite the challenge.

During the analysis of the data and its corresponding themes a pattern has been identified. As the result section hinted there seems to be a difference in challenges faced by B2B companies versus challenges faced by B2C companies. Table 2 illustrates the core challenges for each respective customer segment.

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<thead>
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<th>B2B</th>
<th>B2C</th>
</tr>
</thead>
<tbody>
<tr>
<td>• User Acquisition</td>
<td>• Fierce Competition</td>
</tr>
<tr>
<td>• Onboarding</td>
<td>• Selection of acquisition channel</td>
</tr>
<tr>
<td></td>
<td>• Pivots during scaling</td>
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</table>

Table 2: Challenges faced by B2B and B2C companies

Looking at the B2B segment, these types of businesses seem to have an incredibly difficult time when it comes to user acquisition. While the study of Gill et al. (2012) mentioned high advertising costs in the growth aspects, this does not seem to be the case either. Because the challenge, as suggested by the result section in this study, seems to be that it is difficult for these companies to find a channel to reach out to potential companies. The results of the study
pointed furthermore to another challenge faced solely by B2B companies which has been defined as onboarding. According to the data, B2B companies might need to customize their products for every single customer. This can span from a simple push of a button to an extensive and time-consuming customization process. Thus, potentially limiting the speed as to how fast a user base or customer base can be created which is according to the authors of (Huang, Henfridsson, Liu, & Newell, 2017) the most important requirement for scaling. Looking now at the B2C companies, the data could confirm the generic market challenge identified by Gill et al. (2012). Within the context of the identified market challenges, one incredibly difficult scaling challenge for B2C companies seems to lay in dealing with the numeros competitors in this field. This challenge is furthermore enhanced due to the fact that digital products are generally associated with a low barrier for replication. Suggesting that competitors might copy a company’s product quite easily.

Consumer faced companies could in theory see the entire world population as their potential customer, they face a difficult challenge in finding and selecting the right user acquisition channels to reach these potential customers. B2B companies seem to have rather few channels, as opposed to the numerous channels B2C companies can choose from. According to the data entrepreneurs need to spend a lot of time and resources in finding a channel which provides the best ROI during the scaling process. The last challenge identified in this small-scale study in the B2C segment focuses on the notions of the hypothesis driven approach by (Eisenmann, Ries, & Dillard, 2012). This methodology is one of the most frequent if not, the methodology to building a startup. It is based on the lean principles implying that ideas need to be verified using minimum viable products, agile management methods and other approaches to help shape a startup (Ries, 2011). Various notions from the lean methodology have been applied to the concept of scaling as well (e.g. Maurya (2016)). The literature from the lean methodology is based on acquiring feedback, preferably by future customers. The accumulated feedback data is then used to pivot elements from the business model. However, as hinted in the result section the hypothesis of pivoting during the scaling phase seems to be oversimplified. As the data from this study suggests, pivoting a business model becomes an incredibly difficult challenge, since the already existing user base needs to be considered. Suggesting that adjusting to feedback in or after the scaling phase is even more challenging then the lean methodology literature suggests.

6 Conclusion and suggestions for future research

The aim of this small-scale thesis was to investigate the challenges associated in scaling digital companies and digital products. The research question for this thesis was: “What are the challenges in scaling a digital company? A qualitative study has been conducted which included eight semi-structured interviews with seven CEOs and one head of project from companies operating in various market segments. The interviewed companies consisted furthermore of a mixture of business- and consumer faced firms. As a concluding answer there are several challenges related to scaling a digital company. The challenges were the fierce market competition due to low barriers of entry, regulatory issues such as data protection laws and licensing issues, the lack of funding to support the scaling process, localization and cultural aspects which need to be considered while scaling to other countries, onboarding challenges,
and lastly reacting to new feedback after the company has already scaled. Next to these challenges the study revealed that there seems to be a difference when it comes to challenges related to B2B and B2C companies. For example, the B2B companies had major difficulties when it comes to onboarding and customer reach. Whereas the B2C companies are facing an incredibly fierce competition but are also struggling with the selection of the right user acquisition channel. The current findings add substantially to the rather limited scaling literature and can provide a first starting point for further researchers in uncovering other scaling related challenges. The study furthermore provides entrepreneurs with a glimpse upon the potential challenges they might face in their specific customer segment. However, since the research sample is small and the acquired data stems from multiple market sectors generalization of the findings becomes difficult. The purpose of the research was however to explore and uncover potential challenges related to scaling. But also, to act as a building block for future researchers which can dig deeper into the challenges related to scaling digital companies. Future research could empirically investigate other challenges related to B2B and B2C companies. Such as if the challenge in pivoting during the scaling phase are also applicable to companies in the B2B segment.

7 Acknowledgement

I would like to express my sincere gratitude to all of my participants for their time and the valuable information you mentioned during the interviews. Furthermore, I would like to thank my supervisor Henrik Wimelius, who despite his incredibly full schedule always took the time to answer my questions and support me during this process (even at the cost of missing out on one or two lunch breaks). I would also like to thank my girlfriend, Hanna Saramo who provides calm and rational suggestions, and supports me in any kind of venture. Lastly, I would like to thank my mother, Antonia Sattler who supported me throughout my life and who was and still is a pillar of encouragement.
8 References


## Appendix A: Growth Barriers Study

<table>
<thead>
<tr>
<th>Factor</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. deviation</th>
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<tr>
<td><strong>Sales</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LOF</strong></td>
<td>5.10</td>
<td>6.00</td>
<td>5.34</td>
<td>0.35</td>
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<td>1. Lack of financial support from the government</td>
<td>1</td>
<td>5</td>
<td>3.02</td>
<td>1.46</td>
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<tr>
<td>2. Difficulties in getting business loans from banks</td>
<td>1</td>
<td>5</td>
<td>2.95</td>
<td>1.46</td>
</tr>
<tr>
<td>3. Lack of sufficient collaterals to secure bank loans</td>
<td>1</td>
<td>5</td>
<td>2.79</td>
<td>1.45</td>
</tr>
<tr>
<td>4. Lack of enough money to operate business</td>
<td>1</td>
<td>5</td>
<td>2.74</td>
<td>1.46</td>
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<tr>
<td><strong>LOMS</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Lack of formal training in bookkeeping/accounting</td>
<td>1</td>
<td>5</td>
<td>2.73</td>
<td>1.34</td>
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<tr>
<td>2. Lack of formal training in small business planning</td>
<td>1</td>
<td>5</td>
<td>2.68</td>
<td>1.35</td>
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<tr>
<td>3. Lack of formal training in small business management</td>
<td>1</td>
<td>5</td>
<td>2.65</td>
<td>1.35</td>
</tr>
<tr>
<td>4. Lack of experience in small business management</td>
<td>1</td>
<td>5</td>
<td>2.60</td>
<td>1.31</td>
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<tr>
<td><strong>MC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Tough market competition</td>
<td>1</td>
<td>5</td>
<td>4.14</td>
<td>0.89</td>
</tr>
<tr>
<td>2. High advertising costs</td>
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<td>5</td>
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<tr>
<td>3. Inadequate demand for the company product or service</td>
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<td>5</td>
<td>3.71</td>
<td>1.14</td>
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<td><strong>RI</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. High taxes (e.g. sales tax, income tax, etc.)</td>
<td>1</td>
<td>5</td>
<td>4.20</td>
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<tr>
<td>2. High licensing/registration fees</td>
<td>1</td>
<td>5</td>
<td>4.02</td>
<td>0.86</td>
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<td><strong>SBG</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1. Increase in sales over the last three years</td>
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<td>5</td>
<td>3.00</td>
<td>1.44</td>
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<tr>
<td>2. Improvement in overall performance over the last three years</td>
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<td>5</td>
<td>2.94</td>
<td>1.41</td>
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<td>3. Increase in market share over the last three years</td>
<td>1</td>
<td>5</td>
<td>2.80</td>
<td>1.34</td>
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</tbody>
</table>

**Notes:** SBG = Small business growth plan; LOF = Lack of financing; LOMS = Lack of management skills; MC = Market challenges; RI = Regulatory issues; Sales = Logarithm of average sales; Min = Minimum; Max = Maximum.
Appendix B: Literature Review

While doing so the systematic review focused on understanding the concepts of digital entrepreneurship, business knowledge and on finding existing frameworks or lists of potential barriers and challenges in scaling digital companies. A systematic review ensured a transparent process to allow other researchers to replicate and follow up upon the study (Bryman & Bell, 2015). The literature was selected from scientific databases such as Google Scholar and Umeå University library search. The keywords searched on these databases where “digital entrepreneurship”, “entrepreneurship”, “business growth”, “business growth challenges”, “small business growth challenge”, “scaling”, “challenges in scaling a business” and “scaling digital companies”. Resulting in finding a broad set of articles, which were first filtered by relevance and publication source. While the author tried to use literature published between 2000 and 2018 to ensure grasping the newest research in the field, some articles were found before this time. These articles were necessary and fundamental in describing phenomena of this study. The next step was to screen the articles to determine how relevant the article might be for this study. This process consists of several steps: The first step was to screen the headline of the search result. If the headline has been found appropriate the abstract of the article was read. If the abstract showed that the scientific paper might be of importance for this study the entire article was carefully read. Furthermore, if the research paper seemed useful, the reference section was examined to find other related and potentially relevant research papers. The detailed list of all articles read for the literature review is illustrated in the table below:
<table>
<thead>
<tr>
<th>Date of Search</th>
<th>Key word search</th>
<th>Title</th>
<th>Author</th>
<th>Year</th>
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<tr>
<td></td>
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<td>Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship</td>
<td>S Harbison</td>
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<td>Digital Entrepreneurship and its Socioeconomic Impact</td>
<td>C Davidson, C Voss</td>
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<td>The promise of entrepreneurship as a field of research</td>
<td>S Shane, S Verhees</td>
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<td>Successfully Launching New Ventures</td>
<td>F Barringer, RD Ireland</td>
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<td>Innovation and entrepreneurship</td>
<td>T Crampton, Michael A</td>
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<td>Entrepreneurship: Productive, unproductive, and destructive</td>
<td>D Cruickshank, Peter Ferdinando</td>
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<td>Business Growth</td>
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<td>Churchill, Neil C., Lewis, Virginia L.</td>
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<td>Business Growth Challenges: The rise of the entrepreneur</td>
<td>Ward, John I</td>
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<td>Building an integrative model of small business growth</td>
<td>Johan Wilkun, Holger Pelzel, Dean A. Shepherd</td>
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<td>All grown up? The fate after 16 years of a quarter of a million UK firms born in 1998</td>
<td>Michael A. Reynolds</td>
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<td>Growth paths of small technology firms: The effects of different knowledge types over time</td>
<td>Delmar, Janna, Voss, Ann M, Linke, Susan</td>
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<td>Myth-busting and entrepreneurial policy: the case of high-growth firms</td>
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<td>Strategies for superior performance under adverse conditions. A focus on small and medium firms</td>
<td>Rasmussen, Vasiliki C, Khraisheh, Tom</td>
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<td>Unveiling the growth process: entrepreneurial growth and the use of external resources</td>
<td>Rital, Andrea, Grandiotti, Roberto, Pagliaro, Adriana</td>
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<td>The characteristics and strategies of high growth SMEs</td>
<td>David Smallbone, Roger Leigh and David North</td>
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<td>In pursuit of growth: an insight into the experience of female entrepreneurs</td>
<td>Youniss, C.</td>
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<td>Matthew C. Gheysens, R. Hamilton</td>
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<td>Starting at the high growth firm</td>
<td>Delmar, Frederic, Davidson, Per, Gartner, William</td>
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<td>Advancing Firm Growth Research: A Focus on Growth Mode Instead of Growth Rate</td>
<td>Alexandre Rocha, Johan Wilkun</td>
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<td>Investigating Barriers to SME Growth and Development in Transition Environments</td>
<td>Rachel Doern</td>
<td>2008</td>
<td>120</td>
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</table>
Appendix C: Interview Guide

Interview Questions for companies:

Theme One - General
- What is your role/position in the company?
- Describe the business?
- Is it digital?
- Are you the founder? If not, what happened?
- When was it established?

Theme Two - Growth/Scaling in general
- What do you define as growth/scaling?
- How do you measure growth/scaling?
- In your company, how do you keep track of it?
- What do you think is the biggest challenge in the concept of growth for any kind of business?
  - How is that difficult?
  - Five Whys?
- What is the biggest growth challenge in your business?

Theme Three - Digital Business and Digital Products
- Intro for theme, e.g. read media outlets/papers high promise of digital service in terms of global phenomena (Spotify). As a professional do you think this is the case?
- Where do you see opportunities in a digital product? (Same here)
- What are the challenges, difficulties with it?
- How do you grow scale (add a new service, channel, employ more people)?
- What have you been doing/are you doing to scale right now?
  - Was it difficult? Did it work?
    - Why?

Theme four - things to discuss innovation scaling digital tech
- Is there anything else you would like to discuss?