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The Strategic Development of Successfully Acquired New Technology-Based Firms

How NTBFs exploit and obtain resources to strategically develop their venture prior to a successful acquisition

Master's thesis in NTNU School of Entrepreneurship

Supervisor: Lise Aaboen, Karoline Kaspersen

June 2020

Master's thesis

NTNU
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ABSTRACT

Historically, it has been argued that the primary source of motivation for entrepreneurs to pursue a venture is a financial harvest. One way to harvest the value created by the venture is by an exit. An exit is defined in several ways, but in this thesis, we view exit on a firm-level, thus defining it as the event where a firm in some way leaves the market they operate in. Traditionally the high number of exits among new firms has been determined as a result of poor performance. However, recent research argues that – especially for New Technology-based Firms (NTBFs) – exit is not necessarily a failure, but due to a deliberate strategy. The exit route through an acquisition has unambiguously been viewed as a successful way to exit – both by scholars and the entrepreneurs themselves. An acquisition is a complex process that typically requires a well-planned strategy and could be imprinted by incidents from the firm's entire life cycle. However, scholars know very little about such a strategy. We find that nearly no research directly addresses what an exit strategy leading to a successful acquisition for a firm entail. As a result, we argue that empirically qualitative research of exit strategy on a firm-level in cases where the exit route is characterized as a successful route – not only by scholars – but also by the NTBF, is required. Hence, we formulated the purpose of this study is as follows:

How does NTBFs exploit and obtain resources to strategically develop their venture prior to a successful acquisition?

Our study is conducted through a qualitative multiple-case study of ten Norwegian NTBFs that all developed software services and experienced a successful acquisition. Data for the study have been acquired through in-depth semi-structured interviews with founders of the NFTBs, as well as through business plans, and a detailed timeline of the whole life cycle of the NTBFs, that the founders themselves constructed prior to the interviews. The analysis is conducted with a resource-based view of the firms and the critical incident technique as an analytical tool to elicit data points. Through a within-case analysis of each firm's life cycle and the related incidents, as well as a cross-case analysis that compares patterns of incidents across cases, we have identified several strategic developments and characteristics that apply for NTBFs that experience an acquisition.

Our findings suggest that the NTBFs does not have an explicit exit strategy – nor intention – but that they are acquired while seeking financial resources to support a scale-up of the firm. Furthermore, we reveal that the founders choose to adopt concepts from hybrid entrepreneurship as a means to allocate resources towards value-creating activities. As a result, we also suggest further research of the influence hybrid entrepreneurship has on an acquisition. Nevertheless, we find that the NTBFs emphasize an internal team of highly skilled human resources and industry partnerships, as these contribute to increasing the attractiveness of the firm as an acquisition target, in terms of domain knowledge, innovativeness, and high efficiency. We also find that the initial resources – being the founders and high-risk investments – have a substantial impact on the development of the NTBF towards an acquisition. Lastly, we identify specific characteristics that apply for the founders of this study, which contributes to explain the conditions in which the strategic development is made. However, we recognize that the study is limited to only suggest relations between strategic developments and the occurrence of an acquisition, but not determine whether these are exclusive for the NTBFs that experience a successful acquisition.

SAMMENDRAG

Historisk sett har det vært argumentert for at en finansiell gevinst er en entreprenørs primære motivasjon for å starte bedrift. En måte å realisere en slik finansiell gevinst er gjennom en exit. En exit kan defineres på flere ulike måter, men i denne oppgaven har vi valgt å fokusere på exit på et bedriftsnivå. Dermed defineres exit som begivenheten hvor en bedrift på en eller annen måte forlater markedet de har operert i. Tradisjonelt sett har det høye antallet exits blitt beskrevet av litteraturen som et resultat av mislykkethet. Nyere forskning viser dog at exit – spesielt blant unge teknologibaserte bedrifter – er følge av en bevisst strategi. Et oppkjøp er den formen for exit som entydig har blitt anerkjent som en suksessfull exit av forskere og entreprenører selv. Et oppkjøp er en kompleks prosess som typisk krever en velutviklet strategi og kan påvirkes av hendelser fra hele livssyklusen til bedriften. Likevel, vet forskere svært lite vedrørende en slik strategi, og vi finner omtrent ingen forskning som direkte adresserer hva en exit-strategi som leder til et oppkjøp, innebærer. Følgelig argumenterer vi for at en empirisk kvalitativ studie av exit-strategi på bedriftsnivå, i tilfeller hvor exitene kategoriseres som suksessfulle - ikke kun av forskere - men også av bedriftene, er nødvendig. På bakgrunn av dette har vi formulert følgende formål med studien:

Hvordan utnytter og anskaffer unge teknologibaserte bedrifter seg ressurser for å strategisk utvikle bedriften i forkant av et suksessfullt oppkjøp?

Vår studie er utført ved bruk av en kvalitativ multippel case-studie og har analysert ti unge norske teknologibaserte bedrifter. Alle bedriftene har utviklet software-teknologi og har gjennomgått et suksessfullt oppkjøp av sin bedrift. Dataene er innhentet gjennom dyptgående semi-strukturerte intervjuer med gründere fra hver bedrift. Vi har også hentet inn data gjennom forretningsplaner og ved hjelp av en tidslinje som intervjuobjektene utformet i forkant av intervjuet, og som presenterer hele livssyklusen til bedriftene. Analysen er gjort fra et ressursperspektiv og «critical incident technique» er benyttet som analyseverktøy for å ekstrahere viktig data. Gjennom å analysere hver enkelt case sine livssykluser og de tilhørende hendelsene, og deretter analysere hendelsesmønstre på tvers av caser, har vi identifisert en rekke strategiske utviklingsforløp og karakteristikker som gjelder for bedrifter som har gjennomgått et oppkjøp.

Våre funn indikerer at bedriftene ikke har en eksplisitt strategi eller intensjon om å bli oppkjøpt, men at de ble oppkjøpt mens de var på leting etter økonomiske midler for å finansiere en skalering. Videre, ser vi at gründerne bevisst velger å starte som såkalte hybrid entreprenører, for å produktivt kunne allokere bedriftens ressurser til verdiskapende aktiviteter. I lys av dette foreslår vi et videre studie av innvirkningen hybrid entreprenørskap har for forekomsten av et oppkjøp. Forøvrig ser vi at de unge teknologibedriftene verdsetter å anskaffe seg et internt team av menneskelige ressurser, da dette bidrar til å gjøre selskapet attraktiv for oppkjøpere, i form av økt domenekunnskap, innovativitet, og effektivitet. Videre kommer det frem at de initielle ressursene – hvilket er gründerne selv og høy-risiko-investeringer – har en vesentlig innvirkning på utviklingen av bedriften. Avslutningsvis påpeker funnene våre visse karakteristikker som kjennetegner gründerne av selskapene, hvilket bidrar til å forklare forutsetningene for den strategiske utviklingen som utføres. Samtidig erkjenner vi at studiet er begrenset til kun å belyse sammenhenger mellom strategisk utvikling og forekomsten av et oppkjøp, men ikke identifisere hvorvidt utviklingen er unik for bedrifter som har opplevd et suksessfullt oppkjøp.

ACKNOWLEDGEMENT

This master's thesis was written by three students from the NTNU School of Entrepreneurship. The study has aimed to examine how new technology-based firms can develop their ventures and form strategies in order to achieve a successful acquisition. We believe that our personal experience with new ventures, combined with academic understanding, and with the help of the data collected have provided new insight within the field of study. We hope that upcoming entrepreneurs and others striving to establish their own NTBFs can gain a greater comprehension of what a so-called "exit strategy" actually implies, and which strategic factors are advantageous and triggering for an acquisition of their firm.

We have had the privilege of receiving academic support and guidance from our supervisors Professor Lise Aaboen and Assistant Professor Karoline Kaspersen. We want to thank them for their patience, and for being available to us at all hours of the day. The deliverance of this thesis would not have been the same without their help, we are very grateful. Furthermore, we would like to thank Associate Professor Marius Tuft Mathisen, Professor Karl Wennberg, and Professor Dawn DeTienne for providing relevant literature and insights for the literature review of the study.

Lastly, we would like to thank the NTBFs and interviewees that have participated in this study, for sharing their experiences, knowledge, and stories. Their participation has been of great value for us.

Trondheim 30th of July 2020

Stian Kvaran Bongard | Vetle Krogstad | Henning Philip Patricksson

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LIST OF ABBREVIATIONS

Abbreviation	Description
B2B	Business-to-Business
B2C	Business-to-Consumer
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CMO	Chief Marketing Officer
COO	Chief Operating Officer
CTO	Chief Technology Officer
FFF	Family, Friends and Fools
IPO	Initial Public Offering
M&A	Merger & Acquisition
NTBF	New Technology-Based Firm
NTNU	The Norwegian University of Science and Technology
PRT	Property Rights Theory
RBV	Resource-Based View
TCT	Transaction Cost Theory

1 | INTRODUCTION

A financial harvest of the value created in a venture is argued to be the primary source of motivation for entrepreneurs (Schumpeter, 1982). An *exit* can be described as a strategy for such financial harvesting, or a way to realize initial investments (Birley & Westhead, 1993; D. R. DeTienne, 2010; Pisoni & Onetti 2018; Wennberg, Wiklund, DeTienne, & Cardon, 2010).

Yet, an exit is defined in different ways, depending on the level of analysis (D. R. DeTienne & Wennberg, 2013; Parastuty, 2018); On an individual-level, it is the event where an entrepreneur leaves the firm it helped create (D. R. DeTienne & Wennberg, 2013). On a firm-level, it is the event where a firm leaves the market they operate in (Cefis & Marsili, 2011a), and, on an organizational-level, it is the event where an organization, or an industry, ceases to exist due to an evolutionary process in the environment it resides (Hannan & Freeman, 1989). For the purpose of this thesis, we will refer to exit on a firm-level, although some features from the other two levels of analysis also will be considered.

Cefis & Marsili (2011) and Picken (2017) write that a substantial number of firms exit the market within the first few years. The high exit rates among new firms has historically been concluded to be due to poor performance (Bates, 2005; Cefis & Marsili, 2011b; Pisoni & Onetti 2018). Stinchcombe's (1965) concept of the liability of newness explains that new firms suffer a greater risk of failure than older ones because they have little legitimacy and lack access to specialized resources and capabilities, thus making them dependent on cooperation with others (Stinchcombe, 1965). Yet, recent research argues that exit – especially for New Technology-based Firms (NTBFs) – is not necessarily a failure, but rather an important milestone based on a deliberate intention (Cefis & Marsili, 2011a). With the introduction of successfulness to an exit, scholar's curiosity to learn more about what characterizes firms that exits, and how they exit, increased (Headd, 2003; Parastuty, 2018).

1.1. Literature Gap

Success in the context of an exit can mean several things (D. R. DeTienne & Wennberg, 2015; Headd, 2003); For a new technology-based firm, the literature typically views success from the perspective of strategic management and economy, with a quantitative focus on business performance (Bates, 2005). Yet, for the entrepreneur, the successfulness of an exit is often measured in a qualitative manner as what the entrepreneur has gained in experience and learnings weighed up against the investments that were made – both financially and personally (Bates, 2005).

The mode through which a firm exits, meaning the way they leave the market they operate in, or the way they realize their initial investments, is commonly called an exit route (Birley & Westhead, 1993; Cefis & Marsili, 2011a; Wennberg et al., 2010). For a NTBF, the most discussed exit routes are Initial Public Offering (IPO), Merger & acquisition (M&A), Voluntary Liquidation, Bankruptcy, and Trade Sale (Birley & Westhead, 1993; Bobelyn, 2012; D. R. DeTienne & Cardon, 2012). Among these routes, the literature overall acknowledges IPO and M&A to be high-performance exit routes (Cumming, 2008; Mathisen, 2017) – and thus a success – whereas a bankruptcy is outright viewed as a failure (Coad, 2014), and the general successfulness of a voluntary liquidation is debated due to different perspectives of measurement (Wennberg et al., 2010). A trade sale is also quite unambiguously referred to as a success, as it often falls under the same category as M&A, yet from the seller's perspective rather than the buyers (Mathisen, 2017). For the remainder of this thesis, we will refer to the event of a trade sale as an acquisition, regardless of the perspective being from the seller or the buyer. Moreover, even though an IPO is generally considered a successful exit route, the literature disputes whether or not it actually is an exit route, as it oftentimes is used to a greater extent as a financial tool rather than a direct exit plan (Coad, 2014; Prisciotta & Weber, 2005). Hence, based on the literatures description of exit routes, the remaining definite successful exit route on a firm level can be argued to be an M&A (Cefis & Marsili, 2011a; Coad, 2014; Mathisen, 2017; Prisciotta & Weber, 2005).

Naturally, to execute a "non-desirable" exit route doesn't necessarily require much strategic planning for the firm (Balcaen, Manigart, Buyze, & Ooghe, 2012; Schary, 1991). However, to execute an M&A with a high return of investment is a complex process which typically requires a well-planned strategy, and may be imprinted by incidents from the whole life of the firm (Albert & DeTienne, 2016; Carsrud & Brannback, 2011; D. R. DeTienne & Cardon, 2012; Pisoni & Onetti 2018). In some cases the exit may even be a part of the commercialization strategy itself (Bobelyn, 2012; Gans & Stern, 2003; Graebner, Eisenhardt, & Roundy, 2010; Rossi, Yedidia Tarba, & Raviv, 2013). Yet, scholars know very little about this process of planning and executing an exit strategy (D. R. DeTienne, McKelvie, & Chandler, 2014).

Bobelyn (2012), Pisoni (2018), and Picken (2017) have touched upon the description of an *exit strategy*, or rather strategic actions leading to an exit, by using life cycle models for firms, in order to explain the actions in the context of different stages of the NTBFs' life. Typically the life cycle is divided into a stand-up stage, a start-up stage, and a scale-up stage, where an exit may occur somewhere in between a start-up stage and a scale-up stage (Bobelyn, 2012; Picken, 2017; Pisoni & Onetti 2018). Within these stages, scholars emphasize several different factors, such as; Motivation and intention (Albert & DeTienne, 2016; Carsrud & Brannback, 2011; D. R. DeTienne et al., 2014; Schumpeter, 1982), development and validation of business concepts, (Bobelyn, 2012; Graebner & Eisenhardt, 2004; Kasch & Dowling, 2008; Picken, 2017), and growth (Mathisen, 2017; Picken, 2017; Ranft & Lord, 2002; Wernerfelt, 1984). Quite unambiguous however, the literature concurs that the first years of the firm is critical, often referring to the liability of newness for NTBFs (Stinchcombe, 1965). Hence, we see that exit strategies, or strategic actions leading to an exit, are attributed to certain phases of a lifecycle, where the emphasis of what factors to focus on varies.

In Figure 1, by using Pisoni & Onetti's (2018) structure, we illustrate the life cycle the NTBF typically goes through from inception of the firm, towards what the literature describes as high-performance successful exit routes. Note that the figure only accounts for time, and not the growth of the firm, in terms of resources, sales or size.

Figure 1: Illustration of an NTBFs strategy, divided into phases, leading up to a successful exit.

While there are some articles discussing exit strategies for entrepreneurs, and exit strategy as a concept in general, there's nearly no research directly addressing what an exit strategy leading to a successful exit for a firm is. Yet, we recognize that the strategy leading to a successful exit might not be explicitly an exit strategy, but more of a growth strategy or a commercialization strategy (Bobelyn, 2012; Gans & Stern, 2003; Graebner et al., 2010; Mathisen, 2017; Picken, 2017; Ranft & Lord, 2002; Rossi et al., 2013). Moreover, we identify that the construct of success and failure on a firm-level in large is discussed as a homogeneous result of an exit route, and rarely as the result of a well-planned exit strategy. Although the routes may be described as a consequence of the strategy, it can be argued that a route may be both successful and a failure, depending on how well the strategy leading to it was conducted (Bobelyn, 2012; Picken, 2017; Pisoni & Onetti 2018). In the cases of entrepreneurial exit, the successfulness has predominantly been measured qualitatively by the perception of the entrepreneur. Thus, it is reasonable to believe that the strategy is accounted for in the evaluation. In the case of a firm exit, however, success is mostly measured quantitatively from a financial perspective. As a result, we argue that empirically qualitative research of exit strategy on a firm-level, in cases where the exit route is characterized as a successful route – not only by scholars – but also by the NTBF, is required.

1.2. Purpose

In this thesis, based on the literature gap presented previously, we seek to examine how new technology-based firms can develop their ventures and form strategies in order to achieve a successful acquisition. To be able to examine what strategic aspects that are advantageous for such a development, we will study firms that already have experienced a successful exit, since these are likely to have at least made some strategically developments that were advantageous for the occurrence of an acquisition. Hence, the methodological approach is: Given that a successful acquisition has occurred, how have the firms developed from inception to acquisition? Consequently, the purpose of the study is:

How does NTBFs exploit and obtain resources to strategically develop their venture prior to a successful acquisition?

There are several variations and definitions of *New Technology-based Firms (NTBF)* – some more narrow than others. We have interpreted NTBFs as a semi-broad definition such as discussed by Storey (1998), where it is defined to be a newly started – meaning the first 5 years of existence – independent firm that exploits technical innovations and inventions, or that operate in new industries (Storey & Tether, 1998).

The study will be conducted by using a *Resource-based View (RBV)* of the firm, which allows us to investigate how the NTBFs exploit their own resources, and acquire additional resources to develop the firm past strategic obstacles (Barney Jay, 2000; Penrose, 2009). Furthermore, we will adopt the *Critical Incident Technique (CIT)* as a tool to identify measuring points at which the firm significantly has had to emphasize their strategy or make changes to it, to progress (Allan, 2017). Hence, the study will be conducted by analyzing how the NTBFs exploit and obtain resources at critical incidents during their life cycle, as these incidents typically are either a part of the strategy, or the contribute to form the strategy of the firm (Allan, 2017).

1.3. Contribution

Through this study we aim to contribute to a deeper explanation of how NTBFs can form strategies and manage resources to develop themselves to become a valuable and attractive acquisition target. Most research on exit strategy has focused on the entrepreneur as an individual, or been conducted quantitatively, thus insufficiently exploring the intricate nuances that a firm-level exit-strategy may consist of. Hence, we have assessed that a qualitative in-depth, multiple-case study of NTBFs that have experienced an acquisition can contribute to a deeper and more accurate exploration of how NTBFs develop their firms prior to what both the founders and the literature describes as a successful exit. Ultimately, we seek to strengthen NTBFs founders' and business managers' comprehension of what a so-called "exit strategy" implies, and which strategic factors are advantageous and triggering for an acquisition of their firm. Thus, not only will the study contribute on a theoretical level, but it may also serve as a practical guidance for new ventures with an intention of exit.

1.4. Structure

For the remainder of this thesis, we will first present the theoretical foundation – both current literature and the theoretical framework – that the study utilizes to analyze and discuss findings. Thereafter, we will go through the methodology used for data acquisition and -analysis. Further, the data is analyzed – both within-case and cross-case – by using the theoretical framework to reveal findings. Consequently, the findings are discussed in relation to the current literature of exit strategies, before a conclusion is presented. Lastly, the study's implications and suggestions for further research is displayed.

2 | THEORETICAL FOUNDATION

In this chapter we will first present the current literature about acquisitions and acquisition strategies for NTBFs, which will serve as a basis for the discussion. Then we will introduce the theoretical framework that constitutes as the foundation for the analysis.

2.1. Acquisition

The literature discusses a *merger* and an *acquisition* as two nearby exit routes, as they offer similar properties. The event where a firm is sold as a whole, or the firm's core assets and resources are sold, is in general called an acquisition (Puranam, 2001; Rossi et al., 2013). It is not unusual that intangible assets such as reputation, tacit knowledge, and the firms' routines are partially preserved in an acquisition, nor that operation continues under new ownership (Ranft & Lord, 2002; Rossi et al., 2013). Therefore, there are clear similarities between an acquisition and the description of a merger between two firms. Especially since a merger usually implicates that the "smaller" firm to some degree dissolves in order to be integrated into the "bigger" firm (Hagedoorn & Sadowski, 1999). Consequently, the two events are often referred to as one: M&A (Balcaen et al., 2012; D. R. DeTienne & Cardon, 2012; Hagedoorn & Sadowski, 1999).

M&A is, as previously mentioned, sometimes referred to as a *trade sale* especially in the successful outcomes of an M&A, viewed from the sellers perspective (Bobelyn, 2012; Mathisen, 2017). However, the label trade is most often used in the context of *Venture Capitalist (VC)* investors or founders that harvest their financial gains from investments. More specifically trade sale can be defined by two criteria adopted from the technology acquisition literature (Mathisen, 2017): (1) The buyer is an industry incumbent more significant than the new venture, and (2) the buyer assumes 51% or more ownership (stock sale), or all productive assets (asset sale). Hence, only a specific part of the exits within M&As can be considered a trade sale.

Acquisitions are seen as an essential way for large companies to realize their growth strategies (Rossi et al., 2013). This could be done by acquiring NTBFs that operate in the foreign market as a part of an international expansion strategy, or they can acquire companies that develop new and complementary technologies, often called technology acquisitions (Bobelyn, 2012; Gans & Stern, 2003; Graebner et al., 2010). These are two of the most common reasons for companies to decide to go for an M&A (Pisoni & Onetti 2018). Such M&As usually occur among firms operating in the same industries, therefore, this serves as a way for the buyers to expand their product offerings and speed up the amount of time used to develop new products (Pisoni & Onetti 2018). Gans & Stern (2003) concludes similarly in their 2003-study of commercialization strategies of NTBFs, saying that for new technology-based firms lacking resources to get their product to the market, commercialization through an acquisition, to get access to complementary assets, is a viable option. Especially in markets where the appropriability regime is tight – meaning that intellectual property and tacit knowledge is highly valued – and where valuable specialized assets are held by a few strong, established firms, such a commercialization strategy is suitable (Gans & Stern, 2003; Kasch & Dowling, 2008; Oxley, 1997). Thus, an acquisition may occur as a result of an NTBFs desire to grow, both geographically, financially, and resource-wise.

Pisoni & Onetti (2018) argues that the older a company gets, the lower the probability of being acquired becomes, which corresponds to what Stinchcombe's (1965) theory of the *liability of newness* says. This is because, the more mature a firm gets, the more rigid and harder it becomes to implement them into a new company. Pisoni & Onetti (2018) examined 5744 M&As involving American and European firms where the founders had a financial harvest strategy, thus investigating M&As as a high-growth exit route. Their research shows that the highest chance of reaching an M&A was within five years of establishment both for American and European companies (Pisoni & Onetti 2018). This argument is consistent with Bobelyn's (2012) resource-based description of a firm's exit-possibilities during each one of the four phases that a new technology-based firm typically goes through: "innovation assessment, offering development, commercialization and rapid growth," each of which requires different resources and capabilities. Bobelyn (2012) concludes that to be considered a potential acquisition target, one has to at least be at phase two, "offering development," meaning that the firm has proof-of-concept and an initial business model, and thus decreasing the technological uncertainty enough to increase acquisition likelihood. However, as the firm moves on to the later phases, "commercialization and rapid growth," it becomes less dependent on established firms' assets and market channels because it develops its own marketing and distribution networks. As a result, with an increased potential to generate revenue, the firm will not necessarily become more attractive, but they will have more bargaining power (Bobelyn, 2012). Ponikvar's (2018) research is aligned in its implications, saying that firms with inferior profitability, yet without efficiency or liquidity problems, are the most frequent targets for mergers and acquisitions. Hence, we see that there is a distinction between acquisition likelihood and acquisition return, both of which are dependent on the development phase the NTBF is currently in.

The inherent potential in a compound of two companies is an essential aspect for both buyer and seller during an acquisition. When selling-managers in NTBFs search for a potential buyer, they are concerned about the price and the parties' *combination potential* (Graebner & Eisenhardt, 2004). Graebner (2004) views this through a lens of courtship and writes that the synergies the parties achieve when they merge are based on similarities and complement factors. This viewpoint also causes company leaders to refuse offers when the combination potential is low even though the acquisition interest from the seller is high (Graebner & Eisenhardt, 2004). Furthermore, the combination-potential is not emphasized by selling-managers to increase the financial reward, but due to factors such as status and achievement, along with emotional factor (Graebner & Eisenhardt, 2004). Ranft & Lord (2002) states that the reason for this is that selecting a suitable fit among buyers will not necessarily get the price up, and because long-term financial gain will largely depend on effective post-acquisition integration, which will always be quite an uncertainty. In Ranft & Lord's (2002) research they view knowledge as a vital resource and emphasize its social complexity within and across firms. Accordingly, the literature claims that courtship between buyer and seller of compatible parties drives to a subtle trade-off between price, firm survival, and firm efficiency (Graebner & Eisenhardt, 2004; Ranft & Lord, 2002).

When a firm shifts ownership through an acquisition, valuation and pricing are often features that are challenging for all parties, and not necessarily reflecting each other. Past acquisition literature points to the phenomenon of "winners' curse," which suggests that buyers may overpay in acquisitions (Graebner & Eisenhardt, 2004). While this is likely to occur, recent studies show that sellers are similarly willing to sacrifice short-term financial returns as part of their engagement by building a valuable corporate blending between the parties. Indeed, studies reveal that less synergistic buyers pay more than buyers with high combination potential. One of the reasons for this may be to compensate for the weaker long-term financial outcome (Graebner & Eisenhardt, 2004). Thus, the literature claims that both buyer and seller willingly sacrifice more when the combination potential for an M&A is high.

2.2. Acquisition Strategies

To successfully execute an M&A with a high return of investment is a complex process which typically requires a well-planned strategy, and may be imprinted by incidents from the whole life of the firm (Albert & DeTienne, 2016; Carsrud & Brannback, 2011; D. R. DeTienne & Cardon, 2012; Pisoni & Onetti 2018). To illustrate the phases an NTBF typically goes through, and the respective strategic actions that are attributed to them, we will utilize the life cycle models for an NTBF that Bobelyn (2012) and Pisoni & Onetti (2018) describe, shown in Figure 2.

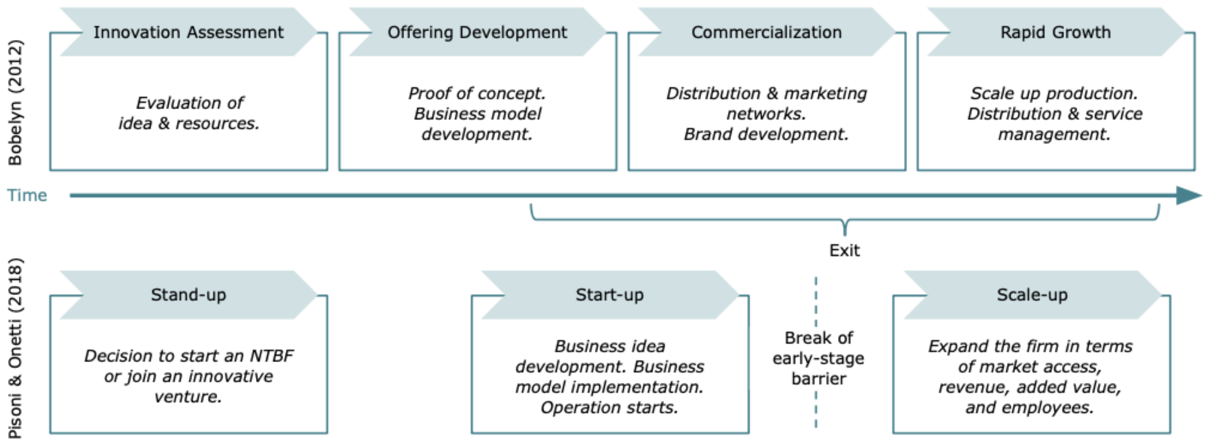

Figure 2: The life cycle of NTBFs. Adopted from Bobelyn (2012) and Pisoni (2018).

The acquisition, as discussed in chapter 2.1., will, according to Bobelyn (2012) and Pisoni & Onetti (2018), most likely occur at any point during the transition between "offering development/start-up" and towards the end of "rapid growth/scale-up." However, an explicit strategy for the firm - not just for growth and development in general - but for the sole purpose of accomplishing an exit tends to impact the outcome of an exit process. The literature, in general, describes the choice of such a strategy as best initiated at birth, or in the so-called "Innovation assessment/Stand-up" phase in Figure 2 (Albert & DeTienne, 2016; Carsrud & Brannback, 2011; D. R. DeTienne & Cardon, 2012; Pisoni & Onetti 2018). Albert & DeTienne (2016 p.823) emphasizes this in their research from the perspective of imprinting, which is explained as a "perspective that suggests that the decisions made early in the life of a firm may have lasting impact on its ability to move in a strategic direction". Hence, even though the exit is likely to occur later in the life of an NTBF, the very initial actions may impact the exit.

Additionally, Picken's (2017) life cycle model, as viewed in Figure 3, gives a different perspective by illustrating the relation to sales, and also emphasizing strategic obstacles in the transition phase of the NTBFs life; the transition phase is "arguably the most critical period in the life of an emerging firm," and "during this relatively brief period the founding team must lay the foundation for a rapidly growing business, establish credibility and legitimacy, and acquire the initial resources essential for growth" (Picken, 2017, p.588). Due to the complexity of its nature, and the fact that NTBFs often suffer from the liability of newness, many fail to meet the needs of the firm in the transition stage, and only about half of the NTBF survive more than five years (Freeman, Carroll, & Hannan, 1983; Picken, 2017).

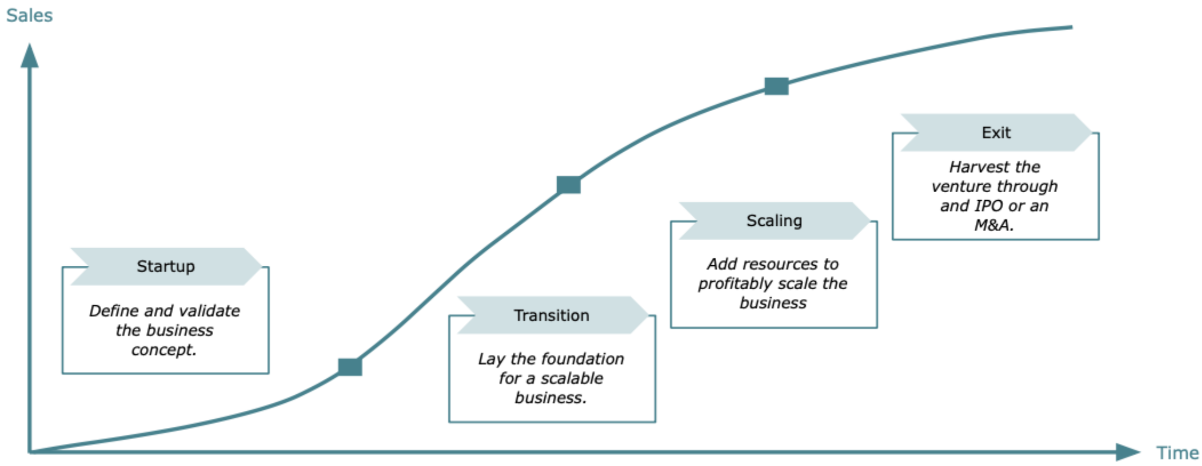

Figure 3: The four stages in the life of an NTBF. Adopted from Picken (2017).

To further structure the literature of exit strategies, we will use Pisoni & Onetti's (2018) three stages - stand-up, start-up, and scale-up - to divide the strategy into separate stages. We choose to build upon Pisoni & Onetti's (2018) model because its stages are formulated in a way that fits the stages of both of the two other models, thus serving as a common denominator. However, the other life cycle models will be used complementary, as they offer valuable insights. Lastly, we will discuss how the literature describes founders' characteristics to have an impact on the occurrence of an acquisition.

2.2.1. Stand-up

The stand-up stage is the initial phase, describing the establishment of the NTBF. Bobelyn's (2012) adaption of the life-cycle model of an NTBF refers to the initial stage as one where the firm assesses the innovation- and commercial potential, along with the resources and capabilities that are required from the firm to transform the idea into something feasible as a business. Picken (2017) defines his first stage similarly by emphasizing the tasks of validating the business concept, such as; market opportunity, business model, value proposition, and go-to-market strategy (Picken, 2017). Both processes described by Bobelyn (2012) and Picken (2017) are goal-driven, based on a predetermined vision. Pisoni & Onetti (2018), on the other hand, defines the stand-up phase as a stage where the individual or a team of individuals is inspired, willing and motivated to become entrepreneurs or start an innovative venture together (Pisoni & Onetti 2018), thereby putting less focus on the assessment tasks - and more on the determination of shared motivation and vision in the new firm. Hence, we see that the three authors have slight differences in the perspectives of which they view the first phase.

According to Carsrud & Brannback (2011), the motivation for the founders can be either *extrinsic* or *intrinsic*, or both. Extrinsic motivation refers to motivation attained through external factors such as money, power, or status, whereas intrinsic motivation usually refers to an individual's personal interest in entrepreneurial activity as such. Schumpeter

(1982) argues that financial harvest is the primary source of motivation for entrepreneurs, which can be described as extrinsic. This argument became the basis for most of the literature on entrepreneurship and economics in the following decades (D. R. DeTienne et al., 2014; Shepherd & DeTienne, 2005). Although the general perception within the field since then has been that financial reward is the primary motivation, other scholars have argued that there are intrinsic non-financial motivators for starting ventures as well (Birley & Westhead, 1993; Shepherd & DeTienne, 2005). DeTienne et al. (2014) explains that previous research distinguishes between those with a motivation for financial harvest and those with a motivation to advance in the community. She goes on to categorize the motivations into three different strategies: "Financial harvest exit strategy," "Stewardship exit strategy," and "Voluntary cessation exit strategy." Carsrud & Brannback (2011) claim that individuals that are motivated by the latter typically consider their entrepreneurial engagement as a means in itself and presents it as the reason for why we see a growing number of social entrepreneurs with little apparent extrinsic reward (Carsrud & Brannback, 2011). As a result, we see that with different sorts of motivations, there are also different objectives for a strategy.

DeTienne et al. (2014) used these categories to develop a typology for exit strategies; those with extrinsic motivation and a financial harvest exit strategy are more likely to go through with an IPO or to aim for acquisition and have an initial business idea that is highly innovative. They will also be more likely to follow a causation-based decision-making process, as they typically have a more clearly defined goal. Those with a stewardship exit strategy on the other hand, DeTienne et al. (2014) describes to be less likely to have extrinsic motivations, but rather autonomy, freedom and work independence as a motivator. Such a strategy does not typically lead to an acquisition, but rather the exit routes of family succession, employee buy-out, or voluntary liquidation. Lastly, DeTienne et al. (2014) portray the founders of firms with a voluntary cessation exit strategy to be of the kind she labels as lifestyle entrepreneurs (Wennberg & DeTienne, 2014), meaning that they have in mind that they one day will voluntarily liquidate the firm. Because they have an initial intrinsic motivation to be an entrepreneur as a means in itself, as Carsrud & Brannback (2011) described it, they are likely to consider the venture as rewarding at exit, although liquidation on a firm-level in general is not considered a success (Coad, 2014). Consequently, we see that the initial motivations of the founders of NTBFs will have an impact on the strategy of the firm and roughly predetermine which exit routes that may occur.

Wennberg & DeTienne (2014) also emphasizes the entrepreneurs' intentions and argues the importance of studying it to be that exit intentions are often developed early in the life of the NTBF – when the firm is easily influenced. Courses that the firm is set to follow from founding may be hard to deviate from, which can result in a limited range of future strategic actions. Thus, an exit intention may be beneficial to focus the strategy but may just as well be a limitation making it hard to change path (Wennberg & DeTienne, 2014). Albert & DeTienne (2016) concurs in their research on founding resources and intentions from an imprinting perspective. They saw that technological resources were related to the presence of an exit intention and that human, financial, and technological resources each impacted the imprinting effect of an exit intention differently. Furthermore, DeTienne & Cardon (2012) researched the impact of founders' intentions and found that the intended exit strategy led to related actions; 70% of the cases they investigated exited in the path they reported as intended, 9% of the cases that considered an acquisition exited through an IPO or independent sale instead (D. R. DeTienne & Cardon, 2012). The remaining 21%

liquidated their firm rather than exiting through the intended route – which indicated that entrepreneurs might be overconfident. Although 21% may be overconfident, it is evident that entrepreneurial intentions can influence NTBFs development. Hence, we see that the initial intentions of the entrepreneur managing an NTBF have a significant impact on the event of an exit.

The first and primary resources of a new venture will be the founding team, in terms of the background of the partners and the knowledge, skills, and social network they possess (Albert & DeTienne, 2016). However, for a new venture to be able to survive and grow, financial resources are often crucial components (Graebner & Eisenhardt, 2004). External sources investing in new ventures often have a horizon of their investments of 5 to 7 years. Therefore, an exit strategy is essential in obtaining external funds, as it is a prominent part of the foundation for expectations regarding the financial return (Cumming, 2008). Thus, we see that with the introduction of external capital investments, the concept of an exit strategy is automatically introduced to the firm, regardless of the founder's initial intentions.

Furthermore, NTBFs with higher initial financial investment achieve lower rates of failure and higher profitability, in addition to greater motivation for growth and a financial harvest (Albert & DeTienne, 2016). Previous research additionally reveals that teams of founders are more likely to build growth ventures than individual entrepreneurs (Albert & DeTienne, 2016). Thus, the founding team and the initial financial resources invested in the firm will tend to facilitate development and growth over time and increase the founder's motivation for a financial harvest.

2.2.2. Start-up

For the start-up phase, Bobelyn (2012), Picken (2017), and Pisoni & Onetti (2018) do not correlate completely. Yet, they all emphasize it as a critical phase for an NTBF since it is at this point, they start to attract attention from stakeholders and lay the foundation from which the firm either will be sold or scaled. Pisoni & Onetti (2018) briefly explain the stage as one where operations start, the business model is implemented, and the business idea is further developed. The NTBF's secure financial investments, and it is within this stage that the likelihood of an exit begins. Bobelyn (2012) corresponds quite well with this in her stage labeled "offering development," where she also argues that it is at this point, the firm starts to become attractive for an acquisition. However, as she has four phases instead of three, she also has the following stage labeled "commercialization." At this stage, she argues that the likelihood of being acquired does not necessarily increase, but since the firm starts generating revenues and develops a network – thereby becoming more resource independent – their bargaining power increases, and thus the acquisition returns accordingly. Picken (2017) labels the same phase as a transition phase and explains it to be a transition between a loosely structured founding period to a structured scaling period. His focus is more towards the management part of the firm than that of the others. Picken (2017) stresses that the NTBF has to become more or less autonomous in its processes, such that a scaling phase can focus entirely on exploiting the groundwork from the transition phase. Hence, we see that each scholar has different foci in this phase; Bobelyn (2012) with an RBV, Pisoni & Onetti (2018) with a financial view, and Picken (2017) with a management perspective.

Gans & Stern (2003) introduce their view on cooperation as a commercialization strategy. When discussing cooperation, they mention joint ventures, licensing, and M&A as typical relationships between an NTBF and another firm. Traditionally a firm competes in *the market of products*, where one develops an idea to become a product and tries to enter the market by utilizing competitive advantages such as product-market fit, domain knowledge, access to specialized resources, and proprietary assets (Gans & Stern, 2003; Kasch & Dowling, 2008). However, if these advantages are hard to obtain, the appropriability regime is strong, or specialized resources are held by few incumbents, *the market of ideas* might be an appropriate route to market entry (Bobelyn, 2012; Gans & Stern, 2003; Kasch & Dowling, 2008). In the market of ideas negotiations take place in "the shadow of the product market," meaning that one can enter cooperation agreements without competitors noticing. If the threat from competitors is great, the value of cooperation increases. Also, if the appropriability regime is robust, and thus intellectual property highly valued, the bargaining power of an NTBF with a protected business idea increases (Gans & Stern, 2003; Kasch & Dowling, 2008). The cooperation of an NTBF and an incumbent firm typically involves access to specialized and complementary resources, and network, in exchange for exclusivity to the use of the product, or stock options (Bobelyn, 2012). Although there are several ways a relationship in such cooperation may be, the increasingly popular type of relationship is through an acquisition (Gans & Stern, 2003; Kasch & Dowling, 2008). Although with a knowledge-based view rather than a resource-based, Kasch & Dowling (2008) base their research heavily on Gans & Stern's (2003), and suggest two things for managers of NTBFs: When developing their commercialization strategy they should decide for or against cooperation, and how the cooperation should be (bilateral or unilateral). Secondly, patents are in many cases highly valued, and if there's high uncertainty in the market they should consider a cooperative alliance as a market entry strategy (Kasch & Dowling, 2008). Bobelyn (2012) also stresses technology acquisitions as a critical component in a commercialization strategy for NTBFs. In general, a cooperative alliance such as suggested by Gans & Stern (2003), Bobelyn (2012) and Kasch & Dowling (2008) implies an M&A between a NTBF and an incumbent firm. In conclusion, for an NTBF to enter the market, they can exploit a cooperative relationship with an industry incumbent to gain several resource-based advantages, and eventually end up with being acquired.

Albert & DeTienne (2016) similarly writes that NTBFs with substantial proprietary assets such as patents, copyrights, and trade secrets have unique future advantages. The more innovative and novel these technological resources are, the higher the likelihood of the founders of the NTBFs planning on reaping substantial financial rewards from their efforts and investment through their business operations, as well as through their exit strategy (Albert & DeTienne, 2016). Founders with innovative products and services will, therefore, see higher value in an acquisition, and thus may want to imprint the firm in a direction that will lead to a well-developed exit strategy (Albert & DeTienne, 2016).

The transition stage, as described by Picken (2017), simulates the start-up phase, as discussed above, but may also stretch a little later. This period is arguably the most critical in the life of an emerging firm and may imprint the success of the NTBF, thus also an acquisition (Picken, 2017). The main challenge in this stage is to complete the development of the offering while establishing a solid foundation and positioning for the firm to scale. This is something the founding team must fulfill through establishing credibility and legitimacy, as well as acquiring the initial resources essential for growth (Picken, 2017). Many NTBFs fail to manage these challenges, which Picken (2017) identifies as *the eight hurdles of the transition period*. These eight hurdles are as presented in Table 1.

Table 1: The eight hurdles of the transition period. Adopted from Picken (2017).

H1 · Setting a direction and maintaining focus.	**H5** · Developing effective processes and infrastructures.
H2 · Positioning products/services in an expanded market.	**H6** · Building financial capability.
H3 · Maintaining customer/market responsiveness.	**H7** · Developing an appropriate culture.
H4 · Building an organization and management team.	**H8** · Managing risks and vulnerabilities.

If one fails to clear one or more of these obstacles in the transition period, the likelihood of an NTBF shutting down increases (Picken, 2017). This makes the hurdles something the NTBFs must overcome in order to experience an acquisition, not only in the start-up stage but also as one enters the scale-up phase.

Graebner & Eisenhardt (2004) states that managers in NTBFs appear to be actively interested in selling their firms when they encounter strategic hurdles. Concurrent, in the growth of an NTBF, such barriers are widely expected, and a kind of routine, and can lead to challenging measures such as obtaining financial resources and ramping up sales. It turns out that the more numerous and complicated hurdles that emerge, the stronger is the acquisition desire of firm leaders (Graebner & Eisenhardt, 2004). Strategic hurdles interrupt the basic running of the business and turn the leaders' attention, which may be a possible explanation for the leaders' connection towards improving acquisition interest in these circumstances. Sometimes when firms’ facing challenging situations, leaders extend their focus beyond the day-to-day operations and are therefore more accessible to further strategic openings (Graebner & Eisenhardt, 2004). Moreover, Graebner & Eisenhardt (2004, p.379) states that "the importance of strategic hurdles suggests that acquisition can be viewed as courtship". While the seller's interest is decisive and varies over time, the timing of the buyer's approach becomes crucial (Graebner & Eisenhardt, 2004). Thus, seeing as acquisition is a two-sided agreement that requires interest from the seller as well as the buyer, acquisition is considered as courtship. Consequently, we see that strategic hurdles may present as a catalyst for the founders’ consideration of an acquisition, which may also attract buyers, as an acquisition can be considered courtship.

2.2.3. Scale-up

As the third phase, Bobelyn (2012), Picken (2017), and Pisoni & Onetti (2018) put scaling of the firm, which includes expanding the firm in terms of market share, revenue, number of employees, and production. Picken (2017) describes the phase to be one where the firm must add significant resources and fully utilize processes and partnerships within the already validated business concept. The objective is rapid growth in order to outgrow competitors and gain competitive advantages (Mathisen, 2017; Picken, 2017; Wernerfelt, 1984). Scaling requires that the past phases in the life cycle have been thoroughly done. Graebner & Eisenhardt (2004) also highlights strategic hurdles as critical incidents for an NTBF that aims to grow, and that the desire to exit may occur earlier than intended due to complications in the growth process, as a result of the hurdles. Hence, it is evident that the previous development of resources, teams, and processes in the firm significantly imprints the scaling phase.

Mathisen (2017) explains that growth provides legitimacy, and in that sense, in order to survive and be able to achieve a successful exit, an NTBF has no choice but to grow. Bobelyn (2012) states that the gained legitimacy also will result in increased bargaining power in an acquisition. Yet, Mathisen (2017) argues that there is no definite way to measure growth, although the literature points to factors that contribute to achieving growth; Entrepreneurs that are motivated to grow, and have ambitions – much like that which is described about exit intentions (D. R. DeTienne & Cardon, 2012) – are likely to experience actual growth, and that innovation is a crucial factor for the fastest growing ventures. Therefore, we see that there is a relation between the innovativeness and the ambitions of the firm, the legitimacy they obtain, and ultimately the firm’s acquisition returns.

One of the prominent challenges for an NTBF during a scale-up is to exploit the knowledge and technologies in the firm successfully (Mathisen, 2017). Mathisen (2017) and Ranft & Lord (2002) states that information asymmetry is among the fundamental obstacles for a venture to grow. If the firm manages to exploit and overcome the uncertainties associated with tacit and explicit knowledge, they are more likely to scale-up successfully (Mathisen, 2017; Ranft & Lord, 2002). Much like resources is explained in resource-based theory (Wernerfelt, 1984), knowledge is also explained to contribute to gaining a competitive advantage if managed right. The transferability of knowledge, both within the firm and between firms, is highlighted as important (Ranft & Lord, 2002; Wernerfelt, 1984). Explicit knowledge, such as documented info, project reports, and profits, is in general easily communicated, but also easily replicated by other competitors. Tacit knowledge, however, often comes in the form of routines, teamwork, principles, and know-how, and are more embedded in the culture of the firm or individual (Ranft & Lord, 2002). Such type of knowledge is not as easily replicated by competitors, but may also present as an obstacle for growth (Mathisen, 2017; Ranft & Lord, 2002). Therefore, in order to successfully scale, and to utilize and harvest the knowledge in a firm, it is argued that codifiability of the firm's knowledge is important (Kogut & Zander, 1992; Ranft & Lord, 2002). Codifiability is explained as "a firm's ability to structure knowledge into a set of identifiable rules and relationships that can be easily communicated" (Kogut & Zander, 1992 p.387). To structure knowledge to be easily communicated within the firm, but also across firms, may contribute to an increased attractiveness for an M&A as well (Bobelyn, 2012; Ranft & Lord, 2002). Especially seeing as the concept of acquisition of complementary resources also applies for knowledge, which means that larger firms that seek to expand will need to acquire complementary knowledge from NTBFs (Kogut & Zander, 1992; Wernerfelt, 1984). Consequently, the literature states that, in a scale-up phase, the information asymmetry in an NTBF needs to be reduced, and the transferability of knowledge within and across the firm should be emphasized to present as an attractive acquisition target.

2.2.4. The Impact of Founders’ Characteristics

Much of the research that is done on exit, and the choosing of which exit route that suits an individual or the firm is conducted in an empirically quantitative manner. Thus, characteristics of the founders, teams, and firms that have chosen certain exit routes have been prominent. DeTienne & Cardon (2012) examine the correlation between the prior experience of the founder and the exit route the firm ended up taking. There is a clear link between founders that are highly educated and have entrepreneurial experience and the occurrence of a firm-level acquisition. However, these founders are, in general, less involved after the exit. Hence, we see a correlation between the founders' background and the event of an acquisition for the NTBF.

Most applications of human capital theory state that entrepreneurial experienced founders are positively correlated with the continuation of a firm (Wennberg et al., 2010). However, recent research on exit has found that the experience enhances the entrepreneur's ability to build value for the firm and increases the willingness to harvest this value creation, thereby exiting the firm. Furthermore, entrepreneurial experienced founders is also a vital factor for investors when considering the human capital of firms (Wennberg et al., 2010). Thus, the founders' prior experience can contribute to increased value creation and acquisition attractiveness.

Wennberg et al. (2010) write that findings concerning education in the literature point out that education should have a positive effect on the likelihood of making a profitable exit (Wennberg et al., 2010). Contrarily, recent studies also show that new ventures with highly educated entrepreneurs do not necessarily lead to this, which may be explained by the case that higher education can bring overconfidence. This corresponds with DeTienne & Cardon's (2012) remark about entrepreneurs' overconfidence leading them to not being able to follow their intended exit strategy. Highly educated entrepreneurs may have a strong belief that they have the skills and knowledge needed to build a profitable business, and therefore fail when these expectations do not coincide (Wennberg et al., 2010). Hence, although highly educated founders may facilitate for the NTBF to be acquired, it may also give false expectations of growth capabilities, and thus fail.

2.3. Theoretical Framework

Past research has shown that understanding some aspects of exit has benefited from the "classical" organizational theories, such as resource-based theory and evolutionary theory (Parastuty, 2018). According to Barney (1991), the resource-based theory has shed light on the ways that firms exit based on resources being critical to the performance of the firms. Previous studies have also shown that a firm's outcome and exit route can be predicted by resources, although the theory does not explain which specific resources correspond to an exact exit route (Parastuty, 2018). Both Gans & Stern (2003) and Kasch & Dowling (2008) conducted their research with an adaption to a resource-based view of the firm. Gans & Stern (2003) uses the RBV as an extension to the framework presented by Teece (1986), to present a new framework for drivers of commercialization strategies, whereas Kasch & Dowling (2008) uses both RBV, Property Rights Theory (PRT) and Transaction Cost Theory (TCT) to view the same events in order to get several perspectives. Kasch & Dowling (2008) conclude, however, that TCT contributes little to explaining commercialization strategies, as opposed to RBV and PRT, which is able to explain a great deal. Therefore, we see that several theoretical frameworks may contribute to an explanation of acquisition strategies, however, an RBV is emphasized by the literature.

In the following sections, we will give a review of resource-based theory and draw a bridge to the typical tasks an NTBF has to address during the different phases in its life cycle, which then becomes conceptualized in a framework of critical incidents.

2.3.1. Resource-based Theory

Resource-based theory draws its basis from viewing a firm as a broad set of resources, which goes back to the seminal work of Penrose (1959). By specifying a resource profile for a firm, it is possible to find the optimal product-market activities (Penrose, 2009). *The resources of a firm* can be described as strengths that firms can use to develop and implement strategies (Barney Jay, 2000). Firm resources can also be considered as those tangible and intangible assets which are linked semi-permanently to a company at a given time (Wernerfelt, 1984). Penrose (2009, p.60) defines resources "to include the physical things a firm buy, leases, or produces for its own use, and the people hired on terms that make them effectively part of the firm". Hence, a resource in a firm can be both tangible and intangible, human and non-human, and can be described as potential strengths for the firm to use.

According to Penrose (2009), *services* are the contributions these resources can construct to the productive operations of the firm, which causes a resource to consist of a bundle of possible services. Thus, for any given incident, a firm must possess resources from which it can obtain the productive services appropriate to the amounts and types of products it intends to produce, regardless of the type or scope of operation (Penrose, 2009). Penrose (2009) claims that some of the services will be obtained from the resources the firm acquires in the market as occasion demands and others will be obtained from resources already under the control of the firm. Wernerfelt (1984) states that a firm should seek to create a situation where the firm's resource position directly or indirectly makes it challenging for competitors to catch up. Such a situation takes place when a firm finds a way of using the services of its resources more profitably than before, or if the firm sees that any of the resources used in current operations can be used more efficiently, and thus are able to expand (Penrose, 2009). Consequently, a resource – either internal or external to the firm – offers a set of services that, if productively and efficiently exploited, can contribute to give the firm a competitive advantage.

Penrose (2009) writes that it is the interaction between the *material- and human resources* that affect the productive service available from each of the two types of resources. Furthermore, it is a firm's productive services available, or potentially available, based on its resources that give each firm its unique character. This unique character can be characterized as *resource heterogeneity,* which is the most basic condition of resource-based theory, and it assumes that at least some resource-bundles and capabilities underlying production are heterogeneous across firms (Barney Jay, 2000). Prior work on the resource-based theory recognized that entrepreneurship is an intricate part of the resource-based framework (Alvarez & Busenitz, 2001). Alvarez (2001) describes entrepreneurial knowledge to be the ability to grasp conceptual, abstract information of where and how to obtain undervalued resources – explicit and tacit – and deploy and exploit these resources. The cognitive ability of entrepreneurs to frame situations opportunistically is a heterogeneous resource that can be utilized to generate other resources (Alvarez & Busenitz, 2001), as well as a potential source of competitive advantage (Barney Jay, 2000). Hence, the firm's unique interaction between material- and human resources are a heterogenous resource that – especially for entrepreneurs – can be utilized to exploit undervalued resources and concepts to the firm's benefit.

A firm will always have partially used resources and resources that are used less efficiently, which can be in the form of unused productive services available from existing resources.

Unused services can be described as "free services," which, if they can be used profitably, may provide a competitive advantage for the firm possessing them (Penrose, 2009). Note that not all aspects of a firm's attributes are necessarily strategically relevant resources and that some may prevent a firm from pursuing and implementing valuable strategies (Barney Jay, 2000). Thus, a firm should always seek to use the resources more efficiently, and to evaluate the relevance of the obtained resources to assess whether they are restrictive or productive for progression.

The possibilities of using services change with developments in knowledge, and there is a close connection between the type of knowledge held by the personnel of the firm and the services obtainable from its material resources (Penrose, 2009). The knowledge possessed by a firm’s personnel tends to increase concurrently with experience. Therefore, the available productive services from a firm’s resources will also tend to change. Additionally, increases in knowledge can increase the domain of services available from any resource (Penrose, 2009). As tangible resources become part of a firm, the range of services they are capable of yielding starts to change depending on the abilities of the firm's human resources. The two types of resources together create the unique productive service opportunity of a particular firm (Penrose, 2009). As a result, we see that with increased experience for the human resources comes increased knowledge, which in turn also increases the amount of productive services they can offer, and together with tangible resources can pose a unique opportunity.

At any time, a firm will have a variety of inducements to grow in one or more directions, and there will be a mixture of difficulties to be overcome in outlining and executing an expansion (Penrose, 2009). The inducements and challenges are due to factors external to the firm, as well as internal circumstances. When the human resources in the firm does not have the managerial capacity or the technical skills required for the planning, execution, and productive operation of a new program, internal obstacles may arise. However, internal inducements to expansion arise primarily from the existence of a pool of unused productive services, resources, and specialized knowledge, all of which will always be found within any firm (Penrose, 2009). As a consequence, a firm will always have some degree of motive to grow in one way or another, which will always be possible if the resources in the firm are managed and exploited properly. However, the resource capacity may be a restrictive factor, causing the firm to have to obtain additional resources to grow.

2.3.2. An NTBF’s Life Cycle

As introduced in the theory of acquisitions and acquisition strategies, the life cycle of an NTBF – from inception to acquisition – can be divided into different phases. By using Picken’s (2017) phases, supplemented with Bobelyn (2012) and Pisoni & Onetti’s (2018) we are able to define a set of tasks that the NTBF typically have to address in the different phases, such as shown in Figure 4.

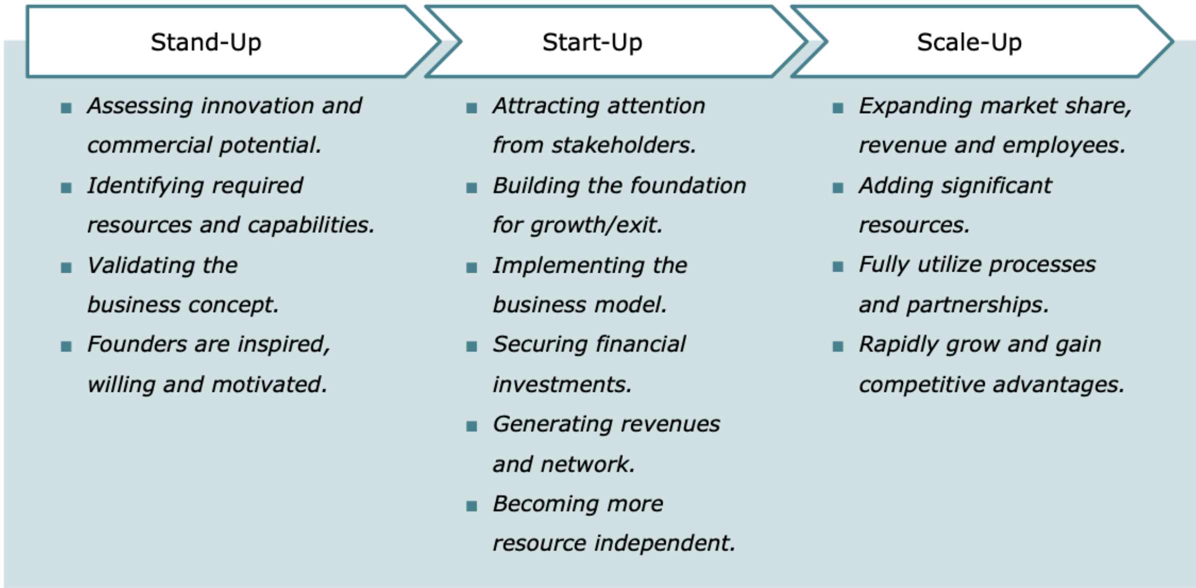

Figure 4: Characteristics of an NTBFs tasks during different phases of their life cycle. Adoption from Picken (2017), Bobelyn (2012), and Pisoni & Onetti (2018).

The more thoroughly the tasks of the former phases are conducted, the more likely it is that the NTBF is able to fulfil its full potential in each of the latter phases, which in turn may lead to significant value creation and attractiveness as an acquisition target (Bobelyn, 2012; Mathisen, 2017; Picken, 2017; Pisoni & Onetti 2018). Hence, if an NTBF is able to maintain an efficient development at all phases in its life cycle, the likelihood of it progressing to be an attractive acquisition target may increase.

2.3.3. Conceptual Framework

As a framework of analysis, we have connected the theory of resource-based view and the life cycles of an NTBF, together with the *Critical Incident Technique (CIT)* to form a conceptual framework, shown in Figure 5. The CIT is a flexible analytical tool that involves retrospective records of what subjects consider to be critical moments in a case (Allan, 2017). Allan (2017, p.300) defines a critical incident as "an instance in human behavior that emphasizes or decreases the goals, objectives, or outcome of a particular activity or communicative event in a significant way". In the context of this research, we identify critical incidents as measuring points that represent strategic plans, obstacles or decisions during the life cycle of an NTBF.

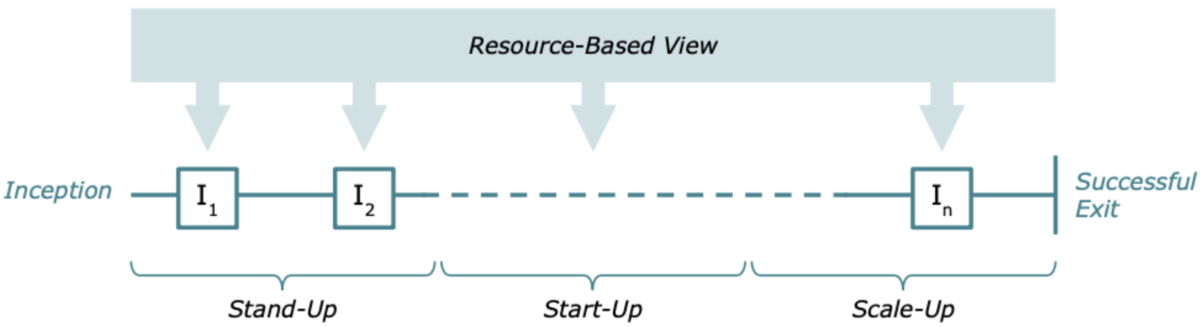

Figure 5: Conceptual framework of incidents in an NTBFs life cycle, categorized into phases.

This framework serves as the foundation for the data collection and analysis throughout the research. When a critical incident occurs that the NTBF needs to overcome, it has to develop its resources by exploiting existing ones or obtaining new ones. By using CIT to analyze specific events associated with strategic obstacles and decisions, we can determine which actions and behaviors NTBFs implemented, based on their resources, to be able to progress, as well as which actions led to the incident. Hence, by also using the life cycle phases to divide the strategy into three parts, we will be able to assign the incidents to a phase, and thus relate it to the typical tasks the literature describes an NTBF to have to address at that point.

3 | RESEARCH METHODOLOGY

In the following chapter, we will present and discuss the research methodology chosen for the master thesis. We have structured this chapter by first going through the research design – including learnings from a previous pilot study, then the procedure of acquiring and analyzing the data. Lastly, we will reflect on the study's trustworthiness and limitations.

3.1. Research design

The question for the research in this thesis is set to be the purpose of the study. To answer this question, a research design was made in which we empirically examined cases, obtained statements and explanations that were analyzed (Yin, 2014). Such research is characterized as social research, which implies two research methods; Quantitative and qualitative (Uwe Flick, 2015; Jacobsen, 2016). Since the purpose of this master thesis aims to explore how NTBFs exploited and obtained resources to strategically develop their venture prior to an acquisition – thus, emphasizing an exploration of detailed nuances of past experiences – a qualitative research method is suitable (U Flick, 2015; Jacobsen, 2016; Larsen, 2017). We further chose a multiple-case study as our research design.

3.1.1. Pilot Study

During the fall of 2019, we conducted a pilot study to serve as a basis for this master thesis. The pilot study was conducted as a comparative case study, with in-depth interviews as primary data source, and business plans as secondary data sources. The objective for the pilot study was to administrate that the questions we asked supported the purpose and the theoretical framework sufficiently, as well as to test how the interviewees responded to questions (Bryman, 2016). For the pilot study, we did four interviews where we looked at two different cases that both seemingly had experienced successful exits within five years of operation. One of the cases included hardware technology development, while the other had developed software technology. Based on our reflections and experience from these interviews, several areas of improvement were identified, as listed in Table 2.

Table 2: Learnings from the pilot study.

- We found that we would benefit from having the interviewee more prepared to elaborate past events for the interview.
- We found that choosing, and placing critical incidents was difficult. Thus, to rather have the interviewee set up the incidents before the interview – as a timeline – would be advantageous.
- We experienced that our interview guide did not fully support the theoretical framework, nor cover all aspects of the life cycle of the NTBFs.
- We found that the cases faced very different obstacles, due to their different technologies. Thus, the comparison of the cases elucidated few concrete findings.
- We experienced that the two cases had very different routes of exit, and that they varied in degree of successfulness. Thus, we found that more strict criteria were necessary.

As a result, we suggested changes for the master's thesis, predominantly in terms of case selection and data acquisition. We assessed that some of the issues addressed in Table 2 could be solved by having the interviewee prepare a timeline of the life cycle of the firm, with critical incidents listed. This way, the interviewee could be prepared, and it could make it easier to utilize the CIT. Additionally, we assessed that a multiple-case study within one type of technology development, and with only one route of successful exit, could offer a better basis for a cross-case analysis, and thus enabling us to elucidate more findings. Hence, we see that the pilot study aided in the identification of areas of importance and difficulty, thus offering a valuable basis for the research design in this thesis.

3.1.2. Multiple-Case Study

Researching past events through a case study allowed us to explore both developments over time, at various points of time, and through the context in which it occurred (Yin, 2014). Yin (2014) explains that case studies provide for a holistic and meaningful understanding of real-life events as it allows an explanation to complex situations. For our paper, "a case" was defined as the lifecycle of one NTBF, from inception to acquisition. Ten cases were examined and compared in this master thesis. Therefore, a multiple-case study is appropriate (Yin, 2014). Since the cases came from different industries, with varying durations, and offerings, the theoretical framework presented earlier set the conditions for analyzing cases in a resource-based context. Using a multiple-case study in combination with a resource-based view allowed us to answer how each case obtained and exploited resources throughout their life cycle, as well as to compare the development across cases, thus, enabling us to empirically answer the purpose of the study.

3.1.3. Selection of Cases

The selection of cases to study was a systematic process based on the information they could provide to the study (U Flick, 2015), as well as our learnings from the pilot study, displayed in Table 2. As we had learned that cases with hardware development and software development faced different obstacles – thus, making them difficult to compare, we chose to only focus on one of the groups. Of the two groups, we decided to favor software developing cases as these seemingly had the most homogenous conditions, and therefore would offer a better basis for comparison. As a result, a set of criteria for the selection of the cases were constructed, as presented in Table 3.

Table 3: List of criteria for selection of cases.

- The firm in the case must have gone through an acquisition they regard as successful.
- It must be/have been a new technology-based firm at the time of the exit.
- The firm in the case must have offered a service based on software development.
- The cases should be diversified; industry-wise, duration-wise and product-wise.

We required that the exit had already taken place to be able to review the whole life cycle leading up to the acquisition. Additionally, there is an assumption that if the subjects view the events in retrospect, they are able to have a more objective viewpoint, thus, enabling them to evaluate their decisions accordingly. However, it may also lead to a more glorified picture than the reality was (Jacobsen, 2016). Furthermore, we recognize that by only choosing cases in which the NTBFs had experienced an acquisition we are unable to assess if the way the NTBFs exploit and obtain resources to develop their venture is unique for the cases that had a successful acquisition, or if the same developments also apply for NTBFs that does not exit through an acquisition or for NTBFs that does not exit but achieve similar growth. As a result, our findings are restricted to only suggest patterns of development that lead to a successful acquisition.

The cases chosen for this master thesis were discovered by snowball sampling through our professional network, as well as through online business magazines and articles. For some of the cases, we had thorough information regarding the team, technology, and development before selecting the firm. However, for other cases, we had little knowledge about the firm beforehand and thus had to read up on them prior to the selection. The characteristics of the cases are as presented in Table 4.

Table 4: Characteristics of the cases for the study.

Cases	Business model	Years' operating	Time since exit
Case 1	B2B	2	Months
Case 2	B2B	2	< 1 year
Case 3	B2B	5	> 3 years
Case 4	B2C	3	2 years
Case 5	B2C	4	1 year
Case 6	B2B	5	1 year
Case 7	B2B	4	< 1 year
Case 8	B2B	2	< 3 years
Case 9	B2B	5	5 years
Case 10	B2C	1	< 3 years

As seen in Table 4, all cases featured an acquisition within five years of operation, and there was a wide variety of durations. The interviews took place between a month and several years after the exit occurred, which further emphasize the importance of the preparation for the interview by the interviewee. All the firms in the cases developed software technology, yet in different industries and offering different services. Hence, the selection is diversified in terms of industry, duration, and service offering.

3.2. Data Acquisition

We acquired primary data through semi-structured in-depth interviews and secondary data through a timeline prepared by the interviewees as well as supplementing documents, such as business plans and media reports. Semi-structured interviews allowed us to conduct an in-depth study of predefined topics as well as enabling the interviewee to introduce topics they emphasized as important. The timeline and supplementing documents contributed as a secondary source of information that is more objective than the data acquired from an interview; thus, it allowed us to explore more nuances of the reality (Jacobsen, 2016). Moreover, since we used the critical incident technique as a tool for the theoretical framework, we implemented this in the data acquisition process to elicit data points for along the life cycle of the NTBF for analysis. In the following sections we will first present how the in-depth interviews were conducted, before we display how the secondary sources of data were utilized.

3.2.2. In-Depth Interviews

According to O'Connor et al. (2007), it's essential to go through the following four stages to conduct a CIT interview; (1) Selecting the appropriate incidents, (2) create a detailed description of the incidents by formulating questions and follow-up questions to understand the rationale, (3) understand the reasoning and cues for the action taken, and (4) recognize the cause of the incident.

Choosing the right subjects for the interviews is crucial to be able to answer the purpose of the study (Bryman, 2016; O'Connor, O'Dea, & Melton, 2007). Since we were familiar with some cases and their founders, we had a good basis for selecting participants. For the NTBFs we were not familiar with, we asked the contact person for the firm in the case to select the interviewee best suited to participate in the study. The interviewees had all been part of the founding team and played a key role in the firms from inception to acquisition, as portrayed in Table 5. In an NTBF, we consider the key positions to be held by the CEO, CTO, CFO, COO or CMO. To anonymize the firms in the cases yet have them named for the analysis – as this was practical – we gave them the pseudonyms Firm One to Firm Ten.

Table 5: List of cases, firm pseudonyms, and the interviewee’s roles.

Case	Firm	Role
Case 1	Firm One	COO
Case 2	Firm Two	CEO
Case 3	Firm Three	CMO
Case 4	Firm Four	CEO
Case 5	Firm Five	CTO
Case 6	Firm Six	CEO
Case 7	Firm Seven	CEO/COO
Case 8	Firm Eight	CTO
Case 9	Firm Nine	CEO
Case 10	Firm Ten	CEO

Before the interview, we requested all the interviewees to fill out a timeline portraying the firm's development from inception to acquisition, by using a template similar to the one exemplified in Figure 6 (See Appendix 1 for full timeline template). The timeline facilitated for the interviewees to list the incidents they considered to be impactful for the development of the firm. As a result, we were able to visually be presented with the critical incidents of the firm in a chronological order, as well as aiding the interviewee to remember the development of the firm, prior to the interview. Thus, we managed to elicit detailed information about past events more efficiently than in the pilot study, as well as addressing stage (1) and (2) in O'Connor et al.’s (2007) suggested stages for a CIT interview. Furthermore, this may also contribute to counteract biases, like social desirability (O'Connor et al., 2007).

	Q1			Q4	
First year	Firm established.	Started to develop MVP.	...	Hired another tech guy.	Needed to change the service.
	Founders had a great idea!	Granted money from a public fund.		Testing with pilot customer.	Investment from angel investor
	Founders equity.				Hired a designer.

Figure 6: Example of timeline template for the firms, with dummy-data.

Prior to the interviews, we also constructed an interview guide (Appendix 2). The guide was designed as semi-structured with open-ended questions. This allowed the interviewees to give meaningful and holistic answers portraying their experiences, yet allowing us to control the topics (Larsen, 2017). With a semi-structured interview guide, we also facilitated for the interviewee to introduce topics they deemed important, within the predetermined thematics of "The Firm", "Incidents along the life cycle", "The Exit", and "The Firm's resources". Correspondingly, we constructed the interview guide to revolve around the timeline, so that both the interviewers and the interviewee could utilize this as a visual aid and a driver for the interview, to gain a common understanding of the development of the firm, which further aided in addressing stage (3) and (4) in O'Connor et al.'s (2007) stages through a CIT interview.

We conducted ten individual interviews for this master thesis. Because of the open-ended questions, our interviewees spoke more or less freely, causing a variation in the length of time. Therefore, although we had planned for approximately 60-minute-long interviews, they had a duration of between 50 and 75 minutes. Due to the COVID-19 situation, it became difficult to conduct the interviews face to face while complying with the infection control rules of the national authorities. Consequently, we conducted all interviews by using *Zoom*, a digital communication tool provided through the university, that encrypts the information shared, and allows us to record the interviews.

There were two interviewers present in every interview; One was leading the interview and directing the conversation, while the other was noting incidents, statements, or other things that seemed to be of significance for the research, as recommended by Jacobsen (2016). We based the structure of our interviews on Tjora's (2017) three phases; warm-up, reflection, and wrap-up. First, we gave the interviewees a general introduction to the thematics of the interview, such as previously described. Then we asked the interviewee basic questions, such as their age, education, experience, as well as making them briefly explain their business case. This information was to a large degree available for us beforehand, but in order to make the interviewee comfortable and start reflecting on past events, it is a useful way to open an interview (Tjora, 2017). Then we made the participants talk us through the timeline that was prepared beforehand. Next, we started asking more direct questions related to incidents from the timeline and the thematics that was the basis for the interview guide: "The Firm", "Incidents along the life cycle", "The Exit", and "The Firm's resources". To wrap the interview up, we asked some more specific questions that included all thematics, in addition to asking if the interviewee wanted to add something. To conclude the interview, we requested whether we could conduct a short follow-up interview if we were to need more data. During the whole interview, we frequently asked follow-up questions to clarify, but also to make the conversation more organic and fluent (Jacobsen, 2016).

3.2.3. Secondary Data

As frequently mentioned, we requested the interviewees to prepare a timeline before the interview, as well as give us access to other relevant documentation that could help us explore the cases in-debt, such as business plans or media reports. We did so because written documents are based on information that is non-spontaneous, unlike an interview. Therefore, it is, in general, more reflected and thought through (Jacobsen, 2016). This can both be positive and negative for the research, as it may lead to a presentation of a faked or desired truth, but it may also lead to more processed and precise information (Jacobsen, 2016). Nonetheless, written documentation – especially the timeline – was very contributive to get a more comprehensive picture of the case and to gain insight into the moment of the incident.

3.2.4. Documentation

All the interviews were recorded through Zoom's built in audio recorder. The raw material from the recording, as well as notes from the interview, was transcribed into a document using the service oTranscribe.com. To ensure that all the authors were involved in either the execution or documentation of each case, the author that was not present at the interview was responsible for transcribing the interview. That way, we made sure that everyone had a thorough understanding of each case. The documents were organized into case-specific folders containing the transcript, the timeline prepared by the interviewee, notes from the interview, business plans, and other information relevant to the case. As a result, all the data from each case were thoroughly structured, which served as a good basis for the analysis of the cases.

3.3. Analyzing the Data

From the raw material gathered from each case, we wanted to extract valuable data to be analyzed. By using the critical incident technique, as well as *thematic analysis*, we were able to structure the data in an effective way. Thematic analysis is not a very clear outlined strategy of analysis, yet it can be seen in most approaches to qualitative data analysis as more or less a coding system to manage the data (Bryman, 2016). A theme may be described as; (1) a category identified by the analyst through the data, (2) that relates to the focus of the research, (3) that builds on codes identified in transcript or notes, (4) and that provides the researcher with a basis for a theoretical understanding of the data that can make a contribution to the literature of the research field (Bryman, 2016). The analysis is done through a within-case analysis followed by a cross-case analysis to study the cases from a holistic view.

3.3.1. Within-Case Analysis

A within-case analysis was conducted to analyze each case in its own context. For this analysis, the unsorted data from each interview was sorted into critical incidents, as illustrated in Figure 7. The timeline the interviewee had provided served as a basis for the sorting of the data, however, if there were additional incidents we had noticed during the interview, those were also added to the timeline. As thematic analysis suggests, we categorized the incidents by defining four categories that we assessed to be recurring thematics; "Team", "Financial", "Market", and "Product", each with a unique color-code, as seen in Figure 6 (Bryman, 2016). The categorization served as an effective tool for visually identifying patterns of incidents. Next, direct quotes from the transcript were attributed to the respective incidents of which they discussed. Thus, also using the incidents themselves as thematics to sort by. At this point in the analysis we emphasized to stay as close to the transcript as possible, to make sure individual interpretations by the analyst wouldn't affect the data. All incidents, and the related quotes were then interpreted in their own context and summarized through a resource-based view. With all incidents being categorized and summarized through an RBV, we used the life cycles from the conceptual framework to divide the timeline into the three phases: Stand-up, Start-up, and Scale-up. As a result, we were able to construct our own interpretation of the firms' timeline, divided into phases, and with each incident revised, categorized and summed up in a resource-based view, such as illustrated in Figure 7.

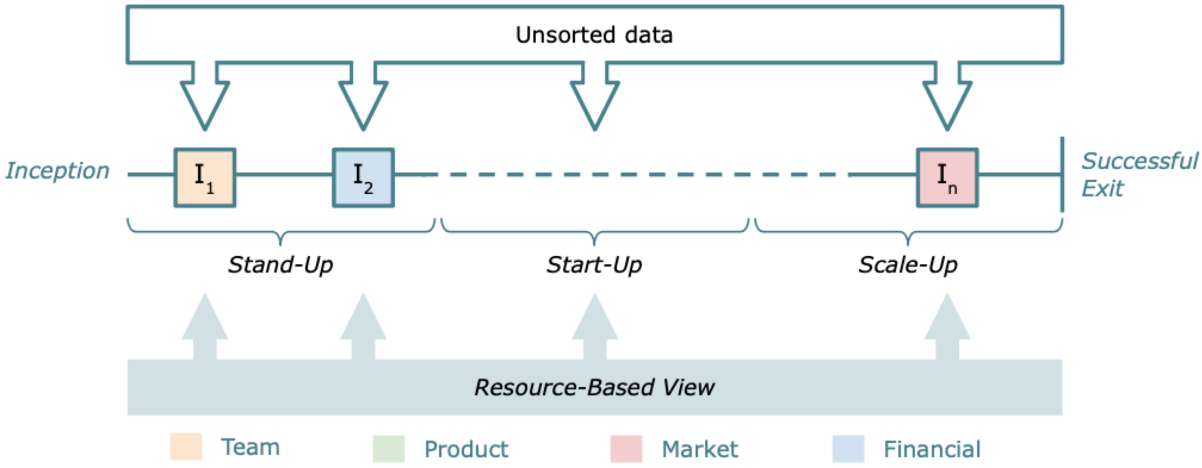

Figure 7: Exemplified process of within-case analysis.

To further analyze the cases, we utilized the new timeline to in-depth explore how the firm obtained and exploited resources at the listed incidents, as well as investigating how one incident may affect the occurrence of other incidents and ultimately the occurrence of an acquisition of the firm (Bryman, 2016). This qualitative analysis of the incidents was analyzed within the firms' own context, and also the context of the respective phase in which the incidents occurred. Lastly, we summarized the analysis of the incidents, which led to an in-depth exploration of a single case as a stand-alone entity that could be used in a cross-case analysis (Paterson, 2012).

3.3.2. Cross-Case Analysis

Following the within-case analysis, a cross-case analysis was conducted to compare the ten cases analytically. With the help of the new timelines, and the within-case summaries, we elicited recurring or prominent incidents, and resource developments, that were used as further data points to find patterns, similarities and differences across cases. These incidents and resource developments were structured into a count sheet to visually aid us in the search for findings (Appendix 3). As suggested by Bryman (2016), the examined patterns, similarities and differences were sorted into thematics based on the findings in the count sheet. The patterns were then analyzed within the context of their thematic. Furthermore, we examined possible links and connections between the thematics. Lastly, the cross-case analysis was summarized across thematics, to portray a holistic view of the most critical findings.

3.4. Trustworthiness of the Research

When evaluating the worth of data acquired for a qualitative research paper, *trustworthiness* is critical (Bryman, 2016). Trustworthiness is made up of four criteria: credibility, transferability, dependability, and confirmability.

Credibility depends on whether or not a reader considers the findings credible, meaning that they deem the determination of the social reality by the researcher as valid. Prolonged engagement with interviewees is suggested as a way to increase the credibility of the paper (Bryman, 2016). For this thesis, this engagement was short, with just two interactions with each participant during the Spring of 2020; a brief phone call, followed by the interview. Yet, by using a multiple-case design that allows for several sources of data acquisition – thus, enabling a triangulation of the data – the credibility increases (Bryman, 2016).

Transferability explains to what degree the findings in this thesis may apply to other contexts. Since a qualitative method was used for this paper, transferability is an empirical issue, since the findings may not hold to other contexts or even the same context in another time (Bryman, 2016). By having specified the research context to be Norwegian NTBFs developing software, in addition to the described industry contexts of each case found in the within analysis, we provide what is called a "thick description" for others to make judgements about the transferability of the findings. Yet, we recognize that the context of the time the firms operated in, varying from one month ago to five years ago, may have changed and thus also affected the results in some way.

Dependability describes whether or not the data collected can be considered consistent and can be replicated and repeated over time (Bryman, 2016). As the analysis of the data followed concepts from thematic analysis, thus relying heavily on the analyst's preferences and interpretations in the structuring of the data, the research may be difficult to fully replicate. Yet, by thoroughly elaborating our research methods, enclosing appendices, as well as having been audited through the whole process of the research by our supervisors, we have aimed to increase the dependability.

Confirmability examines if the interviewees or the authors shape the findings due to underlying motivations, preconceptions and other subjective factors (Bryman, 2016). By having the interviewees prepare a timeline of the venture's development, we aimed to reduce subjectivity for both parts, as this served as a more objective data than the interview alone. Thus, less subjective interpretation was needed from the authors' parts. For the creation of the timeline, as well as during the interview, we offered the interviewees little instructions, as we didn't want to color their portrayal of the incidents nor their citing of the firms' development.

However, during the interviews we predominantly asked the interviewees broadly about their recollection of the incidents listed in the timeline, rather than asking them directly about how they develop the firms' resources. Thus, the analyst had to interpret the recollection to determine how the firm managed resources. As all three authors have preconceptions of how NTBFs develop resources – due to their enrollment at NTNUs School of Entrepreneurship – the interpreting might have been colored by an underlying preconception.

3.5. Limitations and Reflections

In the following chapter we will share our reflections and elaborate the limitations of the study, and the influence these might have had on the findings.

Initially, we planned to conduct the study with fewer cases, but in more detail by interviewing two representatives from each case, as this would have offered an even more in-depth portrayal of the firms' resource development (Yin, 2014). However – partly as a result of our experiences with the pilot interview – but mostly due to the difficulty of reaching out to two representatives from firms that in many cases no longer existed as they used to, in the midst of the COVID-19 pandemic, we chose to rather interview one representative from each case, and increase the breadth. As a result, we evaluated that the importance of a triangulation of data sources, by eliciting secondary information from the timeline, business plans and online business magazines became even greater.

In addition to fewer cases, we also considered for a while to investigate NTBFs that had developed hardware services, as we hypothesized that these may have faced more resource intensive obstacles than those developing software services. As we found it surprisingly difficult to get in contact with NTBFs that had been acquired, in general, even more so identifying hardware firms that had been acquired within five years of operating, we chose to only focus on software firms. Yet, we hypothesized that the majority of the NTBFs developing software services had more homogenous development processes, thus experiencing more comparable incidents, which we viewed as something that could be utilized as a strength for the study.

When collecting data through interviews, face to face interviews are the most promising way (Jacobsen, 2016; Larsen, 2017; Tjora, 2017). However, because of the COVID-19 pandemic, all interviews were conducted over Zoom. Hence, developing trust with the interviewees was challenging, especially considering our short engagement with them. As a result, we emphasized the warm-up phase of the interviews to make the interviewee comfortable, as proposed by Tjora (2017). Yet, we also recognize that by eliminating the physical presence, and the body language that may partake in the interpretation of the interview the confirmability may have been decreased.

Since there were varieties in the amount of time since the firms had operated; from a month to five years, the accuracy and resolution of the data acquired was accordingly varied. The requirement of the construction of a timeline was a tool that aimed to reduce this variety of quality, yet we also experienced that a few interviewees had not constructed the timeline prior to the interview, or that they did so poorly. Hence, the general comparability of the cases presented themselves as challenging during the analysis. Different areas of focus of the interviewees' portrayal of their firm's life cycle may also have affected the comparability.

Lastly, as previously mentioned, our study was limited to only examine cases where a successful acquisition had occurred. Although we emphasized diversity within the selected cases, the fact that we only included a group of cases with one successful outcome can be viewed as a homogenous selection, and thus a weakness. While our study is able to analyze and find patterns of resource development of NTBFs that have experienced a successful acquisition, we are not able to assess if these developments are unique or if they also apply for similar cases that (1) exited through a non-successful route (i.e. Bankruptcy or liquidation), or (2) continued to successfully grow independently. Hence, we recognize that we are not able to verify whether the patterns of development we find are exclusively related to an acquisition, or a successful growth of the firm in general.

4 | ANALYSIS

The following section will present the analysis of the data collected through the qualitative method described in chapter 3. First, we will present a within-analysis of the ten selected cases, in which each case individually is summarized by linking critical incidents to the development of the NTBF. This is followed by a cross-case analysis, investigating similarities, patterns, and differences between the cases, where we will relate incidents to specific resources that seem to be essential across the different cases and analyze the findings. Lastly, the findings from the cross-case analysis will be summarized.

4.1. Within-Case Analysis

Each of the ten cases will be analyzed by first introducing main characteristics to the case, as well as a table of the categorized incidents they have faced, forming a timeline of the life cycle from inception to acquisition. Thereafter, we will in-depth present and analyze the incidents from the phases; stand-up, start-up, and scale-up. Note that two of the cases are acquired before being assigned to the scale-up phase, therefore only being divided into stand-up and start-up. Lastly, we will summarize each within-case analysis.

4.1.1. Firm One

Firm One operated in an industry with a diversified customer base, both small and large, and within different markets. After three years of operating, they were acquired by a large international competitor. In Table 6, we have listed the incidents that stood out as critical during the interview.

Table 6: Incidents of Firm One in chronological order.

: Market : Team : Product : Financial

Phase		Incidents
Stand-up	0	Experienced own need for the Service. Developed MVP.
	1	Experienced demand for the Service in the market.
	2	Obtained human resources to develop the Service.
	3	Obtained financial resources from FFF.
	4	Obtained human resources to accelerate the development of the Service.
Start-up	5	Offering the service before launch due to high demand, and receives the first paying customer.
	6	Initiated funding round with professional investors.
	7	Restructured the Firm. Offered shares to motivate the human resources.
	8	Obtained financial resources from professional investors.
	9	Launched the Service nationally.
	10	Obtained human resources to develop the Service.
	11	Obtained human resources to sell the Service.
	12	Obtained human resources to adapt the Service to foreign markets.
Scale-up	13	Launched the Service in Country 2.
	14	Experienced high growth nationally, and interest from professional investors.
	15	Obtained financial resources from existing investors.
	16	Obtained human resources to adapt the Service to more foreign markets.
	17	Launched the Service in Country 3.
	18	Initiated funding round with international professional investors.
	19	First contact with Acquirer (International Competitor).
	EXIT	International Competitor acquires the Firm due to growth rate.

4.1.1.1. Stand-up

Firm One was founded by three friends who had previous experience with starting a firm. They had complementary academic backgrounds and domain knowledge that was valuable for the development of the service. Their motivation was predominantly to have a flexible work environment and to work independently. Furthermore, the founders had the ambition that the case would gain experience and possibly lead to a financial harvest. The founders initially started another firm than Firm One. However, during their first months of operating the other firm, they experienced a need for a service that was not sufficiently available in the market they operated in. As a result, they developed an MVP for their own use. They quickly experienced others' demands for a similar service. Consequently, they separated the development of the service from the core business, thus establishing Firm One.

In the first phase of their life cycle, Firm One focused majorly on obtaining the necessary human resources to further develop the Service, from being an MVP to being attractive for the market. We see from Table 6, in Incident 4, that they engaged additional human resources to accelerate the development further. From the interview, we learned that they did so to launch their Service sooner and scale faster. The firm employed these resources through their network, which was affiliated with talented developers. They had experienced the initial market validation they needed, with their MVP, and therefore felt comfortable to develop and offer the Service quickly. To fund these initial resources, we see from Incident 3 in Table 6 that they obtained financial resources from "Friends, Family and Fools" (FFF). Such a source of financial resources is for many the first go-to source, as they often are more willing to place high-risk investments, which an investment at the beginning of development for an NTBF is likely to be. The founders are initially financially supported by the firm that inspired the development. When the NTBF obtains financial resources from the founders and FFF, they receive an income directly from firm one.

4.1.1.2. Start-up

Firm One emphasized throughout their whole life cycle the importance of not waiting for the development of the service to be completed before it is offered. This strategy was mainly to be able to develop the Firm fast and obtain market shares quickly, thus being able to refer to good metrics of growth to investors and other stakeholders.

> *What we have been quite good at, is that we have always been out in the market, selling, even though the product has been under development. The end users respect that the product is not yet perfect, as long as they see that the core business is good, then they are willing to pay for it. (COO, Firm One)*

This strategy is evident in Incidents 5-9 in Table 6, where we see that Firm One offered their Service to the market before officially launching it, due to high demand, and receives the first paying customer. Additionally, just after they launched the Service, they quickly obtained more human resources to both develop and to offer it; one of them being a resource whose task was to help adapt the service to a foreign market. In doing so, Firm One immediately after the first launch prepared for a scaling of the Firm internationally, even though the Service was still under continuous development.

In this second phase, Firm One also initiated and successfully closed their first funding round with professional investors, as seen in Incident 6 and 8. They did so to obtain the substantial financial resources necessary to fund the human resources they had and obtained until now. Simultaneously, Firm One also restructured the firm to prepare for emissions with investors and to offer shares to their human resources as a motivational reward. Firm One strongly emphasized rewarding the human resources – both with shares and high salaries – so that they both could get motivated and highly skilled resources.

> *[...] it's important to dare to pay a little extra to get the really skilled persons, [...] I mean, the difference between finding a medium skilled person with a salary of 500-550 thousand NOK, versus a brilliant person with a salary of 800-900 thousand NOK. Naturally, there's a difference in the salaries, but considering the added value a brilliant person may offer; that value is more than the difference in the salaries. (COO, Firm One)*

To be able to obtain such substantial financial resources, Firm One strategically sought out investors early on. If the investors did not want to invest at that point, Firm One requested to put them on a mailing-list that was regularly used to inform stakeholders and shareholders about the status of the firm and their Service. By doing so, Firm One effectively retained the interest of the investors, which at a later point, may want to invest after all. Furthermore, Firm One considered the completion of a funding round to last for about six months. Therefore, they always initiated the funding rounds long before they needed the resources. Their reason for doing so was that they never would face the risk of having "downtime" in the development of the Firm nor the Service due to lack of resources.

4.1.1.3. Scale-up

After having engaged a human resource to adapt the service to a foreign market in the Start-up phase, Firm One launched the Service in Country 2. At this point, they experienced remarkable growth nationally, enabling them to secure a second round of financial resources from the already invested investors, as seen in Incident 14 and 15 in Table 3. Consequently, Firm One was financially set to continue the development and scaling of the Service further. As a result, these Incidents were followed by them obtaining another technical human resource to adapt the Service to a third market, in which they quickly launched the Service. The time elapsed from their first launch nationally to Firm One launching in Country 3 was only just over one year, which further underscores Firm One's strategy of rapid development and even quicker offering to the market.

As Firm One strategically scaled internationally to increase the market size, they also sought financial resources from international investors, as seen in Incident 18. During this process, the Firm was coincidentally discovered by one of their *Big International Competitors* while searching for international investors. According to the COO of Firm One, they quite early sensed that the competitor sought out firms to acquire so they could increase their market share internationally. The competitor was impressed by what Firm One had accomplished in such little time, both development-wise and growth-wise. This led to negotiations and soon an agreement in which the competitor, *the Acquirer*, acquired Firm One, including market shares, the Service, and related IP, as well as the team. Nevertheless, the COO in Firm one emphasized that their impression was that the Acquirer chose to acquire them due to their rapid growth in market shares, and efficient development of the service.

4.1.1.4. Case Summary

Firm One can be characterized by their emphasis on rapid growth; They rapidly grew the size of the firm, as well as expanding geographically and increasing their market share. In the case of Firm One, the growth of these two factors was strongly correlated. Firm One experienced a demand, which they responded to by adding more technical human resources to the internal team to accelerate the service's development, which led to an increased market share. The firm initially obtained financial resources from the founders and FFF to support early development of the service, which in turn led to the opportunity to obtain considerable financial resources and, consequently, more human resources to develop and scale the Service. The scaling of the service led to more financial resources, more human resources, and followingly an increased market size. Lastly, this rapid sequential development of both financial and human resources, and the market share, led to Firm One being noticed by the Acquirer while the firm was attempting to obtain financial resources internationally. This implicates an efficient utilization of the internal human resources, allowing the Firm to grow without significant obstacles (Penrose, 2009). We further see that the development of obtaining and exploiting resources in the aforementioned sequential manner led to the Firm gaining a competitive advantage through rapid growth (Wernerfelt, 1984).

The founders in Firm One were highly educated, with entrepreneurial experience, and an intrinsic motivation for pursuing their venture, however, they were also well aware that if they managed to grow the firm sufficiently, they would be attractive for investors and as an acquisition target. This may contribute to explain their strong emphasis on the rapid sequential growth that eventually triggered an acquisition of the Firm.

4.1.2. Firm Two

Firm Two operated in an industry with few, large customers, all competing for the same market. After just under two years of operation, they were acquired by a young firm that offered complementing services to the same market. In Table 7, the incidents that stood out as critical during the interview are listed up.

Table 7: Incidents of Firm Two in chronological order.

: Market : Team : Product : Financial

Phase		Incidents
Stand-up	0	Firm is established. Common intrinsic motivation.
	1	Obtained financial resources through an industry-relevant pre-incubator program.
	2	Negotiated license agreement with Industry Partner A (Research Institution) for resources to develop the Service.
	3	Obtained human resources to develop the Service, by conducting trials.
	4	Defined needs for the Service, based on knowledge from a Large Customer.
Start-up	5	Obtained financial resources from public funds and an accelerator program.
	6	Entered cooperation agreement with Industry Partner B (Large Customer) to access knowledge.
	7	Obtained financial resources through pitching/startup contests.
	8	Obtained financial resources from Industry Partner B.
	9	Terminated cooperation with Industry Partner A due to inapplicability.
	10	Finalized development of MVP.
	11	Obtained human resource to develop the Service.
	12	Obtained financial resources through a national innovation contest.
	13	Development restrained due to poor contribution from Industry Partner B.
	14	Obtained financial resources from public institutions.
	15	Acquired external human resources. Terminated shortly after.
	16	Sought for partners from which to elicit knowledge and financial resources.
	17	Participated in an accelerator program. Obtained knowledge about fundraising.
	18	First contact with Acquirer (Complementing Supplier).
	19	Close dialog with Acquirer. Experienced a shared mindset and vision.
	20	Negotiations with Acquirer.
	21	Obtained financial resources from Acquirer, to test compatibility.
	22	Develops the Service parallel to acquisition process.
	EXIT	Complementing Supplier acquires the Firm due to skilled human resources and valuable knowledge.

4.1.2.1. Stand-up

Firm Two was founded by three friends that, at the time of the foundation, were classmates at a master's degree in entrepreneurship. They had different academic education before the master's degree, all of which covered relevant fields of expertise for the industry and shared the same intrinsic motivation to create an innovative service. One of the team members had previous experience with starting a firm. The three founders had conducted feasibility studies of different industries and technologies, but they all shared a fascination for one industry. As a result, they founded Firm Two together, with a shared intrinsic motivation, yet without a clear direction.

The inspiration to pursue this venture for Firm Two came from a technology presented by an International Research Institution and an industry-problem introduced by a Large Incumbent Customer. Thus, one of the first steps for Firm Two was to construct a license agreement with the International Research Institution, Partner A, to get access to a technology that would enable the development of the Service. This process, however, turned out to be long and time-consuming. Parallel to constructing this agreement, Firm Two sought out several possible accelerator programs and funding programs in order to gain access to financial resources and business coaching. As seen in Incident 1, this resulted in Firm Two being granted access to a pre-incubator program that was particularly relevant to their specific industry. These resources helped initiate the development of the Service. The three founders had relevant academic backgrounds, yet they lacked the skills to develop the Service amongst them. Thus, they obtained human resources that possessed the needed capabilities by conducting trials. These resources were qualified within their field and had an intrinsic motivation to work in a NTBF, partly the reason for them being chosen.

At this point, Firm Two had the human and financial resources to start developing the Service, as well as access to key technical resources through Industry Partner A. However, they did not have a clearly defined direction for the Service. As seen in Incident 4 in Table X, Firm Two worked closely together with the Large Incumbent Customer to learn more about the problem they had fronted, and the needs of the industry as a whole. As a consequence, Firm Two was able to define a set of needs that were required by Partner B, thus forming a direction for the Service development.

4.1.2.2. Start-up

The next phase for Firm Two started by obtaining financial resources (Incidents 5, 7, 8); they were granted support from public funds and granted access to an accelerator program (including financial resources and coaching) linked to the previous pre-incubation program. They also participated in pitching contests, which in return rewarded them with financial resources and attention in the industry. Lastly, after entering a formal cooperation agreement with the Large Incumbent Customer, Partner B, Firm Two were offered to develop the Service over the summer while being financed by resources from Partner B. As a result, Firm Two initiated this phase by obtaining substantial resources – both financial and knowledge. Through the pre-incubation program and the cooperation with Partner B they gained access to valuable non-financial resources that enabled further development of both the Firm and the Service.

The development of the Service over the summer led to the Firm, realizing that the technological resources from Partner A were inapplicable and excessive. As a result, Firm Two terminated the agreement with Partner A. Shortly after this, the Firm finalized an MVP that could be tested by Partner B, as seen in Incident 10. The CEO of Firm Two described the development over the summer, together with Partner B, as valuable and productive. At the same time as completing the MVP, Firm Two also obtained another human resource that would assist in the further development and implementation of the Service. At this point, the core team was complete.

Firm Two was awarded prize money at a national innovation contest and they were granted a large amount of financial resources from public funds, thus financing the human resources and other tangible resources to develop the Service, such as equipment. However, during this period, Firm Two also experienced that their development was restrained due to poor contribution from Partner B. As a result, the Firm started to look for other customers from which they could elicit the knowledge and resources necessary to fully develop the Service, thus partly terminating the agreement with Partner B. As seen in Incident 15, the Firm also engaged external human resources, but quickly ended the engagement as this was too cost-intensive and inefficient.

The operations of Firm Two moved to another location, so they applied for an incubation program at the new location. The Firm was granted access to the program, including access to coaching and financial resources. Furthermore, as seen in Incident 17, Firm Two also obtained knowledge about financial development during this program. One of the program resources put the Firm in contact with another firm that offered complementing services to Firm Two's. This led to the first meeting with the *Complementing Supplier, The Acquirer*. When discussing the meeting during the interview, the CEO of Firm Two said:

> *[...] and that's one of the things I remember as especially noteworthy from the meeting with [CTO at the Complementing Supplier]; that he was very enthusiastic about everything I told him – about everything we did. He was very excited about what we developed. He immediately saw a clear possibility for cooperation. I distinctly remember he finished the meeting by saying: "We basically try to solve the same problem, so why don't we do it together?". (CEO, Firm Two)*

Firm Two continued their initial planned development, but after this meeting, the two Firms had a continuous dialogue characterized by a shared mindset about the issue they tried solving. Followingly, negotiations with the Acquirer was initiated. As Firm Two was a very young company, having only existed for about one and a half years, the Firm's due diligence was reasonably short. The negotiations were characterized by mutual trust and openness, according to the CEO of Firm Two. Furthermore, the Firm experienced increased legitimacy due to its partnership with Partner B as they were a known incumbent customer in the industry.

The Acquirer offered Firm Two to be paid as consultants, to develop the Service with the Acquirer and test the compatibility between the two firms. This was valuable for Firm Two, as they continued with the planned development of the Service and did not diverge into the Acquirers strategy. Firm Two did so to ensure steady progress in development, should the negotiations with the Acquirer fall apart.

Shortly after the compatibility-test of the firms, Firm Two was acquired by the Acquirer. When discussing the acquisition process and the strengths of the Firm, during the interview, CEO of Firm Two stated the following;

> *[The reason for the Firm being acquired] was 100% because of the team we were. Especially since we had experience with software development, but also because we understood the issue we tried to solve well and had worked closely with the industry. [...] And [CTO of the Acquirer] got the impression that we were a self-propelled team that could continue our development efficiently, together with them. (CEO, Firm Two)*

4.1.2.3. Case Summary

Firm Two can be characterized by their emphasis on industry-relevant partnerships. They obtained industry-relevant resources and knowledge throughout the firm's life cycle and built a well-qualified team of software and business developers. By working closely with a highly relevant industry partner and participating in attractive accelerator programs, the firm gained legitimacy, problem understanding, and presumably a good product-market fit in an emerging market. The Firm was primarily funded by funds the firm acquired through participation in incubator and accelerator programs, industry partners, and public funding, in addition to the founders being financially supported through their enrollment to the university. Consequently, we see that Firm Two have obtained specialized resources to progress and to develop the Service, something an NTBF always must obtain – either by exploiting internal resources or by obtaining external ones in the market – to develop the service they seek to offer (Penrose, 2009).

Firm Two were a team of six, with half exclusively working with technical development of the Service, and the other half working with development of the Firm. Even though the human resources in Firm Two were relatively few, they were allegedly highly efficient. Both when establishing the Firm, and when obtaining human resources, later on, Firm Two emphasized intrinsic motivations for value creation. Further, the founders' intrinsic motivation, in addition to their obtained knowledge through the industry relations, was contributing factors to the team's efficiency and, eventually, attractiveness as an acquisition target. An NTBF's resources and productive services typically evolves as the human resources' experience and knowledge evolves, something of which is evident in the case of Firm Two (Penrose, 2009). The Firm was predominantly acquired due to efficient human resources, high level of obtained knowledge, and ultimately a good fit between the two parties. The acquisition itself did not come as a part of the Firm strategically seeking an exit, but as a part of the Firm seeking financial resources and cooperative partners. Hence, we see that the obtained knowledge of the internal human resources, through a long-lasting close relation to the industry, was triggering for Firm Two's acquisition.

4.1.3. Firm Three

Firm Three developed an innovative and novel service with a high demand in the market. They provided services for a substantial conservative industry, with few competitors and large customers. After 5 years of operating, Firm Three was acquired by a large firm offering similar services to the same market. In Table 8, the incidents that stood out as critical during the interview are listed up.

Table 8: Incidents of Firm Three in chronological order.

: Market : Team : Product : Financial

Phase		Incidents
Stand-up	0	Firm Three is established. Innovative technology with multiple applications.
	1	Specialized in a specific market.
	2	Obtained financial resources through founder funding, competition and angel investors.
Start-up	3	Signed deal with pilot customer.
	4	Restructured the team due to internal disagreements.
	5	Decided to do all development of the Service internally.
	6	Signed large paid pilot projects.
	7	Granted R&D-funds through public institution and customer.
	8	Founders are engaged full time.
	9	Delivered consultant services to gain financial resources.
	10	Experienced significant challenges with development of the Service.
	11	Obtained financial resources through the existing investor's network.
	12	Restructured roles for the founders.
Scale-up	13	Obtained financial resources through professional investors.
	14	Secured development project with large customer.
	15	One of the founders with substantial knowledge about the Service left the Firm. Obtained new human resources to develop the Service.
	16	Redeveloped parts of the Service. Experienced disadvantages.
	17	Obtained financial resources from existing investors. Inquiry of acquisition declined.
	18	Secured crucial sales to customers.
	19	Launched unfinished Service.
	20	Discussed an acquisition of the Firm.
	21	One of the founders left the Firm.
	22	Experienced conflict between remaining founders and investors.
	Exit	Firm Three is acquired by a Large Supplier of Similar Services, through the network to one of the investors, mainly due to a user-friendly Service.

4.1.3.1. Stand-up

Four friends who went to the same class at the university decided to pursue a venture together. They had little-to-no previous experience with starting a venture, but they had relevant academic backgrounds and domain expertise within a few industries. The founders' motivations to pursue a venture were to build the world's largest technology company, which can be categorized as an internal drive dedicated to building an innovative company and achieving a financial harvest of the venture. Through participation in industry fairs, they experienced high demand in several markets for a Service that had yet to be developed. They evaluate the markets and their application areas and find one industry to be the most promising, as listed in Incident 1. Firm Three was co-funded with an investor who provided the initial financial resources and received the majority of the firm's shares. At the same time, the firm obtains a skilled human resource to lead the development of the innovative Service. Furthermore, they participated in several startup contests and were rewarded with financial resources due to their innovative business case.

4.1.3.2. Start-up

The Firm settles an unpaid pilot project with a customer, as seen in Incident 3. At this stage, the firm is physically separated in two places, and a suitable team is recruited and established in one of those places. When the Firm reassembles, a conflict arises, based on task distribution and choice of the target market. The conflict is solved by changing positions and responsibilities of the human resources. As a result, Firm Three established several roles within marketing and sales, leading to the Firm having more human resources than actual operations that need attention. We further see, in Incident 5, that the firm agrees to do all the development of the Service internally in the Firm, to uphold efficiency of development and control over IP related to the Service.

Although the firm signs large paid pilot projects and is granted R&D-funding through public funds – and thus can financially support all the founders full time– we learned from the interview that the Firm's liquidity is distressed. This is predominantly due to the Firms large amount of human resources that develops the Firm, and not necessarily the Service. Thus, we see in Incident 9 that the Firm is offering consultant services to obtain more financial resources, and yet gain knowledge and experience through development in the Firm. Consequently, Firm Three also faces challenges with the development of the Service; customer’s expectations from the Service are higher than what the Firm is able to offer, which generate a pressure towards the Service developing resources. The Firm has underestimated how complex the development of their offering Service is, and thus fails to satisfy the customers as desired.

Firm Three obtains additional financial resources through the network of the existing investors, as the firm needs additional funding to continue the development of both the Firm and the Service. At this point, the founders' ownership and control of the company begin to decrease significantly. As a result, it is the investors who lead the task of obtaining new financial resources. At the same time, one of the new investors takes over as CEO, and a new CTO is acquired. Consequently, there will also be a restructuring of the roles in the company, as seen in Incident 12. Additionally, one of the founders reduces their engagements in the Firm significantly.

4.1.3.3. Scale-up

Firm Three moves towards the scale-up phase when a professional investor invests in the firm, as seen in Incident 13. In this emission, the human resources in the Firm also have the opportunity to invest in the company, but since the investment is so high this late in the life cycle of the firm, the financial gains were little, according to the CMO of Firm Three. Shortly after, Firm Three enters a large development project with a Large Incumbent Customer, which would lead to a long-term revenue. According to the CMO of the Firm, this project was crucial for the future of Firm Three.

> *The R&D-project with [Large Incumbent Customer] was golden, because that was a project with a total cost of [substantial sum of money], and we also got to sell them our Service for a good sum too. So, that gave us a rather good cash-flow for about 3 years. (CMO, Firm Three)*

As listed in Incident 15, the founder with lead responsibility for development of the Service lacks motivation and leaves the Firm, and in that way; valuable knowledge. This resignation is a massive loss for Firm Three, as this founder's expertise gave the firm a technology advantage that proves impossible to replace. This loss means they have to change the whole way the Firm's Service operates. To do so, they obtain human resources to develop the Service. They redeveloped major parts of the Service, as a part of the development project they had going with the Large Incumbent Customer. However, they also experienced disadvantages with the updated Service, and flaws in the user-experience.

> *What we did was that we solved it in another way, to what [The Firm] is today; [Explains technology-changes]. That was kind of what the new guys we recruited knew. But there were a lot of downsides to that development, to say the least. It was simply impossible to replace [the founder that left]. (CMO, Firm Three)*

Firm Three receives a new round of investment from the existing investor and manages to deliver some sales with the Service they have now rebuilt for launch. The owners also receive an inquiry for an acquisition of the Firm. However, they assess the inquiry to be unreasonably poor, and thus decline, as seen in Incident 17. When the Firm launches, the Service is not ready for the market at all. Yet, the Firm emphasized to try to sell the Service. At this point, the Firm can be categorized as dysfunctional; deadlines for development cannot be reached, while the marketing department still carries out sales campaigns. As the Firm is pressed for liquidity, sales become the main focus, something of which not all members of the Firm agree with. Once again Firm Three experiences a unified team. This process ends up with one of the founders leaving the Firm, making it only one remaining founder. At the same time, as seen in Incident 20, the owners are now starting to consider an acquisition of the Firm.

Through one of the investors, the Firm caught the attention of the *Large Supplier of Similar Services, The Acquirer.* As a result, after a fairly efficient negotiations process, Firm Three was acquired by the Large Supplier of Similar Services.

4.1.3.4. Case Summary

Firm Three can be characterized as largely influenced by actions from the stand-up phase. The timing of the Firm's Service was perfect, and they found a market that had a demand for the type of technology that they would offer. On the other hand, the fact that the founders who would develop the entire Firm from the start were granted a relatively small stake in the company, and limited control over the Firm's development, affected the direction of the firm as well as the motivation of key resources. Moreover, we learned that there were too many founders at inception who shared similar backgrounds and roles in the Firm. Such a homogenous bundle of resources may prevent an NTBF from progressing efficiently (Barney Jay, 2000). This created a paradox, as the Firm wanted to develop the Service internally while also being forced to offer the unused human resources as consultants to avoid running out of financial resources (Penrose, 2009).

Incident 15 – the leaving of a valuable and knowledgeable founder – can be highlighted as a significant impact on Firm Three's venture. Presumably, the Firm's management and investors did not appreciate or realize the significance this founder had for the entire Firm's competitive advantage, and the service this resource offered to the Firm (Penrose, 2009). This implies that the management of the Firm did not have sufficient knowledge about the resources that resided within the Firm, and which ones were the most valuable. Overall the firm allocated the resources quite poorly, consequently weakening the liquidity, which had a significant impact on both the Firm's short-term and long-term strategy. Thereby, lacking the managerial capacity required for efficient development of the firm, consequently leading to internal obstacles (Penrose, 2009). Yet, the Firm went through an acquisition which was successful, in addition to the inquiry of an acquisition they received earlier. This implicates that the Firm was attractive and had created substantial value. The acquisition itself was primarily motivated by financial harvest, although this is less relevant as most of the founders had either left of the Firm or had their ownership interest diluted significantly at the end of the Firm's life cycle. Further, the acquisition was neither a result of an explicit long-term strategy, but rather an incident incurred by the investors based on stagnation in business development. As we have learned that the timing of the Service they offered to the market was impeccable, and the level of innovation of the Service was high, this can be seen as heterogeneous factors contributing to the competitive advantage and successfulness of Firm Three (Barney Jay, 2000). As a result, Firm Three's venture can be characterized as a venture with a very suited and valuable offering to the market, but that it failed to exploit the resources they had obtained (Penrose, 2009).

4.1.4. Firm Four

Firm Four operated in a large traditional market with powerful established competitors. They focused on a digitization of processes in the industry they operated in, which in turn, after 4,5 years of operation, led to them being acquired by a large incumbent supplier that specialized in digitization of similar processes. In Table 9, the incidents that stood out as critical during the interview are listed up.

Table 9: Incidents of Firm Four in chronological order.

: Market : Team : Product : Financial

Phase		Incidents
Stand-up	0	Firm Four is established due to an intrinsic motivation.
	1	Obtained financial resources from founders and public funds.
	2	Obtained financial resources and industry relevant knowledge resources through professional investor.
Start-up	3	Developed an MVP of the Service.
	4	Tested the MVP in the market.
	5	Acquired the first customer.
	6	One of the founders is engaged full time.
	7	Changed the concept for the Service.
	8	Obtained financial resources from a public institution.
	9	Developed the Service.
	10	Pilot project with a small customer.
	11	Obtained additional resources from a public institution.
	12	Large investment deal with Large Industry Partner A fell through.
	13	Entered partnership with Large Industry Partner B.
	14	Obtained financial resources from investor with an industry-relevant portfolio.
Scale-up	15	All founders are engaged full time.
	16	Obtained additional financial resources from the investor with an industry-relevant portfolio.
	17	Engaged inexperienced human resources to manage labor tasks.
	18	Engaged human resources to obtain financial resources.
	19	Large investment deal fell through. Contact with the Acquirer (Large Incumbent Supplier of Similar Services).
	20	Experienced growth and traction. The firm's business is growing and scaling.
	EXIT	Firm Four is Acquired by Large Incumbent Supplier, mainly due to their growth in the market.

4.1.4.1. Stand-up

Firm Four was founded by three persons whose primary motivation for pursuing a venture was to create and build their own company. They did not know each other very well, but they had relevant backgrounds from both engineering and economics. The choice of the industry that the firm entered was somewhat coincidental and was due to the fact that digitalization opened up many opportunities in this industry, then. The founders had no previous experience with starting firms and little knowledge of this industry, so the early strategy was to copy a successful concept they had seen internationally, that had gained much funding and attention.

At this time, the founders worked with the Firm next to their regular job and financed parts of the expenses themselves. The firm was granted financial resources for market clarification of their business concept through a public institution. Moreover, the public institution set them in contact with a highly relevant investor who had previously been involved in NTBFs in the same industry. The second Incident for Firm Four proved to be very important for the development of the business. The highly relevant investor had – besides experience, capital, and network – access to a business venue was crucial for testing their concept.

> *We had an investor who was very enthusiastic and supportive and understood it would take a long time. It usually takes a couple to three years to fully succeed. It was crucial that we got that investor. Without them, it would not have been possible to test the concept. (CEO, Firm Four)*

Although one of the founders had a relevant background for developing the Firm, they lacked the technical expertise to develop the Service. They obtained these resources externally through various consulting companies. The reason for this was that the Firm was not attractive enough to recruit the right people and that the most skilled people were too expensive for them to obtain.

4.1.4.2. Start-up

The next step for Firm Four was to develop and test the Service in the market, as seen in Incident three and four. They managed to acquire a customer to the Service, which rewards them with a small revenue, yet not enough to make the Firm sustainable. However, in addition to the financial resources obtained earlier, it enabled Firm Four to financially support a full-time engagement for one of the founders (COO).

The Firm values customer feedback highly, as they are not yet too familiar with the market, and still are new to the industry. Through this, they learned more about the customers' needs and desires. As a result, the Firm chooses to pivot the business model to a presumed better suited one, as listed in Incident seven; they change the concept from being an entirely new type of Service in the market, to a Service that will make the existing customer journey more effective. This change offered a less radical change to the processes in the market, from which they gained more trust, according to the CEO of Firm Four. The seventh incident was, therefore, very extensive for Firm Four but also crucial for their future development. This pivot also determines that the business model of the NTBF involves solely offering software as a service, which was the initial desire of the founders.

> *The fact that we dared to pivot all the way was essential. Especially the last time. We used what we had learned, we spent a year and a half learning, to somehow pivot to a concept that we think could scale very well. (CEO, Firm Four)*

The founders utilized what they had learned to develop the concept that became the final offering. Since they now offered a new concept, Firm Four was once again granted financial resources for market clarification from a public institution. These financial resources were used to obtain external human resources to develop the new Service, as shown in Incident 9. Consequently, they entered a pilot project with a small customer, to validate the Service. Shortly after, the Firm was also granted financial resources for commercialization of the Service, from the same institution, as seen in Incident 11. These grants were crucial to the Firm to continue its operations.

During the same period, Firm Four seeks to connect themselves to industry partners and investors to gain access to both human- and financial resources. As seen in Incident 12, they fail to land a deal with a potential investor that could have offered financial resources as well as valuable knowledge and industry legitimacy. According to the CEO of Firm Four, the investment-strategy of the investor’s firm had changed due a shift in management, which resulted in them no longer being interested in Firm Four. However, the Firm manages to land a partnership with a highly relevant industry partner, Industry Partner A, that complements the business model of the new Service well. This series of incidents leads to Firm Four being able to obtain a substantial investment of financial resources from a new major investor with an industry-relevant portfolio, as shown in Incident 14. CEO of Firm Four states that they were able to secure this investment because they had built a foundation that bore the potential for a great scaling in the market.

4.1.4.3. Scale-up

The partnership with Industry Partner A and the substantial investment enables Firm Four to pursue a scaling of the Service to the entire national market, in addition to financially supporting the full-time engagement of all the founders. The Firm successfully scales up the Service together with the industrial partner, and engages inexperienced human resources to perform labor tasks, as this was time consuming. As listed in Incident 16, the investor with an industry relevant portfolio invested additional financial resources to stimulate further growth. During the same period, Firm Four also engaged an external human resource to assist in obtaining more financial resources, as this was a task that would steal focus from the founders. For a while, Firm Four and the external human resource focused majorly on obtaining financial resources for future operations, parallel to the scaling of the Service. After a long and good dialogue with an investor who was interested, they still fail to secure the investment in the final phase of negotiations, as listed in Incident 19. As the Firm experienced good growth, they were still able to continue operations, according to the CEO of Form Four.

> *We were left behind by the investor at the same time as we were doing operations to grow. Luckily, we had great growth during this period and the excellent business figures. Without it, it would not have been possible. (CEO, Firm Four)*

Furthermore, the loss of the investment deal in Incident 19 led to one the existing investor granting the Firm to pursue an investment deal with a *Large Incumbent Supplier of Similar Services, The Acquirer.* One of the existing investors had previously forbidden the Firm to pursue an investment from the Acquirer, due to a conflict of interest. As a result, Firm Four started the dialogue with the Acquirer about an investment deal. However, after a short while, the parties concluded that an acquisition – rather than a substantial investment – was favorable for all parties involved in the deal. Thus, after a rather quick acquisition process, Firm Four was acquired by the Large Incumbent Supplier of Similar Services, mainly due to the Firms significant growth in the market, and the scalability of the Service.

4.1.4.4. Case Summary

Firm Four's progress from inception to acquisition was driven by the founders' strong desire to create and run their own business. The fact that the starting point was so industry-independent made them very open to feedback, which led to rapid changes and pivoting of the Service. Although the Firm struggled to obtain all the technical development resources they needed internally, it is evident that they fully utilized the resources they had (Alvarez & Busenitz, 2001). The ability to engage the right stakeholders and obtain financial resources through investors is recurring thematic in the development of Firm Four. Although they lost two large investment deals, which allegedly could easily have led to distress for the Firm, they still emphasized a focus on growth and a continuous scaling of the Firm, which in turn lead to them continuing to be attractive for other investors. These resources enabled the founder to engage full time without personal financial risk. The Firms faithfulness in the long-term strategy of growth, which went beyond short-term profitability, was crucial. Furthermore, the Firm would not have been able to pursue the venture, had it not been for the public financial resources they were granted during the stand-up phase, when they defined the direction for the Service. Consequently, we see that Firm Four had a great belief in a long-term strategy, and that they managed to exploit the relevant resources to overcome obstacles in pursuit of this long-term objective (Penrose, 2009).

Firm Four was predominantly acquired due to their steady growth in the market, which was enabled because they had built a good foundation for a scaling of the Service early in the life cycle. The buyer initiated the acquisition, since they considered it as a better strategic solution than merely becoming an investor in the Firm, even though the initial goal for Firm Four was to obtain financial resources to independently grow. In conclusion, the Firm's persistent ability to trust their long-term strategy, utilize their human resources, and focus on growth, enabled Firm Four to obtain the necessary financial resources, and consequently, also the acquisition of the Firm. To frame situations opportunistically – such as with the obstacles Firm Four encountered – can be viewed as a heterogeneous resource that the Firm managed to utilize well to obtain other resources, and thus, progress (Barney Jay, 2000).

4.1.5. Firm Five

Firm Five operated in a conservative industry with large, well-established competitors. The industry is driven by large assets, and the customers are predominantly consumers. After just over 4 years of operating, Firm Five was acquired by a Large International Competitor. In Table 10, the incidents that stood out as critical during the interview are listed up.

Table 10: Incidents of Firm Ten in chronological order.

: Market : Team : Product : Financial

Phase		Incidents
Stand-up	0	Firm Five is established. Intrinsic motivation for value creation.
	1	Obtained human resources to develop the Service. Part time.
	2	Initiated development with private financial resources from the founders.
	3	Initiated development of the Service.
	4	Engaged a CEO/CMO.
	5	Decided name for the Firm. Developed branding.
	6	Became aware of a competitor. Accelerated development.
	7	Granted press release exclusivity to a large national newspaper.
	8	Entered agreement with Large sub-supplier to the Service.
Start-up	9	Pre-launch of the Service to the Firm's network.
	10	Launched the Service, and gained the first paying customers.
	11	Gained attention through the press release from the newspaper.
	12	Engaged a CEO and obtained human resources to operate the Service.
	13	Obtained financial resources from professional investors.
	14	Service development resources engaged full time. Obtained external human resources to develop the Service.
	15	Obtained financial resources from investors. Cut costs of development.
	16	Experienced a decrease in growth. Seasonal change.
Scale-up	17	Received inquiry of an acquisition.
	18	Obtained financial resources from investors to scale the Service.
	19	Acquisition negotiations fall through.
	20	Initiated acquisition dialogue with multiple potential acquirers. First contact with the Acquirer (Large International Competitor).
	21	Obtained additional financial resources to scale the Service.
	22	Sought financial resources for an international scaling of the Service.
	Exit	Firm Five is acquired by Large International Competitor, due to the growth of the Service and an efficient team.

4.1.5.1. Stand-up

Firm Five was established by three friends with complementing academic background and experience with new ventures, one of whom runs his own NTBF. Through a workshop, they landed on a concept for a Service. One of the founders had previously worked with a similar test project in his former employer. Their motivation for starting a venture was mainly value creation; they wanted to offer something to the community, create value for users, and they wanted to create something on their own. While two of the founders were occupied with other jobs, the last one was very intrigued by the business opportunity and chose to pursue it with the other two founders as board members and coaches.

The Firm obtained human resources, part-time, that could help develop the Service. Although the positions obtained were part-time, the Firm managed to occupy those with talented developers they were connected to through their network. At the beginning of this stand-up phase, the CTO and the other human resources of Firm Five worked without pay, parallel to their other jobs. And the private financial resources seen in incident 2, was used to develop the NTBF. Since the concept previously had been worked with by one of the founders and is a seemingly successful business concept in an international market, the direction for the Service's development was quite clear. Thus, the development of the Service, with the part time resources, quickly began. Meanwhile, the Firm also obtained a CMO that in effect operated as a CEO in the beginning, as listed in Incident 4. This small initial team was emphasized as impactful for the success of the Firm in the beginning.

> *The most significant impact we did at the beginning was to put together a small but superior team. (CTO, Firm Five)*

As a key component in the Firm's core strategy, the choosing of the name for the Service was highlighted as especially important, during the interview with Firm Five; they needed the name – and thus, the brand – to reflect the value proposition of the Service, as well as establishing user trust. In retrospect, the CTO of Firm Five described the branding they created as a significant success factor for the Firm and the Service. As listed in Incident 6, the Firm finds that one of the competing services in another geographical market is thinking of establishing itself in the Firm's national market. As this will potentially deprive them of being the first supplier to the market, Firm Five significantly accelerates its launch date, to beat them. In retrospect, much indicates that the value of being first in the market was vast. Although the launch was accelerated and much development remained, the decisive factor was partly that the firm managed to land an agreement with a necessary sub supplier, as described in Incident 8. Since the Firm offered a novel Service to the market, such an agreement was difficult to obtain.

However, another central factor for Firm Five's successful launch of the Service was that they strategically offered an exclusivity deal for the press release of the launch to a large national newspaper. This way, they could utilize the exposure and media reach from the newspaper, rather than to use their own financial- and human resources for marketing.

4.1.5.2. Start-up

The next phase for Firm Five started with the launching of the Service. In addition to the press release-agreement the Firm had arranged for the launch, they chose to pre-launch the Service to a small group of users in their network, in order to present a constructed image of traction immediately at the official launch, as seen in Incident 9. These factors gave the firm momentum and put the launch of the foreign competitor in the shade as they established themselves in the market only a few days later.

The start-up phase progresses as the firm receives stable growth within the service. A permanent CEO and other human resources are obtained to operate the Service, as listed in Incident 12. Nevertheless, there are still very few human resources in the Firm, and the Service showed excellent metrics at the time. Although the service was not profitable at this time, the positive metrics, the efficient team, and the fact that the Service covered the entire national market were the factors that made the firm receive investments from professional investors, such as listed in Incident 13. These investments made it possible for firm five to engage the team full-time.

> *[...] to this date, we have never received such a large number of users in a single day as we did at the launch. The press release generated an enormous traffic towards us [...] A case like this here is really red numbers, but we spend little money. We spend little money on employees and marketing, and perhaps most on product development. (CTO, Firm Five)*

Yet, at one point, in Incident 16, Firm Five experiences that the growth decreases significantly, and that marketing is very inefficient. The CTO of Firm Five labeled this Incident as "The Depression''. Due to poor results, seemingly without any changes in the strategy nor operations, some human resources considered ending their engagement. The Firm overcomes this hardship but now has to obtain additional financial resources. Later, the Firm finds that the decrease in demand was due to a seasonal shift, which they were not aware of. Allegedly, had it not been for the founders' willingness and ability to obtain financial resources from investors while also cutting operational costs, this could have been the end of Firm Five.

4.1.5.3. Scale up

As the demand for Firm Five's Service once again increases, they also receive an acquisition inquiry. The management in the Firm finds this attractive, and negotiations are initiated. However, as the negotiations steal a lot of focus from the Firm, resulting in an inefficient scaling of the Service, they obtain more financial resources to make up for the poor development. As listed in Incident 19, the negotiations of the acquisition fell through. The CTO of Firm Five explains that they had good inductions from the management of the potential acquirer, but that the board had overruled management, choosing not to acquire the Firm after all. Shortly after, the Firm gets in contact with multiple potential acquirers, both competitors and other stakeholders. As described in Incident 20, it was at this point they had the first contact with *the Acquirer*, a *Large International Competitor.* The CTO of Firm Five explained why the Firm were so interested in an acquisition by stating the following:

> *The Service will be the same [after an acquisition], the big difference is what you avoid when you get an owner with solidity; then you do not have to run for money all the time. Because that is what an entrepreneur does a lot of the time. You never really get done with that. I think that's a part of being an entrepreneur that you don't know about before you have tried it. (CTO, Firm Five)*

While being in dialogue with a couple of potential acquirers, they now obtained more financial resources to stimulate a scaling of the Service nationally. Concurrent, they also sought out international investors to be ready for a scaling of the market size internationally. Eventually, after a very long wait and an equally long due diligence process, which the CTO of Firm Five describes as "the worst period in his life; that long wait", the Firm is acquired by the Large International Competitor. They were acquired predominantly due to the growth they had accomplished, and thus the good market share they obtained.

4.1.5.4. Case Summary

The development of the life cycle for Firm Five can be characterized by a rapid and lean offering to the market, and a good timing. Their Service wasn’t particularly innovative, nor complex, as it existed internationally. Yet, the Service didn’t exist in the national market Firm Five addressed. Moreover, the founders had strong indications that the market was ready for such a Service. They managed to beat a competitor to the market, thus enabling them to conduct a successful launch. The fact that they managed to establish the Service first in the market was a lasting competitive advantage that could not be obtained by the competitors. Such an advantage is essential to develop an NTBF to be a strong competitor in the market (Wernerfelt, 1984). Additionally, they strategically sought out a newspaper to do the marketing for them, which made the Firm able to focus on the development of the Service solely. This can be viewed as an entrepreneurial knowledge, allowing them to exploit an undervalued external resource (Alvarez & Busenitz, 2001). The fact that the founders had experience with new ventures was presumably one of the reasons why certain decisions were made during the stand-up phase; such as prioritizing an internal developing team, recruiting highly skilled technical and entrepreneurial resources, self-financing, and prioritizing the financial resources to support growth rather than the founders themselves.

As Firm Five gained traction and substantial growth, they became attractive as an investment- and acquisition target. However, throughout the negotiations, the Firm lost focus of the main objective for the Service, which was to scale, and therefore had to obtain substantial financial resources. This may indicate a lack of managerial capacity required for executing all parallel operations (Penrose, 2009). Presumably, this loss of focus – in addition to the first failed acquisition process – led to a weak bargaining power for Firm Five. Nonetheless, the metrics the Firm was able to refer to – in terms of market response and growth – were so impressive that they still obtained a high interest from the Large International Competitor. The acquisition was a consequence of everything the Firm had accomplished during its relatively short life cycle, with such limited resources, as well as the founders’ analysis that an acquisition was the leading strategy for further growth of the Firm. Furthermore, the founders' intrinsically motivated strategy and the team's quality made Firm Five unique, and became a fundament for the acquisition, which is reflected by the fact that everyone continued to operate the Firm post acquisition (Penrose, 2009).

4.1.6 Firm Six

Firm Six operated in a regulated industry with few direct competitors, yet large indirect competitors. Their users/customers were both businesses and consumers. 5 years after inception, with 3,5 years' operating, the Firm was acquired by a large industry partner. In Table 11, the incidents that stood out as critical during the interview are listed up.

Table 11: Incidents of Firm Six in chronological order.

: Market : Team : Product : Financial

Phase		Incidents
Stand-up	0	Firm Six was established. Complementary background and intrinsic motivation.
	1	Initiated development of the Firm next to primary job. Obtained private financial resources from founders.
	2	Experienced that the market was not ready. Development on hold.
	3	Experienced good timing.
	4	One founder engaged full time, the other part time.
	5	Defined business concept. Developed MVP.
	6	Sought for investors. Entered partnership with Large Industry Partner.
	7	Obtained substantial financial resources from Large Industry Partner.
Start-up	8	Developed an employment manual. Obtained human resource to lead the Service development. Both founders engaged full time.
	9	Obtained human resources to develop and operate the Service.
	10	Initiated development of the Service.
	11	Acquired services from external human resources. Short term.
	12	Applied for a license to operate.
	13	Granted license to operate. First in the market.
	14	Launched the Service and gained the first paying customers.
	15	One of the founders left the Firm.
Scale-up	16	Obtained additional financial resources from the Large Industry Partner.
	17	Developed an additional Service.
	18	Launched the additional Service.
	19	Received acquisition inquiry from the Acquirer (Large Industry Partner).
	20	Entered acquisition negotiations.
	Exit	Firm Six is acquired by the Large Industry Partner, due to efficient human resources, and a well-developed Service.

4.1.6.1. Stand-up

Firm Six was founded by two friends with experience from leadership roles in the business world. They have an intrinsic motivation to "start something cool," mainly because they wanted to solve problems. They had experienced a problem for small firms in the national market, which they wanted to solve. As they both were experienced, highly competent, and had complementary skills, as well as an extensive network within the industry, they decided to pursue the business opportunity. The CEO of Firm Six emphasized that they did not feel that they took upon a risk, as this – in the beginning – was something they pursued next to their other jobs and felt so confident in the domain. As Incident 1 and 2 describes, the founders developed the business concept and did a market analysis. However, by looking at similar business concepts internationally and nationally, they experienced that the market was not ready for the Service at the time, and thus chose to postpone the pursuit until they were confident it was. As both founders had other jobs, they were very comfortable with the decision.

> *Lesson number one. Timing is everything. You can have as good a team or product as you want. If the timing is wrong, you can just forget it. (CEO, Firm Six)*

About a year later, one of the founders gets tired of his job and decides to commit full time to the Firm and invest his own financial resources in it, as listed in Incident 3. The founders believe the market is now ready for this type of Service, and the other funder is contributing alongside their primary job. As the founders now have different efforts, they restructure ownership accordingly. They work with the business model, conceptualization, and financing. The Firm assesses it to be irrationally time consuming to always be on the lookout for financial resources to fund the development of the Firm, consequently deciding to aim to obtain a substantial amount of resources that can fund the development long-term. Moreover, they decide to seek out an industrial partner, as this would provide them with legitimacy, resources and a market entry. Thereby, as Incident 7 describes, the Firm utilizes their network in order to connect to a Large Industrial Partner, which agrees to invest a substantial amount of financial resources. The investment is bound to three milestones, all of which is essential for the success of the Firm. The CEO of Firm Six states that, apart from a good business case and a refined keynote presentation, it is the founders' reputation in the industry that allows them to land the deal that potentially finances the firm two years ahead and until they have a positive turnover. Moreover, this investment enables both founders to engage fulltime and financially support everyone involved.

4.1.6.2. Start-up

The Firm emphasized to have all development of the Service done internally, as this will allow them to have full control over the development of the Service, which in effect is “what the Firm actually is”. As both founders had experience in leadership roles, they saw the value of having a defined work culture. Thus, they developed an employment manual that significantly highlighted the candidates' software development capabilities and their ability to work in an interdisciplinary team. In the candidates' actual selection, the manual favored the candidates who were potential good team members ahead of those with the best software development skills. Followingly, they obtained a human resource that would lead to the service's development and operation of the Service within a fitted team, as listed in Incident 9. The Firm viewed it as essential to fill all the Service development roles before Firm development. Furthermore, Firm Six highlighted two factors as critical to obtain skilled service development resources:

> *First, we built a team, where the first employment naturally was technology developer. You will not get excellent tech staff unless you know tech yourself, and unless you have good financial funding. (CEO, Firm Six)*

Development of the Service was initiated, and the team was able to work effectively as they had clear milestones to reach. Firm Six also made sure the human resources were motivated, by offering them shares in the Firm. For a short term the Firm also acquired external human resources to assist in operations, yet these have never been in core development roles, since the Firm emphasized to utilize internal resources for this. The development was efficient, and in Incident 12 they applied for a license to operate. Such a license was obligated to obtain, if the Service was to operate. The CEO of Firm Six described the potential outcome of the application to be binary; either you were granted a license, or you couldn’t operate. As this was crucial, they exploited large financial and human resources to get it right. This application also triggered one of the milestones set by the investment from the Large Industry Partner.

Firm Six was granted a license to operate, as the first in the national market with this type of Service. Shortly after, in Incident 14, the Service is successfully Launched. As the Firm worked closely with the Large Industry Partner, having them represented in the board of Firm Six, their core strategy influenced the Firm’s. Consequently, one of the founders was offered to work in a managing role for the Large Industry Partner and accepted. As this new job shared similarities, and also were closely held to the Firm's operations, the former founder continued to be a valuable resource to Firm Six.

4.1.6.3. Scale-up

The Large Industry Partner invests further financial resources in the Firm, enabling them to scale the Service to be profitable. As seen in Incidents 17 and 18, Firm Six also develops and launches an additional Service. During this period the Firm’s strategy starts to align with the core strategy of the Large Industry Partner. As both parts see this strategic fit becomes evident, the suggestion of acquisition is presented by the industry partner in a process where the Firm sought initially to raise additional capital. One of the main reasons for the inquiry was that the Large Industry Partner had a policy that stated that they had to fully own a Service if they were to co-offer it to the market. Shortly after, negotiations were initiated, which in turn led to Firm Six being acquired by Large Industry Partner, mainly due to the highly efficient human resources in the Firm and to gain access to the Service.

4.1.6.4. Case Summary

The overall development of the lifecycle of Firm Six can be characterized as well planned and a highly efficient one. The Service they offered was novel in the market, yet fairly non-complex and quickly developed, besides from the crucial milestone of being granted a license to operate. Among the main reasons for the success of Firm Six were the domain experience, competency, and network of the founders, in addition to their ability to recruit and a well-functioning internal team of highly skilled developers. Domain experience and internal team of technical developers can be viewed as resources that become increasingly efficient if developed over time (Penrose, 2009). Due to their well assessed postponing in the early stand-up phase – presumably as a result of their entrepreneurial experience – they were able to execute a correctly timed market entry. The internal resources, especially including the founders, can be viewed as heterogeneous resources that offered a competitive advantage (Barney Jay, 2000).

Firm Six’s strategy of obtaining human and financial resources is seemingly a key component in the efficiency of the development. The founders self-financed the initial development of the Service, and then sought out a substantial investment that would allow the founders to fully focus on a continuous rapid development of the Firm without risking their financial welfare. They developed a relationship to a large industry partner with great legitimacy, industry-influence and vast resources. The financial resources, together with a defined firm culture, enabled the Firm to obtain effective, skilled and motivated human resources. Consequently, Firm Six developed a well-functioning and efficient team of human resources, a partnership with supporting resources, knowledge, and financial funds, all of which played a vital role in the successful development of the Service. Thus, we see that a compound of unique resources rewarded the Firm with a competitive advantage (Penrose, 2009; Wernerfelt, 1984). Although Firm Six was acquired while seeking additional financial resources, they were acquired due to their human resources, and to gain access to their Service. Followingly, it can be presumed that the early development of partnership, team, and financial resources were causative factors for the acquisition. Furthermore, all of the employees and the founders of the Firm continued in the Firm after the acquisition, which highlights the founder's strong intrinsic motivation for the venture.

4.1.7. Firm Seven

Firm Seven operated in a relatively new industry with many large customers (businesses) and a large number of users (consumers). After 4,5 years of operation, they were acquired by a sizable complementing supplier with supportive services. In Table 12, the incidents that stood out as critical during the interview are listed up.

Table 12: Incidents of Firm Seven in chronological order.

: Market : Team : Product : Financial

Phase		Incidents
Stand-up	0	Firm Seven is established, due to intrinsic motivation to obtain knowledge.
	1	Used private financial resources to initiate development of the Firm.
	2	Relocated to an international market.
	3	Initiated prototyping in search for business opportunities.
	4	Obtained human resources to develop the Service.
Start-up	5	Launched early version of the Service.
	6	First customer launched a product with the Service.
	7	Sought financial resources from professional investors. Negotiations fell through.
	8	Obtained financial resources from professional investors.
	9	Obtained industry-relevant knowledge resources.
	10	Obtained financial resources from existing investors.
	11	Obtained human resources to develop the Service.
	12	Launched the Service with limited compatibility.
	13	Obtained human resources to develop the Service.
	14	One of the founders relocated. Established a second department.
	15	Secured first sale.
	16	Received acquisition inquiry from Large Customer. Declined.
	17	Secured more sales. Experienced inadequate product-market fit.
	18	Obtained financial resources from existing investors.
	19	Lost customer.
	20	Obtained human resources to develop the Service. Short term.
	21	Obtained financial resources from industry-relevant private investor.
	22	Launched additional Service.
	23	Obtained human resource to develop the Service, and knowledge resource.
	24	Secured deal with a large customer.
Scale-up	25	Obtained human resources for the second department to develop the Service.
	26	Launched an improved version of the Service. Experiences growth.
	27	The Service and the Firm gains interest and attention in the industry.
	28	Financial resources are empty. One of the founders resigns—shutdown of the second department.
	29	Incapable of paying all human resources. Downsizing of resources.
	30	Launched additional versions of the Service.
	31	Received acquisition inquiries from multiple complementing suppliers. First formal contact with The Acquirer.
	32	Negotiations started with the Acquirer. Assistance from external knowledge resources.
	EXIT	Firm Seven is acquired by Large Complementing Supplier, due to a well-developed Service and access to IP.

4.1.7.1. Stand-up

Firm Seven was founded by two friends, from the same university-class and the same previous venture. The two founders shared an intrinsic motivation to pursue a new venture. Furthermore, they wanted to establish themselves internationally, and they aimed to become a role model for other startups, nationally, because they believed such a role was needed, yet lacking. At first, they did not have a clear direction, but rather a vision for what they wanted to achieve, combined with some domain expertise within an industry. They initiate the search for business opportunities with workshops of need-finding. They came up with some solutions, but not a clear one. Shortly after inception, as seen in Incident 2, Firm Seven moves internationally to pursue the venture. The founders use their financial resources and savings to fund the firm's initiation and the costs of living for founders, so forth being able to engage full time in the venture from the start.

During this first period of establishment, the Firm obtained another human resource that would help develop the Service. This resource was one they both knew was skilled, as they knew each other from the university. As listed in Incident 3, the Firm further prototyped different solutions that might turn into business opportunities. Eventually, they ended up with one that seemed the most promising.

4.1.7.2. Start-up

The Firm quickly launched an early version of the Service – somewhat similar to an MVP – of which they had sign-ups and interviews with customers and users in order to obtain data to further develop the Service. As seen in Incident 6, the Firm experiences the first customer launches a product with their Service, thereby signaling an acceptance in the market. As they had developed a version of the Service that could be showcased, in addition to the founders of the Firm being familiar in the industry, they sought out professional investors from which to obtain financial resources. Yet, the negotiations fell through, and no resources were obtained. The CEO/COO of Firm Seven explained the Incident (7) by elaborating the following:

> *Since we had a good reputation in the industry, it was very easy for us to get in meetings with the investors that knew the industry well. We probably entered those meetings a bit too confident, with too little to show. [...] It sort of was a period where all the investors that stated that they invested in early-stage firms, really invested in series A and further. So, we really pitched too high, while we should have sought angel investors and such. (CEO/COO, Firm Seven)*

Shortly after the declined investment, the Firm got in contact with professional investors from their home country. These investors were familiar with the founders and expressed that they were impressed with the firm's commitment and independence. In that sense, CEO/COO of Firm Seven stated that "they invested in us, not the Service". Although it became a mismatch with what other investors were willing to offer, the Firm accepted substantial financial resources from these investors; most of it equity, but also some techquity (funds that are earmarked for technology development through the investor's resources). This incident was critical for Firm Seven, as it enabled them to financially fund the human resources in the Firm, the development of the Service, as well as giving the opportunity to obtain more human resources.

Firm Seven gained access to industry-relevant knowledge resources, successfully closed its first launch, and gained some attention in the industry. Then, as listed in Incident 10, the Firm obtained more financial resources from some of the same investors as previously. Followingly, the firm obtains internal human resources through their network to help develop the Service, and at the same time, launches the Service – although with limited compatibility – as seen in Incidents 11-13. Shortly after, one of the founders had to move back home, which led to some communication issues. As a result, the Firm established an additional national department, where they could exploit local resources at a lower cost than internationally.

In Incident 15, we see that Firm Seven signed their first sales contract, and they started to experience traction in the market. Unfortunately, the customer closed down before launching their product with Firm Seven's Service. Another customer, however, is so satisfied with the Services that they suggest acquiring Firm Seven, as seen in Incident 16. Since the Firm didn't want to sell the Firm at that time, they declined. However, this Incident, in addition to the Firm delivering the Service to 10 new customers, gave some of the existing investors enough validation to invest further financial resources in the Firm. Although Firm Seven experiences traction and validation, they also noticed that the product-market fit of the Service was inadequate.

The Firm obtained a human resource to help develop the service, and obtain even more financial resources, this time from a private industry-relevant investor. At this point, the CEO/COO of Firm Seven states that they were comfortable to obtain enough human resources for both departments. They launch an improved version of the Service, and obtain two new remote resources for the development of the service, as well as one knowledge resource for coaching, as listed in Incidents 22 and 23. The Firm signs with a large customer that possibly would reward them with a substantial number of users, as well as revenue. Shortly after, as seen in Incident 25, they obtain an additional set of human resources to work with the development of the Service in the national department. Now, Firm Seven felt equipped for a scale-up, according to CEO/COO of Firm Seven.

4.1.7.3. Scale-up

To initiate a scale-up phase, Firm Seven launches an additional Service. As presumed, with the signing of the large customer, this launching reward them well - both with users and revenue. For the next period, Firm Seven initiated some small launches for specific events, they speak at industry fairs, they get written about, and in general, attract attention and more users. However, after a little while, Firm Seven runs out of financial resources, thus making them incapable of funding all their human resources, as listed in Incident 28. One of the founders – the founder who previously had moved back, and ran the national department – left the Firm, thus making them close down the national department. Furthermore, there was a downsizing of the Firm, and the remaining founders worked without pay, to be able to fund the rest of the Firm financially. This was a very critical period for Firm Seven. Nevertheless, they launched an update for the Service and attracted more customers.

> *[...] we had hoped for a much larger revenue at this point. We should have earned more. And we should have tried to raise another series. Vi probably started way too late to raise a new series, and revenues were way to slow. (CEO/COO, Firm Seven)*

Followingly, Firm Seven sought out investors and tried to obtain more financial resources. During this process, the Firm receives multiple inquiries of an acquisition of the firm from *Complementing Suppliers* in the industry. According to the CEO/COO of Firm Seven, they were familiar with all the Complementing Suppliers – which was a benefit for the sake of an acquisition, because then the "get-to-know-each-other" part was much more efficient. Together with the investors, Firm Seven chose to enter negotiations with one of the bidders, *Large Complementing Supplier/The Acquirer*, due to them being the ones who were most likely to retain the Service – and thereby user experience – as it was post-acquisition.

> *[...] together with our investors, we chose to go for [Large Complementing Supplier]. That was probably best in our opinion as well, because with them our customers would get to continue to use the service, while with others, the service would have needed major changes to it, and not survived. (CEO/COO, Firm Seven)*

Firm Seven enters negotiations with the Acquirer, as seen in Incident 32, with much help and coaching from a knowledge resource related to one of the investors. The negotiations were quite efficient, and the CEO/COO of Firm Seven stated during the interview that they felt like the "winning part" of the negotiations. As a result, Firm Seven was eventually acquired by the Large Complementing Supplier, predominantly to get access to their IP and their well-developed Service. The CEO/COO further explained that if they had chosen one of the other bidders, they probably would have received a larger financial reward, but they emphasized to choose the options that would benefit the customers, users and investors as well as the Firm. Presumably, this decision is grounded in personal motivation, since the Firm – including human resources – would advance together with the Acquirer. To be able to continue offering the Service to the customers and users would also mean the opportunity to keep developing what the Firm had accomplished.

4.1.7.4. Case Summary

The life cycle of Firm Seven can be described as very efficient and rapid in the stand-up phase and the first part of the start-up phase, which can partly be explained by the fact that the founders were engaged full time from inception of the Firm. Although it seemed like Firm Seven was set for a scale-up, it evidently lacked some product-market fit, and thus are not able to obtain the desirable traction when building the foundation for a scale-up phase. It seems that the Firm, while trying to acquire more customers and improving the Service, lost sight of the financial needs that were required to be able to run the Firm. This led to shortcomings in financial resources, and downsizing of the Firm, putting them in a distressed position. Such an event can be viewed as an insufficient managerial capacity, thus causing hold-up problems and eventually internal obstacles (Penrose, 2009). Nevertheless, it can be presumed that their IP and the strength of the service's fundament saved the Firm in a way that they still were able to launch, when in distress, and they were able to negotiate themselves to an acquisition successfully, though they initially attempted to obtain financial resources.

Other aspects that seem to have been emphasized by Firm Seven is their ability to obtain highly skilled technical development resources and develop their Service mostly internally, as well as rapidly relaunching the Service when changes and updates to the Service were conducted. Throughout the whole life cycle, they continuously iterated the Service, for the better. This emphasis led to them gaining a competitive advantage due to internal specialized resources that continuously increased in knowledge and efficiency (Penrose, 2009; Wernerfelt, 1984). Moreover, it can also be viewed as a vital factor that explains why Firm Seven was considered such an attractive acquisition target.

4.1.8. Firm Eight

Firm Eight operated in a well-established industry with large customers that are suppliers of services to consumers. After four years of operation, they were acquired by a large global supplier of complementary services, with substantial market shares. In Table 13, the incidents that stood out as critical during the interview are listed up.

Table 13: Incidents of Firm Eight in chronological order.

: Market : Team : Product : Financial

Phase		Incidents
Stand-up	0	Firm Eight is established due to intrinsic motivation. Obtained CEO shortly after.
	1	Entered an R&D-project to develop a service for a Large Customer A.
	2	Obtained external human resources to develop the service for R&D-project.
	3	Obtained human resource, to develop the R&D-project, short term.
Start-up	4	Launched the R&D-project for the Large Customer A.
	5	Obtained human resource to develop their own Service. All founders engaged full time.
	6	Defined direction for the Service. Initiated development.
	7	Obtained financial resources from public funds.
	8	Obtained human resource to develop the Service.
	9	Terminated relation to human resource, due to poor contribution.
	10	Obtained financial resources through angel-investors.
	11	Obtained human resource to develop the Service.
	12	Launched the Service nationally and internationally. Compatible with system 1.
	13	Entered R&D-project to develop a service for a Large Customer B.
	14	Launched the Service, compatible with system 2.
	15	Obtained human resources to develop the Service, on short term.
	16	Decided to make the Service compatible for all systems, as one—initiated development.
	17	Terminated relation to human resource, due to redundancy.
	18	Launched the Service with universal compatibility, nationally and internationally.
Scale-up	19	Expanded the Service to 10 new international markets.
	20	Experienced growth in the market. Increased revenue.
	21	Obtained human resource to develop the Firm, short term.
	22	Expanded the Service to international markets with opposite high seasons.
	23	First contact with the Acquirer (Large Global Complementing Supplier).
	24	Formal dialog/negotiations with Large Global Complementing Supplier.
	25	Due Diligence process started. Operations continue as normal.
	EXIT	Firm Eight is acquired by Large Global Complementing Supplier, due to their novel Service.

4.1.8.1. Stand-up

Firm Eight was established by a few friends that shared a common intrinsic motivation for the same industry. The founders shared an interest in this industry predominantly because they had experience as users, and thus were able to see opportunities for a venture. At the time, they were engaged full time in other companies. Initially, the Firm had no specific direction, and to quote the CTO of Firm Eight, "nothing happened in the beginning, there was just an idea of a market to explore". The friends had limited experience with establishing ventures but were all well-educated. Shortly after the Firm was established, they hired a CEO, as the founders possessed skills suited for other roles in the Firm. As seen in Incident 1, by utilizing the CEO's network, Firm Eight entered an R&D-project to develop a service for a large customer, *Large Customer A*, who had significant legitimacy in the industry. The R&D project provided the initial financial resources for the NTBF, making it possible for the founders to obtain financial resources. As Firm Eight did not have the human resources necessary to complete the project themselves, they obtained external human resources to assist in the service's development. Both these resources, as well as another human resource – as listed in Incident 3 – were all engaged in short-term contracts for the sake of delivering the R&D-project to Large Customer A. These resources were engaged in external short-term contracts due to the project being a short-term engagement, and that the founders were uncertain whether they needed the same human resources for the project against conjecture to be transformed into a long-term business case.

4.1.8.2. Start-up

The start-up phase was initiated by Firm Eight, completing and launching the service for Large Customer A. The Firm was paid to develop the Service. They also had an agreement with the Large Customer A to receive royalties from the sales of the Service. As a result, Firm Eight har positive revenue, which allegedly served as a good metric for the Firm when seeking investors. Nonetheless, after successfully launching the Service, they realized that there was a market there that they could exploit. One of the human resources that had assisted the development of the R&D-project became engaged full time, now as part of an internal development team. They formed a clear direction for the Firm so that development could be initiated, as seen in Incident 5 and 6. For the development of their Service, they applied for – and were granted – financial resourced from public funds.

Firm Eight went on to obtain a human resource that would contribute to develop the Service and build a functional internal team. However, the process of obtaining human resources full time, that they didn't have an affiliation with from before, were new to them. They conducted this process poorly, and thus, shortly after having engaged the resource had to terminate their relation, due to poor contribution.

> *[...] then we tried to hire a [system 1] developer. That didn't go all that well – we did a poor hiring – we had to end his employment rather quickly. That was sort of the first blunder we had. And it sort of sucked, because we thought it was really difficult to hire people, mainly because we had no experience with it. (CTO, Firm Eight)*

As noted in Incident 10 in Table X, the Firm obtained financial resources through angel investors. Some of the investors shared the Firm's interest in the industry and brought experience and knowledge as resources as well as financial ones. Followingly, the Firm obtained a human resource to replace the previous one, which turned out to fit significantly better as a resource since they had improved their recruitment process drastically and learned from previous mistakes. The acquisition of these internal resources consequently led Firm Eight to launch the Service shortly after. At that point, the Service was launched nationally and in a few international markets, which is compatible with System 1 in the market. There existed mainly two systems in the market, which they needed to be compatible with. Not too long after the first launch, they launched the Service for System 2 as well. However, while launching the Service, Firm Eight also entered an R&D project with *Large Customer B*, as seen in Incident 13. Through this project, the Firm obtained more financial resources.

Firm Eight obtained human resources in the short term, as summer interns, that helped develop the Service. During this period, the Firm also had assessed the applicability of universal compatibility for the Service, which led to them changing the Service to fit for both Systems. The development of a universal Service was initiated. Meanwhile, one of the human resources that developed the Service ended their engagement due to redundancy. Nevertheless, the Firm had the capabilities they needed to complete the new development of the Service, and therefore re-launched the Service with universal compatibility quickly, as noted in Incident 18.

4.1.8.3. Scale-up

After having launched the Service nationally and in a few international markets, and gained some customers, Firm Eight expanded its market size by launching the Service in 10 new international markets. The firm then experienced growth in the existing markets, especially in the national market, which supposedly stood for about 60% of the revenue. At this point, the firm had positive cash flow, even though the Service was still under continuous development.
Firm Eight obtained more human resources to develop the Firm and Service, also this time on short terms as summer interns. The Service was then further launched in a few more international markets that had opposite high seasons, which would lead to a steadier revenue throughout the whole year.

In Incident 23, one of the angel investors the firm had onboard participated in an industry fair, where he marketed the Service to relevant industry actors he met. One of these, working for a *Large Global Complementing Supplier*, was particularly interested and was put in contact with the Firm. As a result, Firm Eight started a dialogue with the Large Global Complementing Supplier, *The Acquirer*, who was exploring technology they could pair with their complementary services. The CTO of Firm Eight characterized the match as a "coincidental fairytale", stating that:

> *We didn't know until later on, but [the angel investor] had pitched our service to everyone. And as it happens to be, at an industry fair in February, he gets in contact with a guy that works for [Large Global Investment Company] but later is engaged as manager in the world's second largest [Global Complementing Supplier]. [...] And when this guy became manager for a company that needs exactly what we have developed… That's sort of a fairytale story – so we were lucky in that way – but then again one can argue that one creates one's own luck. (CTO, Firm Eight)*

The two firms started negotiations, and went into a due diligence process, as seen in Incident 24 and 25. The CTO of Firm Eight described the due diligence process, especially of the Firm, to be a "pain in the ass". Since the Acquirer was so large, they did the due diligence process very thoroughly. Even so, Firm Eight emphasized maintaining the scheduled development of the Service and the Firm, in case the negotiations fell through. Eventually, Firm Eight was acquired by the Large Global Complementing Supplier, predominantly due to their service's novelty and applicability.

4.1.8.4. Case Summary

The lifecycle of Firm Eight can be characterized by their emphasis on the internal human resources. The founders had prior entrepreneurial experience, were highly educated, and had an intrinsic motivation for venture creation. They made sure not to have more human resources than needed, which contributes to explain several things; they have multiple incidents describing them both obtaining and terminating engagements to internal human resources. At the time of the acquisition of the firm, there were only three human resources – founders included. Additionally, one of the founders had the technical capabilities to lead the development of the Service. Occasionally, they also engaged internal human resources on short term, presumably due to variations in the pressure of development as a result of seasonal changes in the market. Consequently, we can conclude that Firm Eight had the specialized resources and the technical capabilities to support a productive operation, as well as an effective emphasis of fully exploiting core resources of the firm (Barney Jay, 2000; Penrose, 2009). By having development done internally, the Firm expressed that the development was more reliable, and one knew that the knowledge obtained through development resided with the firm and not with human resources that may have left them. Furthermore, the CTO of Firm Eight highlighted the influence of having team members with domain experience as users in the market they operated in, which, allegedly, led to a greater understanding of what was demanded by the Service they offered. Hence, we see that Firm Eight benefitted from having knowledge that developed over time, leading to increased possibilities and efficiency of the internal resources they had, thus also developing an heterogeneous resource-base (Alvarez & Busenitz, 2001; Barney Jay, 2000; Penrose, 2009).

Yet, we also see that Firm Eight utilized external resources through industry-relevant R&D-projects and partnerships. This helped them gain legitimacy, knowledge and information about the market they operated in, resulting in a positive reputation and a good product-market fit. Hence, the partnerships and R&D-projects offered occasional resources from the market that was difficult for the Firm to obtain themselves, which they managed to exploit to develop internal heterogeneous resources and a competitive advantage (Alvarez & Busenitz, 2001; Barney Jay, 2000). As a result of the R&D-projects and iterative development of the Service, Firm Eight had several launches in the market; both to improve compatibility to other systems, but also to scale the market geographically. Consequently, it was the Firm's ability to develop a well-functioning product with a good product-market fit, as a result of fully exploiting internal knowledge and human resources, that led to them being acquired by the Large Complementing supplier.

4.1.9. Firm Nine

Firm Nine operated in a regulated industry with large customers and few, dominant competitors. They offered an innovative service that created value for both businesses as customers, but also for businesses and consumers as users. After 5 years of operating, Firm Nine was acquired by a large complementary supplier. In Table 14, the incidents that stood out as critical during the interview are listed up.

Table 14: Incidents of Firm Nine in chronological order.

: Market : Team : Product : Financial

Phase		Incidents
Stand-up	0	The founder experienced the issue. Conducted feasibility study.
	1	Developed MVP with short term engaged human resource.
	2	Signed letter of intent with Large User A.
	3	Firm Nine is established, with a motivation for financial harvest and learning. Obtained financial resources through FFF and the founder's private equity.
	4	Obtained human resources to develop the Service. Offered shares in the firm.
	5	Conducted pilot study with a Small Local User.
	6	Experienced interest from professional investors. Investment deal fell through.
	7	Obtained financial resources from public institutions.
Start-up	8	Signed letter of intent with Large User B.
	9	Received offers of partnership with industry partners.
	10	Signed an exclusive long-term sales and development agreement with a Large Industry Partner. Obtained financial resources.
	11	Experienced user growth.
	12	Deployed a Service developing human resource as a consultant due to redundancy.
	13	Developed the Service with the Large Industry Partner.
	14	Launched the Service with the Large Industry Partner. Experienced growth.
	15	Experienced difficulties with obtaining financial resources from investors. Explored additional Services to generate additional revenue.
Scale-up	16	Developed additional Service based on existing IP.
	17	Experienced good reviews and traction with the additional Service.
	18	Received inquiry of investment deal from the Acquirer (Large Complementary Supplier). Expressed willingness for acquisition. Multiple interested acquirers.
	19	A human resource left the firm, due to long-time conflict with the founder.
	EXIT	Firm Nine is acquired by the Large Complementary Supplier, due to a large market share, good growth and a well-integrated Service.

4.1.9.1. Stand-up

The foundation for Firm Nine was to solve an issue that the founder had experienced. As the founder and friends shared a collective enthusiasm for solving the issue, they conducted a feasibility study to find out whether others shared the same perception and to assess it as a business opportunity. The results were favorable, but the founder did not commit to the pursuit of the venture yet. The founder was at this point, was enlisted at the university, and wrote a master's thesis investigating some of the properties related to the business opportunity. The founder had some experience with starting and running ventures. At the end of the study, the founder decided to pursue the venture, thus engaging a friend that would help develop an MVP to the Service. The MVP enabled them to seal a letter of intent with a *Large User A*. However, since the cooperation with Large User A required a firm, the founder established Firm Nine. The CEO of Firm Nine expressed that the primary motivation for starting a firm was both a financial harvest, but also to learn how to build a business. The Firm was therefore explicitly planned to end in an exit after five years, and if there were no progress within six months, they would shut down.

The founder desired the Firm to internally conduct technical development to gain full control and overlook the development progress. Accordingly, the Firm quickly obtained internal human resources to develop the Service full time, as seen in Incident 4. The human resources were all affiliated with the founder through the university. The founder had invested private equity in the Firm to finance development and obtained financial resources from "Friends, Fools and Family." These funds went to support the human resources financially, but the team was also offered shares in the Firm as a motivational reward for their work. Firm Nine conducted a pilot study with a small local user, from which they learned more about the issue and what functions the Service needed to offer. This was a valuable project for the Firm, since they both received a validation of the business concept and identified the issues they needed to solve further. Shortly after the pilot, Firm Nine experienced interest for financial contributions from investors. As listed in Incident 6, the investors chose not to invest after all, because they assessed the case to entail large risk due to complexity.

The following period, the Firm predominantly worked with development of the Service, where the main challenge was to support regulatory requirements, and integration towards other systems. Later, in Incident 7, Firm Nine was granted financial resources from public institutions that would support development of the Service and market evaluation.

4.1.9.2. Start-up

For the next phase, Firm Nine started off by signing a letter of intent with a *Large User B* and receiving offers of partnership with two large industry partners. The Firm chose to enter a partnership with the *Large Industry Partner*; consisting of an exclusive long-term sales and development agreement and financial resources. The project they then entered offered an entry in the market, and access to a large end-user base, but was very secret until launched, and in some ways disruptive to the market.

Firm Nine successfully launched the Service together with the Large Industry Partner, gaining a large number of end-users, and experiencing good traction. The CEO of Firm Nine described that the secrecy combined with the disruptiveness of the project made the process of obtaining large users very difficult, as they had a hard time trusting a radically new project that they know nothing about. Yet, the Firm managed to overcome this issue, and still experienced growth in the number of users, as listed in Incident 11 and 14. The CEO further emphasized the communication they had towards their stakeholders, in order to keep them satisfied with the innovative Service:

> *We always made sure to lower the customer's expectations so that we delivered above expectations after the sale, making everyone satisfied at all times. (CEO, Firm Nine)*

Incident 15 marks perhaps the most challenging obstacle for the company in its life cycle: The market was affected by a financial crisis, making it very difficult to obtain financial resources from investors. As a result, the Firm chose to look elsewhere for the financial resources. The Service they had launched collected a vast amount of data that could be utilized for analysis for the customers. By developing an additional Service that offered this data and analysis, the Firm could exploit the relationship with the customers and users more, leading to an increased revenue. The ability to do a strategic shift in the offering development like this was very valuable for the Firm and highlights an efficiency in human resources Firm Nine had obtained. The founder emphasized to have development done internally in the Firm and made sure the human resources were incentivized and motivated by offering them stocks and investments in the Firm.

> *I like to have people in-house, and then I like to have control over technology in terms of security and everything. Moreover, the people I had then, I noticed were some of the best developers you could get. (CEO, Firm Nine)*

4.1.9.3. Scale-up

Firm Nine experienced good reviews, customer satisfaction and growth after launching the additional Service. As seen in Incident 18, the Firm received multiple inquiries of acquisitions from various stakeholders, as well as an offer for an investment deal with a *Large Complementary Supplier, the Acquirer.* Since the founder had prepared the Firm for an exit in a 5-year horizon, they were fully prepared for the situation they found themselves in and were very certain of what they required from an exit. At the point of Incident 18, the Firm decided not to accept investments, but rather started negotiation towards an acquisition.

> *We were offered investment. We said that "It's undesirable for us to have you own just a share of the company; either you buy everything or nothing.", to which they replied "yes, we will buy everything". (CEO, Firm Nine)*

Since the Firm had received multiple inquiries of acquisition, they had a good bargaining power, of which they exploited in negotiations with the Acquirer. In the midst of the negotiation process, a Service developing human resource decided to leave the firm, due to a long-time conflict with the founder. Consequently, the resource was replaced with a new highly motivated resource from the university. Eventually, the negotiations ended in Firm Nine being acquired by the Large Complementing Supplier, due to a large customer-/user base and a well-integrated Service.

4.1.9.4. Case Summary

The development of the lifecycle of Firm Nine can be characterized as very determined, yet adaptable. The founder of the Firm self-financed the initial development and had a clear mission for the venture to be acquired, which he transparently shared with the internal human resources in the Firm. The human resources were offered shares in the Firm to incentivize and motivate them to perform better. These two factors combined led to high efficiency and a clear direction for the development of the Firm, something of which they seemingly benefitted from later. One can argue that the determination of Firm Nine resulted in a precise identification of the required resources, and thus an efficient acquisition of those specialized resources (Penrose, 2009). Firm Nine's decision to obtain human resources directly from the university for technical development can be highlighted as extremely beneficial for the Firm's progress, since this gave the Firm access to highly skilled resources with little to no work experience – and thus lower salary – and presumably a higher willingness to work in an NTBF. The decision to recruit directly from the university, choosing "undervalued" resources without experience, can be viewed as an entrepreneurial trait (Alvarez & Busenitz, 2001).

Furthermore, the ability to adapt to a distressed market situation during the financial crisis was a key success factor for Firm Nine, as this led to a strengthened customer relationship, an increased market size, and great reviews. This ability, together with their strategy to always “under-sell, yet over-deliver” – which increased the user satisfaction and user base – was central factors for the Firm receiving multiple inquiries for acquisition. The way Firm Nine was able to overcome such an external obstacle, and utilize it for value creation, can be viewed as an entrepreneurial ability to frame situations opportunistically, which is a heterogeneous resource that can be used to develop a competitive advantage (Alvarez & Busenitz, 2001; Barney Jay, 2000). Furthermore, the service's timing can be highlighted as critical for the service; they were able to enter the development of the disruptive project together with the Large Industry Partner, which offered a vast number of users and a market entry. Additionally, the founder's financial harvest motivation led the Firm's targeted strategy of selling the Firm, which was crucial for the eventual acquisition, in terms of bargaining power and courtship.

4.1.10. Firm Ten

Firm Ten operated in an industry with many, medium-sized indirect competitors, and consumers as customers. After just under two years of operation, they were acquired by a large industry partner with great legitimacy in the market. In Table 15, the incidents that stood out as critical during the interview are listed up.

Table 15: Incidents of Firm Ten in chronological order.

: Market : Team : Product : Financial

Phase			Incidents
Stand-up	0	Team	Established Firm Ten due to extrinsic motivation and complementary skills.
	1	Financial	Applied and declined financial resources from public funds. Obtained private financial resources from founders.
	2	Team	Obtained human resource with domain knowledge.
	3	Product	Initiated development of the Service. Experienced a lack of capability.
	4	Team	Obtained human resources to develop the appearance of the Firm and the Service. Short term.
	5	Team	Sought for external human resources to develop the Service.
Start-up	6	Product	Developed parts of the Service, for a good appearance to the market.
	7	Team	One of the founders moved to another country.
	8	Team	Engaged external human resources in a foreign country.
	9	Market	Direct Competitor was launched.
	10	Product	Initiated development of the Service, with external human resources.
	11	Product	Experienced inefficient development due to poor communication.
	12	Product	Established relation with sub-suppliers to the Service.
	13	Team	One of the founders left the Firm.
	14	Financial	Obtained financial resources through internal private equity.
	15	Financial	Applied for an accelerator program to access knowledge resources and network.
	16	Product	Allocated the majority of resources to the development of the Service.
	17	Product	Launched the Service.
	18	Market	Signed contract with the first customer.
	19	Product	Dialogue with a supplier of complementary service.
	20	Market	Experienced traction in the market.
	21	Team	The founders became 100% employed in the Firm.
	22	Financial	Participated in the accelerator program.
	23	Team	Obtained relation to a human resource with valuable knowledge.
	24	Market	Contacted Large Industry Actor A. Experienced interest in a cooperation/acquisition.
	25	Market	First contact with the Acquirer (Large Industry Actor B) regarding cooperation.
	26	Financial	Signed term sheet with Large Industry Actor B.
	27	Financial	Due diligence process with the Acquirer started. Development of the Firm is paused.
	28	Product	Completed first sale through the Service.
	29	Team	Acquires external human resources to assist in the acquisition process.
	EXIT	Product	Large Industry Actor B acquires firm Ten due to a well-developed Service and human resources

4.1.10.1. Stand-up

Firm Ten was initially established by three friends with complementary academic education and work experience, yet no experience with starting an NTBF. When discussing motivations for pursuing the venture, during the interview, the CEO of Firm Ten stated that they all did it because it was exciting to start something on their own. However, a financial harvest was also a motivational factor to a large degree.

The Firm applied for financial resources from public funds, as seen in Incident 1, yet this application was declined. As all the founders were full time employed at other firms at the time of inception for Firm Ten, the rejection did not affect them much. They invested personal financial resources into the Firm and used their investments to develop the Service. The fact that the entire team had full time jobs, and thus were not financially dependent on the Firm lowered the founders' personal risks. Shortly after, they obtained an additional founder with domain knowledge within the industry and market they operated within. This helped the Firm form a clear direction for the Service, which led to them initiating the service's development. However, they quickly realized that their human resources were not sufficiently skilled to develop the Service. Thus, as seen in Incident 4, Firm Ten obtained a human resource that could develop its digital appearance and design. The Firm obtained these services externally because this was a one-time project-based assignment, whose objective was to build a foundation for engaging technical developers. They did so to appear more professional, which later turned out to valuable impact Firm Ten.

> *We also decided to hire a designer early on. I think that was an important decision, as we later received many comments about the professionality of our appearance. It was almost as if they didn't expect us to look that professional, since we were a start-up. Our design didn't appear as if it cost 500.000 NOK, but rather much more. I feel as if that was an important decision we made; to present as a serious business from day one. (CEO, Firm Ten)*

As acquiring an internal team domestically or acquiring consultants in the domestic market was way too costly for Firm Ten, they actively sought consulting firms in the international market, as they required highly skillful software developers. Accordingly, the Firm obtained resources externally in the form of a foreign consulting firm that provided the services needed to develop the software at a cost the Firm could operate.

4.1.10.2. Start-up

Firm Ten developed, as introduced, a website with a professional look that led to them experiencing a sense of increased legitimacy. None of the founders was 100% employed by the Firm at this point but had other jobs. One of the founders moved to another country to work with the other job, about half a year after the establishment of Firm Ten. During the same period, Firm Ten was set in contact with a group of external human resources from another country. Thus, communication across borders became essential.

As seen in Incident 9, a direct competitor of Firm Ten launched its service. While this immediately felt like a showstopper, the Firm shortly after viewed as a positive thing, according to the CEO of Firm Ten: The competitor could prepare the market for the type of service they both offered, as well as they could use the competitors offering as a benchmark to differentiate from in the development of their own Service. Followingly, the development of the Service by the external resources began. However, the development was inefficient in the beginning due to poor communication from the founding team. As the Firm was not experienced with the development of services, they lacked knowledge about how to communicate their requirements to developing resources.

In Incident 13, Table X lists that one of the founders, who moved to another country – had to leave the Firm. This was a decision the Firm as a whole took because the founder was no longer able to commit as much time as necessary to the development of the Firm. Furthermore, the remaining founders also invested through private equity to financially fund the development of the Service.

Firm Ten allocated most of their time and resources to develop the Service, which they shortly after launch, as seen in Incident 16 and 17. During the same period, the Firm also applied for an accelerator program, intending to obtain access to network and knowledge resources for coaching. Nonetheless, the launch may be characterized as successful, as they quickly signed their first customer after the launch. The customer acquisition process was, according to the CEO of Firm Ten, much harder than they had imagined – and they learned a lot from the first signing with a customer. The CEO further elaborates that the process they offer with their Service is likely to be one of the largest financial transactions the consumer ever does in its lifetime. Therefore, trust was one of the key components they had to deal with.

In Incident 19, after the launch, Firm Ten got in contact with a supplier of a complimentary service that the Firm was interested in implementing into their own Service. From this point on, the CEO of the Firm describes as a transition phase from being a young startup-company that "bootstrapped" development, towards a more developed firm that offered integrated solutions and started gaining traction in the market. As the Service gained more customers, which led to more onboarding processes, the founders quit their other jobs and started working full time for Firm Ten. The accelerator program they had applied for earlier started, and Firm Ten received great feedback on their development, both of the Firm and the Service. They gained access to a human resource with valuable knowledge, as planned, and they were put in contact with relevant industry actors.

As a result of their participation in the accelerator program, Firm Ten got in contact with *Large Industry Actor A*, a partner with substantial resources, complementing services, and an influence on the market. The Large Industry Actor A shows great interest in cooperation, and Firm Ten senses that the possibility of acquisition is present. However, almost simultaneously, the Firm is also contacted by *Large Industry Actor B*, *The Acquirer*, who initially chose to be anonymous. The Acquirer had heard of Firm Ten through the Supplier of Complementing Services that they previously had been in contact with. Firm Ten saw it as valuable to have an industry actor in collaboration with them, as this would increase the legitimacy in the market and strengthen the trust relationship with the customers. Thus, as seen in Incident 26, Firm Ten signs a term sheet with The Acquirer. Followingly, a due diligence process was initiated, as well as negotiations of the acquisition price. This process took a majority of the focus of Firm Ten, thus pausing almost all operations. Regarding the negotiation process, the CEO of the Firm stated:

> *What was quite interesting was that, since we were a very young firm... I mean, it was nothing stopping [The Acquirer] from developing the service themselves, but they focused on time-to-market and us as a team, because they needed a team, and they could save a lot of time by gaining access to our source code. And that sort of changed the negotiations a bit. Usually one negotiates based on revenue and growth and stuff like that, but we were too young to negotiate on those terms, thus making it difficult to put a price on us. (CEO, Firm Ten)*

During this time, Firm Ten also experienced the first transaction going through using the Service. For the remainder of the negotiations and acquisition process, Firm Ten acquired human resources to assist with knowledge and experience. Shortly after, Firm Ten was acquired by the Large Industry Actor B because of its well-developed service and human resources. According to the founders, the firm was initially in the market to raise more capital, but the offer from the acquirer was too great not to accept.

4.1.10.3. Case Summary

The development of Firm Ten from inception to acquisition can be characterized as quite efficient, in the sense that they only operated independently for 1,5 years yet managed to exit due to the development of the Service they offered. The founders self-financed the entire process and did not start working full time in firm ten before they experienced marked traction. As CEO of the Firm stated, they could not negotiate on market shares or revenue, thus making the quality of the team and the Service even more critical. This ability to assess and opportunistically frame an obstacle, is an entrepreneurial trait typically associated with experience, yet the founders actually lacked such experience (Alvarez & Busenitz, 2001). Since Firm Ten from the beginning had conducted their development by engaging an external team of experienced developers, in addition to the fact that the Acquirer allegedly chose the Firm as an acquisition target due to the Service's comprehensiveness, one can assume that the Service was of high quality. Considering the short period Firm Ten operated, the rapid pace at which the Service was developed, and the quality they delivered, a highly skilled experienced team of external resources was worth the investment.

The reason for the high quality of the product may otherwise be partly explained by Firm Ten's emphasis on gaining access to domain experienced internal human resources that could contribute with knowledge about the market. This emphasis resulted in the definition of a specific direction for the Service during the stand-up phase. Further, their contact with the Supplier of Complementary Services, and their participation in the accelerator program during the start-up phase, as well as their contact with both industry actors, A and B, was impactful factors for the Firm. This characterizes the Firm's ability to obtain specialized resources and exploit external knowledge resources to generate a competitive advantage (Penrose, 2009). At least two of the abovementioned incidents directly influenced the event of the exit for Firm Ten, which was primarily triggered as a result of the founders' financial harvest motivation redeemed by the buyer's tempting offer.

4.2. Cross-Case Analysis

The cross-case analysis will investigate similarities, patterns and differences between the cases, by highlighting thematics that have prominent throughout the within-analysis. Within these thematics we will analyze how NTBFs develop, obtain, or exploit resources to progress towards an acquisition. The thematics will be presented chronologically in the order they typically occur in the life cycle of the firms. Lastly, we will summarize our findings.

4.2.1. Founders' Characteristics

Our study reveals that distinct founders' characteristics are related to the establishment and development of a successful venture, leading to the firm's acquisition. All founders in our study are highly educated or start their ventures while completing their master's degree. Furthermore, we find that a large share of the founders has prior entrepreneurial experience, which seems to have had a positive effect in resource identification and development in the very initial phase. Thirdly, it is evident that it is preferable for the cases in our study to be a group of acquainted founders – rather than a single founder alone – since a group of founders have led to the venture possessing multiple and complementary skills and attributes. Alvarez (2001) describes entrepreneurial knowledge, such as experience and entrepreneurial education the founders possess, as an ability to grasp abstract information and utilize undervalued resources. We see that these characteristics have made the founders very aware of which resources they possess and which they must obtain, thus, enabling them to more rapidly progress with development in the early phases. Hence, being a group of acquainted founders with diversified capabilities can be seen as valuable, as this has implied a shared risk, and contributed to efficient progress without having had to obtain a substantial amount of human resources, nor financial resources.

Despite these findings, there is one case in which there is only one founder who still managed to build the same foundation as a team of founders. This founder was very aware of which resources the firm possessed and which it was required to obtain to progress. To obtain human resources, the founder emphasized offering shares to the resources as a means to incentivize and motivate them during the early phases. In this case, the entrepreneurial knowledge of the founder was efficient in the identification and development of initial resources to support operations (Alvarez & Busenitz, 2001; Penrose, 2009). Hence, we see that it is plausible to be a single founder, given that one obtains the necessary human resources from the beginning, and makes sure to incentivize and motivate them to pursue the venture together.

4.2.2. Motivation

It is evident that there are primarily two underlying factors that have motivated the founders in this study to pursue their ventures: Firstly, all the firms were established by founders with an intrinsic motivation, predominantly for value creation and building their own business. This intrinsic motivation for pursuing the venture can be viewed as part of the reason for why a majority of the firms eventually are acquired due to human resources, and why the founders usually continue their engagement with the firm post acquisition. Secondly, the other emerging motivational factor among some founders was the possibility of a financial harvest. The firms that had founders with a motivation for financial harvest can be seen as having a more defined direction for the firm, and predetermined milestones that facilitated progress. Our findings don't show any apparent reason for why some of the founders didn't have an explicit motivation for financial harvest, besides from their strong emphasis on the intrinsic motivation to create something of their own, and to improve the status quo. Thus, the motivation may be viewed as a heterogenous factor that increased the human resources' value, as well as managerial- and technical abilities, which contributed to an efficient development of the firm and eventually an acquisition target attractiveness (Barney Jay, 2000; Penrose, 2009).

Another aspect of motivation that is evident in many of the cases, is the firms' ability to incentivize and motivate their full time engaged internal human resources. Several firms utilized a structure where they offered their human resources co-ownership, or the option of a co-ownership in the firm. Such a structure had multiple effects for the firm: One of the recurring effects is that the share offering acted as a substitute to low wages in the early phases of the venture. Another effect it led to is that the human resources gained ownership to the project – thus, increasing their commitment – which generally led to an increased efficiency. Additionally, by offering co-ownership to their internal human resources, the firms seem to have stimulated a long-term working relationship with the resource. In that sense, firm shares acted as a "free service" that was exploited to gain a competitive advantage through a motivated team (Penrose, 2009). Hence, as a result of offering shares to the internal human resources the firm increased the efficiency and built a long-term corporate culture that increased attractiveness for an acquisition.

The characteristics of the cases where firm shares weren't offered to the human resources were generally that the firms hired external resources or that the firm's team consisted primarily of the founders. Thus, an offer of shares was not relevant to the same degree, as the founders already had ownership, and the external human resources received full financial support for their contribution to the project – which acted as a sufficient motivational factor for completing their operations.

4.2.3. Founders' Engagements

Findings indicate that the founders we have studied rarely are financially supported by the firm they run during the stand-up phase. Their income is largely dependent on another employer, or public student grants due to enrolment to a master's study. In the few cases where the founders are financially supported by their firm from the beginning, the salary is low, and it's not uncommon for them to also have an additional income. By having an additional engagement providing financial support to the founders, the firms have been able to allocate the financial resources to favor service development rather than founders' salaries. Moreover, such engagement for the founders has also tended to reduce the personal risk a new venture entail. As a result, we see that the firms may progress at a higher pace, since they are able to allocate financial resources to support activity that rapidly develops early versions of the service that can validate the business concept.

However, since many of the founders have additional engagements, it is common for them to only be able to commit part-time to the NTBF until the firm has obtained enough financial resources to fully support them. Yet, this hasn't seemed to affect the efficiency of the development in any particularly negative way, which may indicate that the managerial capacity of the founders has been retained (Penrose, 2009). The full-time engagement of the founders is usually triggered by the firm signing with a large customer, experiencing traction in the market, or obtaining a significant financial investment – thus, providing validation of the business concept and reducing the risk of pursuing the venture. To conclude, we see that a majority of the founders are not fully financially supported, nor fully engaged in their venture until the firm reaches a start-up or scale-up phase.

4.2.4. Initial Financial Resources

In every case, the initial financial resources are obtained in the stand-up phase. For a significant amount of the firms, these initial contributions are made either by the founders of the firm – as equity – or by "friends, fools and family" (FFF) of the founders. The few firms that have chosen other sources for obtaining financial resources have done so through recurring revenue from an initial R&D project with a partner, or through public funds. It is of our impression that several cases desired public funding, as this, in general, is regarded as "free resources", yet not every case featured the novelty or level of innovation that a public grant typically requires and thus did not apply. Nevertheless, as a result of the founders – and potentially early employees – contributing with equity, we see that the stake of pursuing the venture has increased, and the effort put into developing the firm to succeed accordingly.

There is an apparent pattern that the initial financial resources are used to finance the development of an MVP or similar early versions of the service. These early versions have been developed predominantly to test the service in the market, as a means to validate a problem-market fit and the business concept as a whole. Consequently, the firm can reduce the risk and uncertainty related to the venture, which has positively affected later investment deals. Hence, we see that the firms obtain financial resources through founders' equity and FFF to fund the development of an MVP due to two factors: Firstly, it is difficult to find professional investors who are willing to invest in a firm with the amount of uncertainty an early phase may entail. Secondly, by validating the business concept and proving potential, the firm aims to increase the valuation of the firm, as well as the size of a later investment deal. Such a strategy can be viewed as an efficient way to exploit using small financial resources to facilitate a resource expansion (Penrose, 2009). In conclusion, we see that many firms emphasize obtaining initial financial resources from sources that are willing to make high-risk investments to enable the development of a proof of concept that will allow the firm to obtain a more substantial investment later on.

4.2.5. Internal Human Resources

Findings show that a vast majority of the firms in the study are acquired due to their internal human resources – largely consisting of founders and technical resources. Although it is not always the internal human resources alone that have triggered an acquisition, but rather a compound of resources - such as the service, or possibly market shares – the human resources still stand out as highly impactful for the development of the firms.

We find that all firms express that they had an initial desire to carry out the technical service development internally. Since very few of the firms in our study have founding members that possess sufficient technical skills to develop the service themselves, we see that the majority of the firms establish an internal technical development team as soon as it is financially feasible within the stand-up or start-up phase. To stimulate rapid development, it is critical to identify and obtain specialized resources as such, so that the appropriate operations can continue without hold-ups (Penrose, 2009; Wernerfelt, 1984). There are several evident strategic repercussions that come from the firms preference to have development resources internally, as opposed to acquiring them externally: It is a common feature that the firms to a larger degree have been able to obtain full control of service development, as well as to effortlessly and instantly reiterate the service.

Furthermore, by utilizing internal human resources, the firms have been able to increase the competitive advantage and the attractiveness of the firm in terms of the development of knowledge that accrues to the firm (Penrose, 2009). The latter further contributes to the development of heterogeneous resources that is hard to imitate (Barney Jay, 2000). Therefore, although these internal resources can be difficult to financially support during the early phases, they are generally considered worthy of the investment due to the repercussions it has had on the firms' abilities and competitiveness.

Another contributing factor that underscores the favorable consideration of internal human resources in our study, is that they frequently have proved to make extra efforts for the firm, especially when approaching deadlines or similar labor-intensive operations. Yet, we also see that acquiring an external development team has been advantageous in a few cases, since they have been an already well-developed team with high efficiency, thus enabling the venture to develop at a high pace. However, a second factor that highlights the benefit of having an internal team, as opposed to an external, is that most of the cases have practiced continuous iterative development, which has been easier to identify and conduct when having had a continuous internal team. By having the required technical skills present at all times, the firm will reduce the possibility of an internal obstacle – such as an operational hold-up – as well as it will induce the firm to expand in order to not hold unused resources (Penrose, 2009). Thus, we see that to facilitate a continuous development of the service with high labor efficiency, it can be regarded as beneficial to acquire an internal team of human resources, but for occasional short-term development, an external team may be just as efficient – if not more.

In the same way, as internal developers have been regarded as efficient resource allocation, it appears that highly skilled and senior developers are meriting the additional financial cost they typically represent – both for an internal and an external team. Overall in this study, highly skilled service developers are a deeply desired resource that almost all firms have managed to acquire. As a result of prioritizing skilled human resources, many firms have been able to develop an accordingly high-quality service, with a unique IP, that is attractive for both the market and the acquirer. Hence, we see that highly skilled human resources are emphasized, despite the additional financial cost they represent because they enable the firms to increase the quality of their service and attractiveness as an acquisition target.

4.2.6. Resources Through Partnerships

Findings indicate that a majority of the firms are looking for more than financial resources when they obtain partners. There is an evident emphasis on establishing partnerships that also offers access to network, relations to stakeholders, coaching, or legitimacy. Whether the partner is an industry actor, professional investor, an angel investor, or an incubator-/accelerator program, they have usually been central for the development of the firm, and oftentimes have been directly or indirectly involved in the acquisition of the firm. However, the study shows no apparent correlation between the characteristics of the partner, and the phase in which the partnership was established, nor the size of the contribution they offered the firm. Consequently, one can presume that both the ability and the desire to establish a relationship with any partner that can contribute with industry relevant financial-, human- or knowledge resources is present throughout the whole lifecycle of the firm.

For a large amount of the cases, a collaborative relationship to an industry partner constituted a vital resource for the firms and their progress. These cases were often dependent on an industry partner to enable their service. As a result of gaining access to resources from their industry partner, the firms were able to develop a service better fitted for the market, with an increased functionality through eliciting knowledge, gaining access to complementary services and legitimacy. The ability to utilize partners' heterogeneous resources to gain a competitive advantage as such can be viewed as an entrepreneurial trait for the firm (Alvarez & Busenitz, 2001; Barney Jay, 2000). Hence, we can conclude that the firms that have developed a cooperative relationship to industry partners have been able to exploit the relationship to develop the service, enter the market, and develop a competitive advantage.

We further see that in the cases where an industrial partnership was not present, the firm was generally less dependent on obtaining external resources to develop and offer their service. These firms typically managed to obtain and develop market information, legitimacy and knowledge through exploiting internal resources rather than external. Thus, the firms that did not seek industry partnerships have offered a service that have required resources that have been sufficiently represented within the firm, and thus been developed independently by exploiting the internal resources (Penrose, 2009).

4.2.7. The First Paying Customer

Findings show that nearly all the cases we studied experienced the first paying customer in the start-up phase, regardless of whether their business model is business-to-business or business-to-consumer. Naturally, this incident is often a direct result of the firm also launching their service in the start-up phase. The enabling of the launch – and thus, the first paying customer – mainly comes from exploiting financial and human resources to develop an early version of the service and validating the business concept in the stand-up phase, such as described in chapter 4.2.4 about initial financial resources. It should be mentioned that it is a common feature that the firms acquire a pilot customer of some sort that acts as a more collaborative customer, usually without paying for the service. This has often been a part of the market validation during the stand-up phase, or the early start-up phase, and have verified if the firm should advance with development as planned or if the service needs to be adjusted. The pilot customers generally seem to have been more interested in aiding the firms in the development rather than necessarily becoming a paying customer. Yet, in some cases the collaboration has also led to a paying customer-relationship. Hence, we see that nearly all of the cases experience a first paying customer in the start-up phase, often as a direct result of having exploited internal human resources to develop a proof-of-concept.

For the vast majority of firms, the event of the first paying customer in the start-up phase was essential for further progression, and also a part of the strategic development of the venture; both as a source for obtaining financial resources through revenues, and to obtain feedback from customers to iterate the service. Consequently, the firms gained access to both financial- and knowledge resources from the market, which they utilized to build a foundation for a scaling of the firm. We also see that some firms have a larger emphasis on acquiring the first paying customer and increasing the revenue than others, because they are pressed on liquidity. To summarize, the findings show that the event of a first paying customer is an important milestone to overcome for the firms in order to solidify a transition from the stand-up phase to a more established start-up phase that revolves around iterative development of the service and developing a foundation for a scale-up.

Our findings show that it was only one of the firms that did not experience a paying customer during the start-up phase. However, this firm was also acquired before they were assigned to a scale-up phase. The reason for this was predominantly because the complexity of their service required an accordingly long and advanced development process. Thus, a paying customer wasn’t an objective they aimed to fulfil in the near future. Consequently, the firm that did not experience a first paying customer managed to develop parts of the complex service, and the knowledge base in the internal human resources sufficiently enough to be attractive for an acquisition in the start-up phase.

4.2.8. Acquisition Properties

We see that the vast majority of the cases ended with an acquisition while the firm was in the scale-up phase. Common features for these cases was that they either expanded the firm’s market share, the size of their team, and/or their product portfolio as a means to stimulate growth. Another feature that is recurring is that the firms have, at the time of the acquisition, developed significant knowledge resources, capabilities and/or valuable industry partnerships, all of which can be considered heterogeneous resources that offers a competitive advantage (Alvarez & Busenitz, 2001; Barney Jay, 2000). Hence, the firms that were acquired during the scale-up phase can be characterized as having developed competitive advantages – through knowledge, a well-developed service, or access to specialized resources – which have enabled them to successfully and rapidly scale the firm.

We see that a small minority of cases experienced an acquisition before the firms could be attributed to the scale-up phase, but rather the start-up phase. Few specific reasons can be assigned to the fact that the firms were acquired during the start-up phase, as these cases do not stand out as particularly more – neither less – successful than the others in the study. However, they had either developed a partnership with a complementing stakeholder or managed to implement and verify their business model and core operations. As a result, these factors triggered an acquisition at an earlier stage in the life cycle of the firms, although the firms had not yet initiated a growth-strategy. Moreover, even though these cases were both in the start-up phase, they faced entirely different challenges; one trying to develop a highly complex service, another seeking to launch their fairly trivial service. Both, however, were acquired rather coincidentally, as they got in contact with complementing suppliers that suited their strategy well.

Findings show that there is often a compound of different resources together, rather than a single resource alone, that triggered the acquisition. Yet, although the acquisition often is triggered by the firm obtaining and exploiting a combination of resources, there is to a large degree similar resources that each case emphasizes: The study reveals that nearly all of the founders highlight the quality and functionality of their offered service as an essential reason for them being acquired. Equally, an efficient group of internal human resources also affected the occurrence of an acquisition positively, which corresponds to the fact that a vast majority of the firms conducted the service development internally and that many firms had their human resources continue operating the firm post acquisition. Lastly, some of the firms also emphasize the firm's metrics (meaning customer acquisition costs, return of investments and other key performance indicators), growth rate, and market share as reasons that made them attractive to the buyer. All these factors reflect competitive advantages, either in the form of unique service, a knowledgeable and efficient team of human resources, or rapid growth (Penrose, 2009; Wernerfelt, 1984). To summarize, our study shows that there is rarely a single attribute that triggers an acquisition, but rather a set of attributes in a compound – predominantly effective internal human resources and a well-developed service.

4.2.9. Intention to Sell the Firm

In the study, we see a definite similarity in the final objective of the firms, which triggers the acquisition. The majority of the firms develop a connection or initiate a dialogue with their respective acquirer while seeking to obtain financial resources to maintain operation, or to scale the service further. Prior to this pursuit for financial resources, the firms have primarily focused on developing the business and their service; at which point an acquisition was neither an expected outcome nor an objective. As follows, we see that the founders in many of the cases are unaware of the full extent of their firm's attractiveness as an acquisition target. This finding corresponds well to the fact that the firms didn’t have an explicit exit strategy. Although the founders initially did not pursue an acquisition at the time, the acquisition offer made them reconsider, because of its strategically profitable return. Moreover, most of the founders explained that, although it was not their intention, an acquisition was a rational outcome, as they were actively looking to raise substantial financial resources for growth.

For the few cases that had an explicit exit strategy and intention to sell the firm prior to the acquisition, the outcome is mostly the same. The distinction we see primarily lies in a greater understanding of the potential outcomes for their case, and realization of their firm’s values. Additionally, we find that they conducted the acquisition process as an actively seeking party, evaluating several potential acquirers. However, there are no findings that reveal these cases to have more successful acquisitions than those where acquisitions occur as a result of the firms attempting to obtain financial resources.

4.2.10. Cross-case Summary

The cross-case analysis has shed light to several findings; both patterns that are recurring, but also more unique features that have been beneficial for a few firms in the study. We see that there is a specific set of characteristics that applies for the founders of the firms we have studied: There have usually been a group of founders – rather than a sole founder – that are acquainted, highly educated and entrepreneurially experienced. The founders tend to have had an intrinsic motivation for entrepreneurship, although there is also a present – yet less emphasized – motivation for a financial harvest. We also see that, in the stand-up phase, the founders are rarely full time engaged, nor fully financially supported by their respective firm, but have an additional work engagement that supports them financially. The initial financial resources in the firm tend to come from the founders’ equity or through FFF and are usually utilized to support development of a proof-of-concept of the Service. As a result, we see that the founders generally are able to develop the firm efficiently in the stand-up phase, since they are highly motivated, not yet dependent on financial support from the firm, and since they are able to allocate financial resources to prioritize value creation that reduces uncertainty and offers validation of the business concept.

In most cases in our study there is a clear emphasis on obtaining an internal team of highly skilled technical human resources that can develop the service. The internal resources have been incentivized and motivated by being offered shares in the firm, and – when the firm has enough financial resources – substantial financial support. This has led to increased efficiency, a long-term work relationship and an increased knowledge base. Yet, we see that some also utilize an external team of human resources, as this has enabled rapid development for occasional short-term projects. The lacking resources – often being financial, knowledge, complementary services, or industry legitimacy – have oftentimes been obtained through cooperative partnerships with industry incumbents. Furthermore, we see that the initial financial resources, the internal human resources and – in some cases – the industry partnership have contributed in the development and launch of a proof of concept or a complete service that have enabled the firms to eventually acquire their first paying customer. The incident of a first paying customer during the start-up phase has been a milestone for many of the studied cases, which have allowed the firms to gain market insight for further iteration of their service, and an establishment in the market for further scaling. Hence, we see that a large amount of the cases in our study have utilized technical internal human resources and industry partnerships to develop the service, and to gain competitive advantages that have enabled them to enter the market and build a foundation for further growth.

The acquisitions of the firms in this study have predominantly occurred in the scale-up phase as a result of an efficient internal team of human resources and a well-developed service. In some cases, the market share of the firm has also been a triggering factor for the acquisition, but this has often been a secondary factor to human resources and the service. Very few of the firms had an explicit strategy – nor an initial intention – for an acquisition. Furthermore, for those few with an explicit intention to exit, there is no evident difference in the outcome. We see that the firms' main objective at the time of the acquisition have been growth, both financially and in terms of market share. Especially the pursuit for substantial financial resources, and thus close dialogues with industry incumbents, investors and complementary suppliers, have been triggering factors for the acquisition of the firms in our study. Hence, we see that many of the firms in our study have been viewed as attractive acquisition targets due to their well-developed internal resources, and that they typically have been acquired when seeking to obtain large financial resources for a scaling of their firm.

5 | DISCUSSION

Our study makes several supplements to the current literature of exit strategies. Our analysis reveals both findings that confirm and contradict what the literature describes as strategic developments leading to an acquisition of an NTBF, in addition to suggesting other contributing factors to the occurrence of an acquisition. In this chapter, we will first review findings directly responding to how NTBFs exploit and obtain resources to strategically develop their ventures prior to a successful acquisition. Then, we will review findings of characteristics and impactful incidents that may be prerequisites, or consequences, of the NTBFs exploiting and obtaining resources to strategically develop their ventures before being acquired.

5.1. Strategic Developments

Our findings show that the acquisition frequently occurs while NTBFs are seeking substantial financial resources to support growth. Correspondingly, the literature of exit strategies describes that strategic hurdles – such as obtaining financial resources – may influence the founders' desire for an acquisition, as they are more open to new strategic paths (Graebner & Eisenhardt, 2004). We also identify that most of the NTBFs in our study seek cooperative partnerships that can contribute with financial resources, but also specialized resources that enable them to gain a competitive advantage. These cooperative partnerships act as a source for a compound of shared resources that we find to be positively related to a scaling and an acquisition of an NTBF. Similarly, the literature emphasizes cooperative partnership with industry incumbents as a commercialization strategy to gain access to complementary or specialized resources, and to exploit an entry to the market, which – according to the literature – typically results in an acquisition (Bobelyn, 2012; Gans & Stern, 2003; Kasch & Dowling, 2008). Furthermore, we find that the NTBFs obtain initial high-risk financial investments from founders' equity or FFF to support the development of a proof of concept. The development of a proof of concept has typically triggered the event of a first paying customer, which enables the NTBF to obtain further substantial investments to support growth. This chain reaction of developments is similar to how the literature of exit strategy describes the initial investments, actions and founding resources to have a long-term imprinting effect on the firm's development (Albert & DeTienne, 2016; Graebner & Eisenhardt, 2004). The literature of exit strategy also states that the development of a proof of concept reduces the uncertainty of the venture, thus being beneficial for obtaining more financial resources, such as in our study (Bobelyn, 2012). Yet, the specific source of the initial high-risk financial investments – being founders' equity or FFF – is not defined by the literature of exit strategies. Hence, this discovery offers an elaboration to the literature's description of initial resources for NTBFs.

Furthermore, we find that NTBFs strive to obtain highly skilled technical human resources internally, so that the firm can exploit the human resources' progressive development of domain knowledge as a competitive advantage that accrues to the firm. The current literature of exit strategy does not explicitly explain this emphasis on internal human resources, although there are similarities to how the literature describes courtship in acquisitions (Bobelyn, 2012; Gans & Stern, 2003; Graebner & Eisenhardt, 2004; Pisoni & Onetti 2018), as well as knowledge exploitation (Mathisen, 2017; Ranft & Lord, 2002; Wernerfelt, 1984). The literature of these phenomenon describes that obstacles related to social complexity and knowledge asymmetry, both within and across firms must be dealt with to fully utilize internal resources, develop a competitive advantage, and ultimately be suitable as an acquisition target. Thus, our findings provide a further elaboration by highlighting the impact of highly skilled technical human resources internally in the NTBF as a vital factor for knowledge exploitation and development of competitive advantages, and ultimately to attain courtship from acquirers.

We also encounter findings suggesting that most NTBFs do not have an explicit exit strategy nor intention but are acquired when seeking to obtain financial resources for a scaling of the firm, as discussed earlier. Neither do we find any significant difference in the outcome for the firms that actually had an explicit exit strategy and those that had no initial exit strategy. Although these findings do not implicate that an explicit exit strategy is disadvantageous for the occurrence of an acquisition, they indicate that the absence of an exit strategy in favor of a pure growth strategy is also advantageous for the event of an acquisition. Consequently, our findings disregard some of the existing literature of exit strategies stating that initial exit intentions is decisive for the firm to experience an acquisition, and that there is a strong correlation between the intentions and the occurrence of an exit (Albert & DeTienne, 2016; D. R. DeTienne & Cardon, 2012; Wennberg & DeTienne, 2014).

Lastly, our final findings regarding how NTBFs exploit and obtain resources to strategically develop their venture prior to an exit, explain that founders who make a successful exit are usually what the literature of entrepreneurial careers label as *Hybrid Entrepreneurs*. Hybrid entrepreneurship implies that the founders of the NTBFs strategically retain their current income while also establishing and operating a new venture (Folta, Delmar, & Wennberg, 2010). Most founders in our study are hybrid entrepreneurs during the stand-up phase, before progressing to the second step; becoming full-time self-employed throughout the start-up phase (Thorgren, Sirén, Nordström, & Wincent, 2016). Hybrid entrepreneurship in the initial phase proves to be an efficient strategy for utilizing initial financial resources more productively in the development of NTBFs, primarily by allocating resources to support rapid service development. Since hybrid entrepreneurship is not previously considered within the scope of the literature reviewed in this thesis, the reveal of this finding is a contribution to the literature regarding founding resources, initial financial resources, and their effects on the development towards an acquisition.

5.2. Characteristics and Impactful Incidents

In this section, we will discuss findings from our study that reveal characteristics and impactful incidents that may be prerequisites, or consequences, of the NTBFs strategic development, discussed in the previous section.

First, our findings indicate that a group of acquainted highly educated founders with entrepreneurial experience is advantageous for the efficient development of an NTBF, leading to a successful acquisition. This characteristic of the founders in our study corresponds considerably with the existing literature regarding the founder's characteristics and their relation to the occurrence of an acquisition, which emphasizes these resources as vital when developing a successful firm (Albert & DeTienne, 2016; Folta et al., 2010). Although, Wennberg (2010) also states that highly educated founders may fail due to overconfidence, which, naturally, we are not able to identify in this study, due to the criterion for the case selection being that the NTBF needs to have experienced a successful acquisition. Our findings further reveal that all of the founders primarily emphasize an intrinsic motivation for entrepreneurship and value creation in general. Although our study does recognize that founders also may hold a motivation for financial harvesting, the intrinsic motivation towards venture creation is a considerably more prominent factor. These characteristics disputes with the existing literature in the field, claiming that extrinsic motivation for financial harvest is dominant for founders of NTBFs, while the intrinsic motivation typically is more attributed to lifestyle entrepreneurs (Carsrud & Brannback, 2011; D. R. DeTienne et al., 2014; Schumpeter, 1982; Shepherd & DeTienne, 2005). Hence, we find characteristics that both concurs and contradict previous literature of founders' characteristics' relation to exit.

Secondly, our findings reveal that the incident of the first paying customer is a crucial incident – and a strategic milestone – for NTBFs to experience in the start-up phase, in order to establish themselves in the market. Even though building a positioning in the market is listed as a strategic hurdle in a transition period from the start-up to the scale-up phase (Picken, 2017), our finding further specifies this milestone as a crucial incident for NTBFs – in the sense that it serves as both an objective to enter the market, but also as a triggering factor for increasing legitimacy, acquiring customer feedback, and a further scaling of the firm. We further find that a vast majority of the NTBFs were acquired in the scale-up phase, except for a few cases in the start-up phase, which corresponds entirely with the existing theory describing the occurrence of an exit in the life cycle of an NTBF (Bobelyn, 2012; Picken, 2017; Pisoni & Onetti 2018). Lastly, we identify that at the time of the acquisition, the NTBFs have often gained competitive advantages based on a compound of different resources – both tangible and intangible – which broadly resembles the competitive advantages the existing acquisition literature describes an NTBF to hold (Gans & Stern, 2003; Kasch & Dowling, 2008). In conclusion, our study elaborates the first paying customer as an impactful, triggering incident enabling the NTBF to grow to be attractive as an acquisition target, while also confirming what the current literature states about an exit's occurrence in the life cycle of an NTBF.

6 | CONCLUSION

Through a multiple-case study of ten Norwegian NTBFs that have all experienced an acquisition, this thesis has provided an in-depth explanation of how NTBFs exploit and obtain resources to strategically develop their venture prior to a successful acquisition.

Overall for the NTBFs, we find that there is little to no explicit strategy, nor intention, for pursuing an acquisition. Instead, the acquisition primarily comes as a result of a propulsive plan to efficiently develop and exploit internal resources to facilitate rapid growth. The acquisition usually occurs in conjunction with the event of the NTBFs seeking financial resources for growth, which largely contradicts the existing exit strategy literature. We also find that there are several imprinting strategic actions from the early stages of the NTBFs' life cycle that are impactful for the occurrence of a successful exit. First, our study identifies that the actual successful acquisition predominantly is an outcome of the NTBFs attractive and efficient team or technology, which presents as a competitive advantage. Second, our study contributes to the current literature of exit strategies by emphasizing the significance of hybrid entrepreneurship for the NTBFs in our study. The imprinting effect of the founders retaining an income from an existing job, or other sources of income, until the NTBF has obtained sufficient financial resources to support both the founders and value-creating activities is a productive allocation of resources, as it reduces the overall financial risk which predominantly accrues to the initial investments from founders' equity and FFF. This emphasis of hybrid entrepreneurship for founders of NTBFs additionally enhances the influence of the initial financial resources for NTBFs, which should primarily support the development of a proof of concept as this proves to be a catalyst to land a first paying customer, leading to further growth and more substantial investments for the NTBF. Third, we further elaborate the current literature by identifying that throughout the ventures' life cycle, NTBFs obtain heterogeneous or specialized resources by establishing highly competent complementing teams, and valuable cooperative industry partnerships. These specific resources are profoundly valuable for the NTBFs as they often form the basis of the NTBF's competitive advantage – in terms of market access, domain knowledge and access to specialized resources – which is a significant determinant leading to the acquisition.

Additionally, our study reveals several characteristics and impactful incidents that may be prerequisites, or consequences, of the NTBFs strategic development prior to an acquisition. We find that founders do not need to have an exit intention, but that they prominently have an intrinsic motivation for value creation that drives the NTBFs initial development, that ultimately imprints the NTBF’s attractiveness as an acquisition target, something of which contradicts the current literature of exit strategies. Further, our study additionally finds a couple of founder characteristics that correspond with previous literature in the field. We find that the founders of NTBFs benefit from entrepreneurial experience and higher education as they possess advantageous attributes and expertise to utilize in venture creation. We also find that a group of founders is often favorable as it constitutes a larger pool of available resources to exploit. Our study also highlights a characteristic of the NTBFs that is consistent with previous literature in the field. We identify that at the time of the acquisition, the NTBFs have often gained competitive advantages based on a compound of different resources, which makes the NTBFs attractive as an acquisition target. Lastly, our study reveals that the NTBFs' first paying customer is an impactful incident not explicitly highlighted in the current exit strategy literature, which acts as a strategic objective for the initial phases – but also as a catalyst for further growth, thus facilitating the occurrence of an acquisition.

In conclusion, our qualitative study contributes to an in-depth explanation of the intricate nuances a strategic development of an NTBF, prior to an acquisition, may consist of. First, we have identified two strategic developments that contribute to the current literature; the NTBFs do not have an explicit exit strategy – nor intention – but emphasize rapid growth, and the NTBFs utilizes the concept of hybrid entrepreneurship to reduce personal risk, and productively allocate resources towards value creating activities. Second, we further elaborate the current literature's description of the impact of an internal, highly competent team of human resources. Third, we concur with the current literature of exit strategies' portrayal of the influence of industry partnerships and initial financial resources. Lastly, our study elucidates findings of founders' characteristics and impactful incidents, that contribute to explain the conditions in which the strategic developments towards an acquisition took place.

6.2. Implications for Founders of NTBFs

The strategic approach and the formation of development plans are essential for fostering NTBFs into attractive acquisition targets. From this study, we have provided valuable insight into how founders of NTBFs can strategically address venture creation and develop NTBFs from an initial phase to exit. We suggest that the effect of obtaining and utilizing available resources efficiently as part of a focused growth strategy should be underlined as more crucial than having an explicit exit strategy or exit intention, to achieve a successful acquisition for NTBFs. Accordingly, we suggest these relevant implications:

We argue that the founders would benefit from holding an intrinsic motivation for venture creation, as this encourages rapid and efficient development in the initial phase. Additionally, to reduce the personal risk, and to productively allocate funds to support development of MVPs, the founders should keep their income from current work or other sources of income, while parallelly pursuing the venture part-time until the firm has enough funds to support both. To further encourage efficient development, the firm would benefit from having the founders, or even early employees, contribute with financial funds through equity, as this increases their involvement while also supporting development of early versions of the service. As a result, the initial funds would be from persons directly involved in the creation of the venture, which increases the incentive to rapidly develop both the firm and the service to become attractive for professional investors, industry partners or customers.

We further argue that the firms should emphasize to hire highly competent technical employees with complementing skills, regardless of the high cost they may entail, as these typically contribute to the development of important competitive advantages in terms of unique domain knowledge, rapidness or innovativeness. By hiring these employees internally, rather than acquiring occasional services through a consultancy firm, the respective competitive advantages they may carry accrues to the firm, as opposed to disappearing once the project is over. Additionally, we see that new ventures have benefitted from entering partnerships with industry partners – either customers, suppliers, or industry-relevant investors – since these partnerships typically offer access to valuable resources in terms of financial funds, specialized resources for development, domain knowledge or access to market channels. By combining these two ways of obtaining resources, the firm ends up with developing their own unique base of resources, as well as exploiting established industry actors' uniquely developed resources and experience.

Lastly, we also suggest that the event of a first paying customer should be emphasized as a strategic objective, since the first customer may pose as a catalyst to gain legitimacy, attention and eventually growth in the market. While this contributes to increasing the attractiveness of the service and the firm, it also represents a stream of revenue, which is crucial for the financing of a scale-up phase. Similarly, the firm should always actively seek financial funds – even before they need it – as this is essential to be able to retain a highly competent team of employees, fund development, and thus successfully execute growth plans. Since we also see that most firms in this study are acquired when seeking growth capital, founders should have in mind that when they seek such substantial financial funds as a scale-up oftentimes requires, they may also present themselves as acquisition targets for larger firms seeking to acquire innovative and complementary services to theirs, competent and efficient teams, or rapidly increasing market shares.

6.3. Limitations of the Study

In this section, we will review our study's limitations, predominantly based on the study's selection of cases and literature review.

As highlighted in chapter 3, one of the criteria for the selection of cases is that the NTBFs had to have experienced an acquisition. As a result, we constructed a limitation that made us unable to assess whether our findings were exclusive to our selection of successfully acquired NTBFs, or if they also apply for cases where the NTBF either (1) exited through a non-successful route (i.e., bankruptcy or liquidation), or (2) continued to successfully grow independently, as these two other groups were excluded from the study. First, we argue that the finding of the NTBFs' emerging intention to sell the firm as they seek financial resources to scale, is the most proprietary for NTBFs that is successfully acquired. The NTBFs that would exit through a non-successful route can be argued to not have managed to develop the firm as competitively advantageous as the two other groups, or have failed to obtain the necessary financial resources needed to scale sustainably. Thus, the emerging intention to sell while obtaining financial resources may not ever have presented itself as an option. For the NTBFs that has continued to successfully grow independently, however, it can be argued that they either have managed to obtain financial resources without being faced with the option of an acquisition or that they have not had the same need for financial resources to grow - thus, also not being put in a position of facing an exit opportunity. Second, we find it reasonable to assume that our findings overall are more transferable to the group of NTBFs that continue to successfully grow independently, rather than those who exit through a non-successful route. This is because our findings to a large extent describe factors that resemble growth strategies, in addition to impactful incidents and characteristics that in many ways can be identified as criteria for a successful development. Consequently, although a few of our findings seem likely to be exclusive to NTBFs that have been successfully acquired – and we definitely can conclude that our findings are related to the occurrence of an acquisition for our selection, we cannot with certainty determine if the study as a whole correctly suggests strategic developments that are unique for NTBFs that experience an acquisition.

Furthermore, the search for suitable interviewees from Norwegian NTBFs, offering hardware products – which initially was our intention – proved to be surprisingly difficult to find. As a result, we decided to direct our study to NTBFs developing software services, which sets another limitation for the study. While NTBFs developing software services can be argued to have a more homogenous development process, we hypothesized that NTBFs developing hardware products typically are faced with more resource intensive obstacles – thus elucidating more contrasts in the analysis. Lastly, the thesis has built its basis off of strategy literature that has explicitly been linked to an exit. Accordingly, we have not considered other literature streams, such as literature of growth- and commercialization strategies that do not relate to an exit, although these may offer a broader perspective to the study. Yet, we recognize that the literature of exit strategies largely builds on past literature from these two other literature streams (Parastuty, 2018). Concludingly, the study's selection of cases and literature review offer some limitations, which are as relevant to note as the study's findings.

6.4. Suggestions for Further Research

Several suggestions for future research have been identified throughout this thesis. First we suggest to address the limitation of our case selection, by conducting a broader study with several NTBFs that have operated similarly, in the same time period, but with different outcomes; both cases that have exited through a non-successful route, and cases that have continued to successfully grow independently. In doing so, one will be able to explore the differences in the strategy for cases that have been unsuccessful, but also different variations of success – as an acquisition not necessarily is an ultimate sign of success. Consequently, such a study enables the research to differentiate strategic developments that are exclusively related to the occurrence of an acquisition from those related to pure growth strategies. As previously discussed in limitations, our study has built its basis off of strategy literature that has explicitly been related to an exit. However, we suggest that the inclusion of literature on general growth- and commercialization strategies for NTBFs could offer additional valuable insights into how NTBFs strategically develop.

Moreover, this study only examined NTBFs that developed software services, we suggest a comparable research of acquired NTBFs that develop hardware products. We argue that such research could provide more contrasts to the study, as hardware-offering NTBFs may face more resource-intensive prospects, while at the same time revealing differences between the two groups of service offerings.

Lastly, as a result of our study highlighting hybrid entrepreneurship as an influential concept not yet discussed by the literature of exit strategies for NTBFs, we suggest further research of this influence on an acquisition. For the purpose of such a study, we propose to predominantly focus on the stand-up phase, and how the NTBFs utilize their initial resources productively to facilitate rapid development towards an acquisition, by adopting the concept of hybrid entrepreneurship.

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8 | APPENDICES

Appendix 1: Timeline Template

We would appreciate it if you took the time to construct a timeline, based on the template below, prior to the interview. That way, we both will have a visual point of reference that we can discuss during the interview.

In the template below we have attempted to create timelines for the first five years of your firm. Every table equals one complete year and are therefore divided into 12 columns. In the columns you write incidents, milestones, pitfalls, hiring, or other factors that you find impactful for the firm. If you don’t remember the exact month of the incident, just place it somewhere in the area you think it might have happened.

When constructing the timeline, please mark the approximate time of establishment for the firm with “Inception”, and the approximate time of exit as “Exit”. You can write in both English and Norwegian, whichever you prefer.

	Q1			Q2			Q3			Q4		
1st year												

	Q1			Q2			Q3			Q4		
2nd year												

	Q1			Q2			Q3			Q4		
3rd year												

	Q1			Q2			Q3			Q4		
4th year												

	Q1			Q2			Q3			Q4		
5th year												

Appendix 2: Interview Guide

A semi-structured interview method has been selected. The interviewer asks questions in a flexible order, and follow-up questions are allowed.

The interviewer will explain to the interviewee that the interview will be anonymized and treated according to the data management plan enclosed in the NSD application. The interviewer will ask for permission to record the interview, and also notify the interviewee that notes will be taken throughout the interview.

To open the interview, and to make the interviewee comfortable, the interview will start with an introductory section where we will get to know the interviewee more.

Then the interview will go on to ask more about the venture that took place, the interviewees' motivations, and the team. The interviewee will in advance have been asked to map out a timeline of the development of the firm, from inception to acquisition. If this has not been done, the interviewee will get 5-10 minutes during this section to conduct the task. This task is given to facilitate for the interviewee to memorize past events, and to orderly sort incidents as they happened.

We will then make the interviewee take us through the timeline and pick 4 incidents that stand out as impactful. Each incident will be gone through thoroughly, with the intention to figure out how the venture obtained and developed different types of resources during that incident.

Followingly, a section of digging into the resources that reside with the firm, and how those were utilized, in general, is presented. The main objective of this section is to get the interviewee to enclose what resources they identified as beneficial for the venture, themselves, and discuss if they managed to exploit those resources fully.

Lastly, a section for cutting the interview off is made. In this part, the interviewee is asked to reflect on the outcome of the exit and to give his/her former self tips on things that should have been done differently.

Introduction

1. Name
2. Age
3. Education
4. Work experience or experience from other start-ups prior to the venture?
5. Which role did you have in your previous work?

The Firm

1. What is/was the name and business idea of your startup?
2. What was your motivation and vision for the venture? Ambitions, Financial?
3. Who worked in your team, and what were their expertise?
4. Did the venture have a clear direction and defined objectives?
5. Prior to this interview we asked you to draw up a timeline of the venture. Could you take us through the timeline, and explain milestones and important events that occurred?

Incidents along the life cycle

1. Could you pick some events that you remember as especially impactful for the progress/value creation of your venture?
2. Why did the incident occur?
3. What were the different expected outcomes?
4. Who was responsible for "solving the incident"?
5. How did you evolve to overcome the incident?
    a. Did you acquire external services, financial funds or new personnel?
6. Would you say that the incident strengthened or weakened the venture at that point?

The Exit

1. Could you elaborate the circumstances of the exit you went through?
2. At what point did you start to consider an exit as an opportunity for your startup?
3. Would you say that the way you handled the incidents we talked about, was beneficial or harmful for the outcome of your exit?
4. Did you do any changes to your strategy once you started to consider exit as an opportunity?
    a. Financial strategy
    b. Human resources
    c. Knowledge capital
    d. Tangible resources
5. Why did you do those changes? What effects did you seek?

The Firm's resources

1. What resources and capabilities did you initially identify as beneficial for the success of your firm?
2. How did you utilize/exploit those resources and capabilities?
3. What resources and capabilities did you initially identify as lacking to be able to go through with commercialization?
4. Did you identify who had those resources and capabilities at hand?
   Who were they, and what "relationships" did they have to you?

Wrap-up

1. How would you consider the outcome of your exit? (Why?)
2. What parts of the exit do you consider having been the most challenging?
3. What advice would you give to your younger self in order to improve the process?
4. Summarize, and ask: Is there anything you would like to add?
5. May I return to you with follow-up questions if necessary?

Appendix 3: Cross-Case Count Sheet

	Patterns	Firm One	Firm Two	Firm Three	Firm Four	Firm Five	Firm Six	Firm Seven	Firm Eight	Firm Nine	Firm Ten	Data consensus
Internal Tech Team	A	☑	☑	☑	☐	☑	☑	☑	☑	☑	☐	
Founder Funded and FFF	D	☑	☐	☑	☑	☑	☑	☑	☐	☑	☑	
Public funding	D	☐	☑	☑	☑	☐	☐	☐	☑	☑	☐	
Incubator/accelerator funding	E	☐	☑	☐	☐	☐	☐	☐	☐	☐	☑	
Professional Investor	E	☑	☐	☑	☑	☑	☐	☑	☐	☐	☐	
Angel Investor	E	☐	☐	☑	☑	☐	☐	☐	☑	☐	☐	
Financial long term strategy	E	☑	☐	☐	☐	☐	☑	☐	☐	☐	☐	
Founder salary in stand-up phase	(B)	☑	☐	☐	☐	☐	☐	☑	☑	☑	☐	
Founder salary in start-up phase	(B)	☐	☐	☑	☐	☑	☑	☐	☐	☐	☐	
Founder salary in scale-up phase	B	☐	☑	☐	☑	☐	☐	☐	☐	☐	☑	
Additional engagements/students	B	☑	☑	☑	☑	☑	☑	☐	☑	☐	☑	
Firm shares for employees	G	☑	☑	☑	☐	☑	☑	☐	☐	☑	☐	
Market validation in stand-up (MVP)	(C)	☑	☐	☑	☐	☐	☑	☐	☐	☐	☐	
Market validation in start-up (MVP)	C/D	☐	☑	☐	☑	☐	☐	☑	☑	☑	☑	
First paying customer stand-up phase	(C)	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	
First paying customer start-up phase	C	☑	☐	☑	☑	☑	☑	☑	☑	☑	☑	
First paying customer scale-up phase	(C)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Founder capable tech development	A	☐	☐	☑	☐	☐	☐	☑	☑	☐	☐	
Continuous iterative development	A	☑	☐	☑	☐	☐	☑	☑	☑	☑	☑	
Solving industry issue		☑	☑	☑	☐	☐	☐	☐	☑	☑	☐	
Copying existing concept		☐	☐	☐	☑	☑	☑	☐	☐	☐	☐	
Launch in stand-up phase	(C)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Launch in start-up phase	C	☑	☐	☐	☑	☑	☑	☑	☑	☑	☑	
Launch in scale up phase	(C)	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	
Financial Harvest motivation	G	☑	☐	☑	☐	☑	☐	☐	☐	☑	☑	
Intrinsic Motivation	G	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	
Industry partner was key	F	☐	☑	☐	☑	☐	☑	☐	☑	☑	☐	
Acquired by Competitor		☑	☐	☐	☐	☑	☐	☐	☐	☐	☐	
Acquired by Industry Partner	(F)	☐	☐	☐	☑	☐	☑	☐	☐	☐	☑	
Acquired when seeking funds	H	☑	☑	☐	☑	☐	☑	☑	☐	☐	☑	
Exit exit strategy	H	☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	
Strategically inquired exit	(H)	☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	
Acquired due to IP/Product	Q	☑	☐	☑	☑	☑	☑	☑	☑	☑	☑	
Acquired dut to human resources	A	☑	☑	☐	☑	☑	☑	☑	☑	☑	☐	
Acquired due to marked share	Q	☑	☐	☐	☑	☑	☑	☐	☑	☑	☐	
Non profitable case	Q	☑	☑	☐	☑	☑	☐	☑	☐	☐	☑	
Exit before scale-up	J	☐	☑	☐	☐	☐	☐	☐	☐	☐	☑	
Acquainted founders	K	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	
Founders with domain knowledge	K	☑	☑	☑	☐	☑	☑	☑	☑	☐	☑	
Highly educated	K	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	
Entrepreneurial experience	K	☑	☑	☑	☐	☑	☑	☑	☑	☑	☐	
Experienced founder team		☑	☐	☐	☐	☑	☑	☑	☐	☐	☐	

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The Strategic Development of Successfully Acquired New Technology-Based Firms

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