TAKING THE HIGH GROWTH FIRM TO THE NEXT LEVEL

A literature study on the success factors for a sustainable high growth firm

Author: Ronald van Beek

Promotor: Prof. dr. ing. H. Mulder

November, 2017

Master Consulting Project

Executive Master of Enterprise IT Architecture

Antwerp Management School, Antwerp, Belgium

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. FOREWORD

This literature study was not my first one, but I can assure you, it was by far the hardest one.

First of all, choosing a subject for a management consulting project for finalizing the Master of Enterprise IT architecture (MEITA) proved to be an interesting experience. I started with the idea to apply the design science methodology to redesign a specific piece of software according to Normalized Systems principles in order to provide evidence this piece of legacy software could be replaced by something way more robust. Unfortunately, the transformation program I was involved in at my employer put this piece of software out-of-scope and therefore my initiative would directly become an isolated piece of work. I decided to drop the subject and move on.

A friend of mine at my employer was making a career transition in the New Business Venturing department as an operations manager for a new team that would focus on developing virtual and augmented reality (VR/AR) products and services. As I worked in the past for a start-up company for a short period of time I knew from my own experience that start-ups try to get a product or service to the market as soon as possible in the most rudimentary way, but while doing this, mostly neglect the coherent structure of such a product or service. More often than not this actually results into a complete redesign and rebuild of the product or service as soon the market starts to show some interest, as the product or service is found to simply not scale well. Together with the VR/AR unit of my friend I would make sure that their products and services would be coherent from the beginning by applying enterprise engineering and normalized systems principles. The VR/AR unit existed for four months until the CEO of my company personally decided to pull the plug out of the team as VR/AR was found to be too far removed from core business.

The third time had to be right as time was ticking away. I therefore decided to move on independently from my employer and dive deeper in the subject of new businesses becoming successful and then experiencing the challenges of scaling their product or services. Although I was truly interested in what enterprise architecture principles could be help new businesses to avoid the worst of their scaling challenges, this proved to be a far-fetched ambition. There just isn't much research available on the role of enterprise architecture within small and medium sized enterprises and even less within high growth firms (or the many other labels used for such firms, such as scale-ups, gazelles or rapid growth firms). Is seems that enterprise architecture is something mostly for large and complex organizations and not (yet) for younger and smaller firms just embarking on their growth path. My promotor, Professor Hans Mulder, warned me that, although considering it an interesting subject, the scientific validity of linking the role of enterprise architecture to successful high growth firms could easily become a minefield of assumptions and unfounded relationships based on wishful thinking. Therefore I decided, as high growth firms nowadays receive a lot of attention but knowledge is still found to be fragmented, to change the subject towards an integrative literature study to provide a cohesive overview of the success factors of high growth firms. The result of this literature study is what lies in front of you. I am proud of the result, but have to admit that I deeply underestimated the complexity of the subject and the number of conflicting findings on this highly interesting and relevant subject. Hopefully my study helps to provide more order and cohesion into the subject and in such way illustrates the valuable contribution that the field of Enterprise Architecture can provide, even to younger and smaller firms.

A foreword is never complete without expressing gratitude to the ones that contributed to the accomplishment of such a work lying in front of you.

First of all I have to express my gratitude to my employer KPN, especially Menne Drolenga, Hugo de Heer and Elroy Duivestein, for providing me the opportunity to embark on the MEITA-experience at Antwerp Management School. I also thank the Antwerp Management School for truly exceeding my expectations in challenging my thoughts on Enterprise Architecture and Enterprise Engineering in particular, and providing some excellent academic facilities as well. The days at the AMS campus, although intensive and exhausting, have been fascinating without exception. With the AMS my special thanks go out to Steven de Haes, Danny Lauwers, Hans Mulder and Wendy Behr for providing me the much-needed and much-appreciated flexibility in delivering this final piece of work. I continue thanking Bas van Westing of Fourstack and Guido van der Ven of Bol.com who both tried to help me get in touch with a number of Dutch high growth technology firms. I also thank Patrick Jobse, a longtime and dear friend, who put me in touch with Maxim Spek, entrepreneur and owner of Prospex, a hot young firm in B2B content marketing that is experiencing the high growth path. With Maxim I had two great interviews reflecting on my findings and putting some real-life perspective to it. In a similar way I have to thank Professor Theo Mulder, successful IT entrepreneur with first-hand experience in leading a high growth firm and investor in a variety of, some highly successful, firms, for receiving me at his home to share his experiences with me. Both gentlemen vividly showed me that the structured overview of success factors for high growth firms provided in this study, in real-life tend to be much more ambivalent and, in the moment, do not present themselves as clear as when written down in a paper such as this one. Many thanks also go out to my promotor at the Antwerp Management School professor Hans Mulder, who I introduced before, for his sharp thoughts and reflections, his patience, his willingness to introduce me to some of his contacts, including his father, and definitely his positive attitude. For Hans there are never problems, only solutions. This attitude I very much appreciated while working with him.

Finally, last but not least, the uttermost gratitude goes out to my girlfriend who supported me in my crazy choice of writing a thesis for the fourth time and as a result had to put with the many times I was off to Antwerp and the numerous hours I needed to isolate myself from my family to work on this study. She never complained although many evenings and weekends she had to deal with the two lovely boys we have together, Tim and Stijn, now almost five and three and a halve years old. I hope they will not hold it against when they find out that I lied to them about working on Sundays, while actually I was working on my master consulting project at the office. My girlfriend recently asked me: please, no more studies, OK? I have agreed. My family now has my primary focus, as they sacrificed the most. But no more studies? Ever again? I do not have the definite answer to this, there simply are so many interesting things to know, so many things to learn…

"Education Is The Kindling Of A Flame, Not The Filling Of A Vessel."

Attributed to Socrates

---

2. MANAGEMENT SUMMARY

This literature study answered to the call for a more comprehensive overview of success factors for sustainable high growth firms, as it has been widely acknowledged that the body of knowledge on high growth firms is still fragmented. This fragmentation is considered troublesome as especially high growth firms play a pivotal role from both a value creation potential and job creation potential. At the same time, it has been found that sustainable high growth firms are more the exception than the rule. Better understanding of the success factors for high growth firms therefore seems desirable in order to positively change the small odds of making it big as a firm. Therefore, the following research goal was defined for this study.

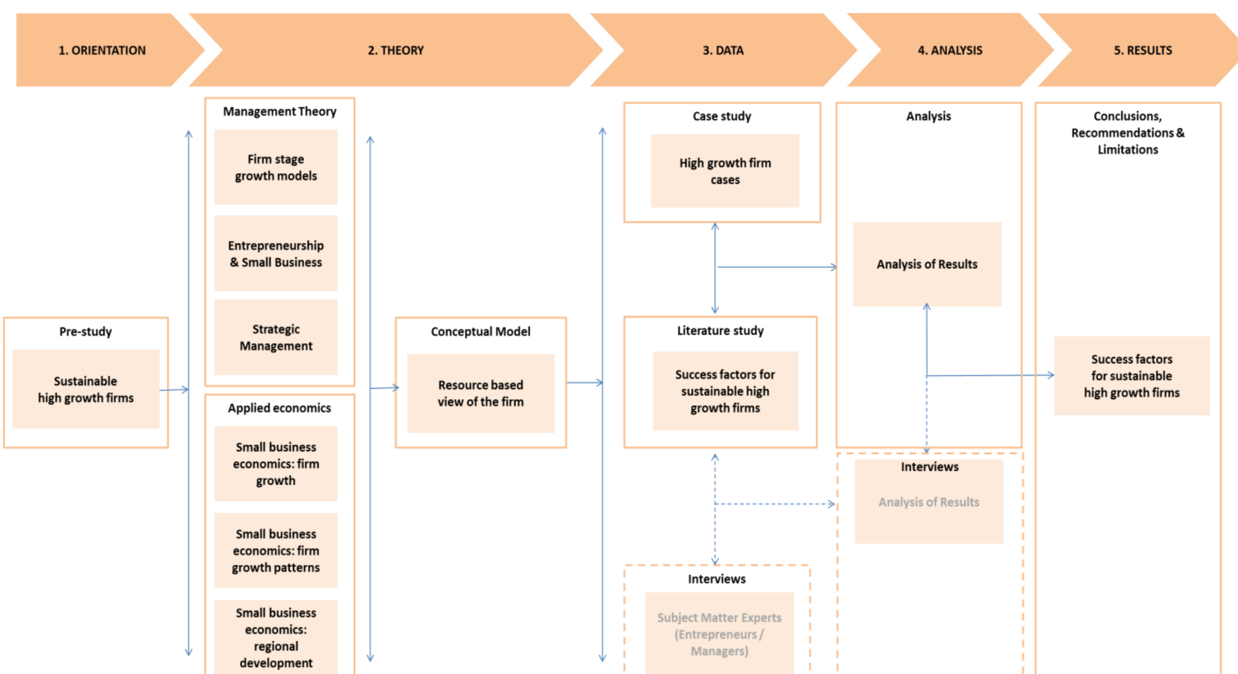
Contribute to overcoming the fragmented body of knowledge on success factors for sustainable high growth firms

Previous studies on high growth firms were found to originate from the academic disciplines of Applied Economics and Management Theory, but within each field of study different sub disciplines have taken an interest in high growth firms, including Entrepreneurship, Organization Design, Strategic Management, Firm growth (patterns) and Economic development. These sub disciplines have been found to have addressed the subject of the high growth firm in relative academic isolation with a fragmented body of knowledge on the subject as result. Therefore the following problem statement was formulated in order to provide a comprehensive overview of success factors for sustainable high growth firms.

What are success factors for a sustainable high growth firm?

Research design

In order to identify the various success factors for sustainable high growth firms found in previous studies, over 100 articles and 20 plus books were reviewed of which 75 articles and 15 plus books were included in the literature study. Although a literature study was the main research method, four high growth cases were introduced as well to validate findings to improve external validity of results by establishing triangulation.



As theoretical conceptual model for this study the 'resource based view of the firm' was adopted as both Applied Economics and Management Theory were found to perceive the efficient and effective accumulation and application of resources as one of the principal challenges for sustainable high firm growth. This model is illustrated below. It needs to be noted that the goal of this study was not to validate the applicability of the resource based view of the firm within the context of the high-growth firm. It merely assisted in structuring the wide variety of success factors found from literature.

In answering the problem statement of this study three central research questions and supporting sub questions were formulated, which are illustrated below.

Central research questions	Supporting sub questions
1. What is the definition of a high growth firm?	*a. In what way can a high growth firm be defined based on how its performance is evaluated?* *b. In what way can a high growth firm be defined based on relevant firm lifecycle stages?*
2. What are success factors for sustainable high growth firms that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?	*a. What are the industry success factors for sustainable high growth firms that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?* *b. What are strategic success factors for sustainable high growth firms that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?* *c. What are success factors for sustainable high growth firms from a capabilities and resources point of view that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?*
3. What is the fit of success factors for sustainable high growth firms identified from literature against the selected case studies in this study?	*a. What success factors for sustainable high growth firms can be confirmed through analysis of the various cases?* *b. What additional success factors for sustainable high growth firms (if any) can be derived through analysis of the various cases?*

What is the definition of a high growth firm: conclusions

Although the first research question: what is a high growth firm, seemed to be a simple question, providing a clear answer proved not to be that simple, as definitions used for a high growth firm were found to vary considerably. As these definition provide the basis for the majority of findings in literature on success factors for high growth firms, considerable time and effort was spent in this study on covering this first central research question. With regards to the question: what is a high growth firm, the following conclusion was formulated first.

Conclusion A

The great variation in definitions of high growth firms, measures used and thresholds (and other restrictions) applied hampers the comparability of studies on firm growth, limiting progress in knowledge development on high firm growth.

In answering the sub question in what way a high growth firm can be defined based on how its performance is evaluated, the following conclusions were drawn from the review of literature.

Conclusion B

Based on how it is measured, a high growth firm is a firm that

…is a high performer, measured by sales growth, when taking the perspective of value creation success

…is a high performer, measured by employment growth, when taking the perspective of employment growth

…is a high performer, measured by sales growth relative to employment growth, when taking the perspective of productivity growth

… is able to scale by growing its sales at a much higher rate than it needs to add employees and does this in a way that it consistently outperforms it peers

In answering the sub question in what way a high growth firm can be defined based on relevant firm lifecycle stages, the following conclusions were drawn from the review of literature.

Conclusion C

Based on relevant lifecycle stages, a high growth firm is a firm that

… is rapidly maturing through the firm lifecycle stages of childhood, adolescence and prime adulthood

…has left the birth and infancy lifecycle stages behind by successfully finding a solution to a problem, translating it into a product or service and receiving strong support and uptake by customers

…is able to successfully navigate the challenges of the various firm growth stages in a (very) short timeframe

…is likely, but not necessarily, a younger and smaller firm

…can be found in any sector of the economy, with a preference for high growth sectors or high growth niches

…has a growth rate independent from growth rates in its sector of the economy

What is the definition of a high growth firm: recommendations

As considerable shortcomings were found in the way of defining a high growth firm based on growth outcome measures, the following recommendations were identified to improve defining and identifying high growth firms. This to help improve comparability of studies and thus enabling progress in the knowledge development on the high growth firm.

Recommendations

- *…When defining a high growth firm by its measures, sales growth, employment growth or productivity growth should not be used interchangeable*
- *…When defining a high growth firm, it is recommended to explicitly state the perspective(s) of interest one takes, being value creation, job creation or scaling productivity*
- *…When defining a high growth firm, relative measures are better suited to compare sector peers if corrected for size bias*
- *…When defining a high growth firm, the most sustainable high growth firms are most likely to be found amongst the 5% best performers*
- *…When defining a high growth firm, the most sustainable high growth firms are most likely to be found amongst firms that have not experienced plateauing or negative growth over time*

What are success factors for a sustainable high growth firm: conclusions

Based on the theoretical conceptual model provided by the ‘resource based view of the firm’, success factors for sustainable high growth firms found through review of literature were structured across three levels of firm analysis, namely industry success factors, strategic success factors and success factors from an organizational resources and capabilities point of view. When validating the identified success factors from literature against the four high growth cases, Minihouse|Multihouse, Baan Company, Bol.com and Prospex, only the success factors finding support with at least three out of the four cases were considered as confirmed by this study. The conclusions with regards to the second and third research question of this study are illustrated below.

I. INDUSTRY SUCCESS FACTORS	SOURCES	CONCLUSION
a) Emerging or growing markets offer most favorable growth opportunities. ○ Emerging markets offer greatest potential for first movers *Getting it right and moving as fast as possible is essential to dominate respective market before shakeout of firms occurs and consolidation takes place.* ○ Growing markets less risky due to structure and standardization *Moving as fast as possible to gain sufficient market share before a shakeout of firms occurs and consolidation takes place.*	Brush & Chaganti, 1998; Covin, Slevin, & Covin, 1990; Eisenhardt & Schoonhoven, 1990; Chandler & Hanks, 1994; McDougall et al., 1994; Koberg et al., 1996; Park, Chen & Gallagher, 2002; Robinson & McDougall, 2001; Kakati, 2003; Eisenmann et al. 2006; Schilling 2002; Klepper & Grady, 1990; Garnsey, 2005; Johnson et al. 2005; Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999	**Confirmed**
b) Sizeable emerging or growth markets offer most favorable growth opportunities	Kutcher et al., 2014; Deloitte, 2015	**Confirmed**
c) B2B markets favored above B2C markets for offering most	Kutcher et al., 2014; Deloitte, 2015; Parker, 2010;	**Confirmed**

	favorable growth opportunities *Early stable revenue streams easier to realize without considerable marketing costs*	Coutu, 2014	
d)	Locating in urban areas with right educational institutes close at hand preferable *Provides easier access to skilled resources to fuel growth.*	Romanelli & Schoonhoven, 2001; Coutu, 2014; Folta, Cooper, & Baik, 2006; Stuart and Sorenson, 2003	Disconfirmed
e)	Locating in areas with access to follow-up capital is preferable	Bamford, Dean, & McDougall, 2000a; Cooper et al., 1994; Lee, Lee, & Pennings, 2001; Coutu, 2014	Disconfirmed
II.	**SUCCESSFUL STRATEGIES**	**SOURCES**	**CONCLUSION**
a)	Broad based product differentiation strategy when operating in emerging markets Focused product differentiation strategy when operating in growth markets. Shifting from broad based product differentiation strategy to focused product differentiation strategy when market matures	Roger, 1962; Levitt, 1965; Kotler, 2002; Kutcher et al., 2014; Deloitte, 2015; Sandberg & Hofer, 1987; Grant, 2005; Siegel et al., 1993; Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999; Baum, 2001; Kakati, 1999	**Confirmed** Disconfirmed
b)	Providing unique value and product superiority for customers	Banbury & Mitchell, 1995; Robinson, 1990; Gilbert, 2006; Barringer et al., 2005; Kakati, 2003; Deloitte, 2015.	**Confirmed**
c)	Providing products and services 'designed to scale'	Kutcher et al., 2014; Deloitte, 2015.	**Confirmed**
d)	Ability to protect products and services	Zahra & Bogner, 1999; Siegel et al, 1993.	**Confirmed**
e)	Growing single product or service first before developing additional ones *More mature processes and transformation towards market-orientation pivotal*	Barringer et al., 2005; Kakati, 2003; Parker, 2010.	Disconfirmed
f)	Expanding markets by transforming products or services into platforms.	Kutcher et al. 2014; Deloitte, 2016.	**Confirmed***
g)	Expanding markets by acquisitions in complementary markets when home markets become saturated.	Penrose, 1995; Banbury & Mitchell, 1995; Harrison, Hitt, Hoskinsson, & Ireland, 2001; Gilbert, 2006; Kutcher et al., 2014; Carucci, 2016.	**Confirmed***
h)	Expanding markets through internationalization when facing small home markets or when home markets become saturated.	Coutu, 2014; Kutcher et al.; 2014; D'Souza and McDougall, 1989; Gilbert, 2006; Carucci, 2016; Shrader, 1996.	**Confirmed***
III.	**ORGANIZATIONAL SUCCESS FACTORS**	**SOURCES**	**CONCLUSION**
Entrepreneur or Entrepreneurial team			
a)	Strong general competencies	Boyatzis, 1982	**Confirmed**
b)	Ability to delegate	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Yehezkel, 2009; Gulati, 2016	**Confirmed**
c)	Previous industry experience	Boyatzis, 1982; Barringer et al., 2005; Baum et al., 2001; Box et al., 1993; Cooper, Gimeno-Gascon, & Woo, 1994; Eisenhardt & Schoonhoven, 1990; Siegel, Siegel, & MacMillan, 1993	**Confirmed**
d)	Technical skills	Boyatzis, 1982; Baum, 2001	Disconfirmed

e)	Prior entrepreneurial experience	Box et al., 1993; Baum, 2001	Disconfirmed
f)	Higher education	Sapienza & Grimm, 1997; Baum, 2001; Barringer et al., 2005	**Confirmed**
g)	Clear decision and vision to grow	Churchill, 1987; Chandler & Hanks, 1994; Bellu and Sherman 1995; Kolvereid and Bullvåg 1996; Cliff, 1998; Miner et al. 1994; Wiklund and Shepherd 2003; Sutton, 2014; Barringer et al., 2005	**Confirmed**
h)	Entrepreneurial team preferable above entrepreneur as individual	Eisenhardt & Schoonhoven, 1990; Kor, 2003; Timmons and Spinelli, 2004; Song, 2008; Reynolds 1993; Francis and Sandberg 2000; Buchholz and Roth, 1987	**Confirmed**
Childhood firm life cycle stage			
i)	Installing strong and experienced management team to plan for firm growth	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990	**Confirmed**
j)	Maintaining Entrepreneurial Orientation (EO) to support strong growth culture	Adizes, 1979; Churchill, 1984; Gulati, 2016; Barringer et al.,2005; Wiklund, 2009; Wiklund 1999; Zahra 1991; Zahra and Covin 1995; Madsen, 2007	**Confirmed**
k)	Introducing basic Strategic Management practices *Initial focus on main issues* *Start information search activities and experimentation to build platform for sense-making, learning and better informed decision-making*	Adizes, 1979; Churchill, 1987; Van Gelderen et al., 2000; Brinkmann, 2008; Andrews, 1971; Hambrick, 1982; Ottum and Moore, 1997; Janis and Mann, 1977; Cooper et al., 1995; Castrogiovanni, 1996; Shepherd et al., 2003	Disconfirmed
l)	Introducing basic Financial Planning & Control practices *Initial internal focus on budgeting to manage cash flows*	Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Churchill & Mullings, 2001; Gibson, 2005; Harnish, 2014	**Confirmed**
Adolescence firm life cycle stage			
m)	Increase functional specialization to a moderate degree; ○ particularly in Marketing & Sales ○ cross-functional teams responsible for an integrated project, product or service preferable over fully functional organization	Churchill, 1987; Kanzanjian, 1990; Child & Kieser, 1981; Whetten, 1986; Horowitz, 2010; Gulati, 2016; Kazanjian & Drazin, 1990; Olson & Bokor, 1995; Hambrick, 1995; Grant, 2005; Ellis, 2017; Peters and Waterman, 1982; George 1977, Kotter and Sathe 1978; Itami and Numagami, 1992; Stam & Wennberg 2009; Slater and Olson 2001; Matsuno et al. 2002; Kakati, 2003; Parker, 2010; Huselid 1995; Storey 2003; Naman and Slevin 1993; Daily et al. 2002	**Confirmed**
n)	Introducing an market orientation (MO) besides maintaining entrepreneurial orientation (EO)	Adizes, 1979; Churchill, 1984; Slater and Olson 2001; Matsuno et al. 2002; Kakati, 2003; Harnish, 2014; Ellis, 2017; Parker, 2010; Gulati, 2016; Barringer et al.,2005; Wiklund, 2009; Wiklund 1999; Zahra 1991; Zahra and Covin 1995; Madsen, 2007; Baker & Sinkula, 2009; Hult and Ketchen, 2001.	**Confirmed**
o)	Increase formalization of Strategic Management to a moderate degree *Focus on most important topics* *Information availability increasing through real-life experiences enabling learning and better informed decision-making.* *Support introduction of market-orientation by prioritize learning about customers*	Adizes, 1979; Churchill, 1987; Naman and Slevin 1993; Daily et al. 2002; Van Gelderen et al., 2000; Brinkmann, 2008; Berry, 1998; Castrogiovanni, 1996; Gibson, 2005; Slater and Narver 1995; Day 1994, 1991; Jaworski and Kohli 1993; Kohli and Jaworski 1990; Narver and Slater 1990.	**Confirmed**
p)	Increase formalization of Financial Planning & Control to a moderate degree	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990;	**Confirmed**

	Introduction of forecast based and market oriented financial planning & control	Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Gibson, 2005; Berry, 1998	
q)	Increase formalization HRM to a moderate degree *Focus on recruitment, development and compensation* *Support building strong growth culture*	Kanzanjian, 1990; Churchill, 1987; Hambrick, 1985; Barringer et al., 2005; Sullivan, 2016; Sutton, 2014, 2016; Gulati, 2016; Harnish, 2014; Parker, 2010.	Disconfirmed
r)	Digitize core processes in IT to leverage growth	Deloitte (2015), Caruzzi (2016), Mitra (2005); Weill et al. (2006); Harnish (2014); Huang & Henfridsson (2017) ,Brynjolfsson & McAfee (2014); Henfridsson & Bygstad (2013); Yoo et al. (2010); Henfridsson et al., (2014) Henfridsson et al. (2014)	Disconfirmed
Prime adulthood firm life cycle stage			
s)	Foster strong Market Orientation (MO) over Entrepreneurial Orientation (EO) to prevent overstretching of resources and capabilities	Churchill, 1987, Bhuian et al., 2005; Parker, 2010; Penrose, 1995; Hult and Ketchen, 2001.	Disconfirmed
t)	Increase formalization of Strategic Management to a high degree *Comprehensive and more formal approach enabled by reduced informational uncertainty* *Introduction of more sophisticated strategic management techniques*	Churchill, 1987; Kanzanjian, 1990; Naman and Slevin 1993; Daily et al. 2002; Berry, 1998; Brinckmann, 2008	Disconfirmed
u)	Increase formalization of Financial Planning & Control to a high degree *Supporting Market Orientation and more sophisticated Strategic Management*	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Gibson, 2005; Berry, 1998	Disconfirmed
v)	Increase formalization of HRM to a high degree *Formalizing cultural values in HR-policies, job descriptions and awareness programs*	Adizes, 1979; Kanzanjian; 1990	Disconfirmed
w)	Increase spending on digitizing core processes *When cash reserves allowing*	Mitra, 2005; Weill et al., 2006	Disconfirmed

With regards to additional observations and success factors for sustainable high growth firms, the following additions were made to the above list, based on the case analyses.

Market expansion strategies as real options for realizing sustainable high growth

For sustaining high growth, firms have the option to expand their markets by pursuing any of the following strategies separately or in combination, depending on their assessment on the availability of adequate resources and capabilities;

- *Expanding markets by transforming products or services into platforms.*
- *Expanding markets by acquisitions in complementary markets*
- *Expanding markets through internationalization*

IPO as event stretching organizational resources and capabilities of high growth firms

The choice of obtaining growth funding through an IPO sets extra requirements on organizational success factors for firm high growth, especially in the area of, but definitely not restricted to, financial planning & control.

Continuous transformation as additional success factor for a sustainable high growth firm

A high growth firm should reinvent itself timely enough in anticipation of decline of its product or services or its chosen markets.

What are success factors for a sustainable high growth firm: recommendations

Based on the analyses of success factors for sustainable high growth firms, the following recommendations were formulated, as a number of shortcomings in the current body of knowledge on success factors for sustainable high growth firms were found to exist. These recommendations are illustrated below.

Organizational resources and capabilities requirements for supporting market expansion strategies

In order to progress knowledge on the high growth firm, it is recommended to study the requirements for successfully pursuing a market expansion strategy, i.e. growth through becoming a platform, growth through internationalization or growth through mergers & acquisition, from an organizational resources and capabilities point of view in more detail.

Organizational resources and capabilities requirements for supporting an IPO

In order to progress knowledge on the high growth firm, it is recommended to study the organizational success factors for successfully preparing a firm for an IPO.

Organizational resources and capabilities supporting firm reinvention

In order to progress knowledge on the high growth firm, it is recommended to study the organizational success factors for firm reinvention in more detail.

Organizational resources and capabilities for sustainable high growth firms in prime adulthood

In order to progress knowledge on the high growth firm, it is recommended to study the organizational resources and capabilities for successful high growth in the prime adulthood lifecycle stage in more detail.

Limitations

The above conclusions and recommendations should be observed with care as a number of limitations need to be considered when interpreting the results of this study.

- Relationship between success factors for sustainable high growth firm at different levels of analysis not proven
- Success factors for sustainable high growth firms not guaranteed to fit all firms
- Small number of high growth firm cases limiting external validity of findings
- Variation of high growth firms selected as case studies limiting external validity
- Success factors for sustainable high growth firms identified based on studies with troublesome definitions

- Initial attempt of mapping cross-sectional findings of success factors on growth life cycle stages
- Low inter-operator reliability introducing potential measurement bias and/or errors
- Limited actuality of studies on high growth firms missing influences of technological advancements

Contribution of this study

Despite the considerable list of limitations this study still boasts providing a relevant contribution to overcoming the fragmented body of knowledge on high growth firms, as was formulated as research goal of this study. This contribution is covered below.

- Guidelines provided to better define high growth firms
- Comprehensive overview provided of success factors for sustainable high growth firms across different levels of analysis
- Resource based view of the firm proven to be valuable model to structure success factors for sustainable high growth firms
- Resource based view of the firm as valuable starting point to test relationships between confirmed success factors for sustainable high growth firms across different levels of analysis
- Firm stage life cycle models allowing for capturing internal dynamics of high growth firms

+++++++++++++

3. INTRODUCTION

High growth firms, the subject of this literature study, can boast a lot of attention for a number of reasons. An obvious reason is that many entrepreneurs dream of hitting jackpot and attaining rock star fame when establishing and trying to grow their firms. Although the importance of accumulating personal wealth and fame should not be downplayed, other reasons tend to have broader implications.

3.1. IMPORTANCE OF HIGH GROWTH FIRMS: JOB CREATION

An increasing number of studies have found that high growth firms are responsible for the majority of new jobs created in the economy. And although many of these studies find their origin in the USA, these findings have been replicated outside the US borders as well. Isenberg et. al (2014) wrote an article in the Harvard Business Review, titled: “For a booming economy, bet on high growth firms, not on small businesses”. They highlight that only a very small number of firms, ranging from 1 to 6 percent, account for the majority of the jobs created in the US economy, in this way popularizing earlier studies. Already since the eighties researchers have been working towards this conclusion, as fierce debate existed whether small firms or large firms were more important for job creation in the economy. The final conclusion on the importance of high growth firms was made when the most notable researchers from both ‘camps’, Birch and Medoff, finally decided to worked together (Birch, 1979; Armington & Odle, 1982; Armington, 1986; Birch, 1987; Kirchhoff & Phillips, 1988; Brown, Hamilton & Medoff, 1990; Davis, Haltiwanger, & Schuh, 1993; Picot, Baldwin, and Dupuy, 1994; Birch & Medoff, 1994). Birch & Medoff (1994), analyzing data from 1988 to 1992, found that about 4 percent of companies generated 70 percent of all new jobs in existing firms. These firms, which they referred to as ‘gazelles,’ employed on average 61 people and were represented in near equal share across all industries (Birch and Medoff 1994). After 1994 various studies have confirmed the importance of these high growth firms, for example, Birch, Haggerty, & Parsons (1995) found, analyzing the period 1990-1994, that high growth firms made up 3 percent of all businesses in the US economy, but generated all net job growth in this period. Of these high growth firms 82 percent employed fewer than 19 people and about 3,5 percent had 100 or more employees. Another study, done by the US National Commission on Entrepreneurship (Jovanovic, 2001) found that only 4.7% of businesses that existed in 1991 grew their employment by at least 15% per year or at least doubled their employment over the 5 years from 1992 to 1997. In 2008, Henrekson & Johansson (2008) analyzed 20 studies on high growth firms in nine countries, finding the claim on the importance of high growth firms to hold across borders as well. They concluded that a few rapidly growing firms were generating a disproportionately large share of all new net jobs, these firms could be of all sizes although small firms were overrepresented and these firms were found to exist in all industries (Henrekson & Johansson, 2008). More recently Tracy (2011) found that high growth firms in represented about 6,3 percent of all firms in the US economy. These companies were found to be younger and more productive than all other firms and were found in relatively equal shares across all industries, even stagnant and declining ones. These firms were again found to generate all net jobs in the US economy and their job creation capacity was found to be largely immune from expansions and contractions of the business cycle (Tracy, 2011).

Although the general belief still is that newly established firms are responsible for a large part of new job creation in the economy, this simply does not hold. While public policy makers still think creating more start-ups will transform depressed economic regions, generate innovation, and create jobs, and therefore focus their policies on supporting new firm creation (Shane, 2009; Almus, 2010; Coutu, 2014), Shane (2009) advocates that policy makers should stop subsidizing start-ups, as, he claims, most start-ups are not innovative, create few jobs and generate little wealth. The focus should be on the subset of firms with growth potential, as Almus (2010) concludes.

> *"…Looking at both the job creation potential and the relatively low propensity of new firms to grow, it is more interesting to focus attention on the small number of fast-growing firms that exist in every economy and to find characteristics that hamper or promote fast growth…"*

3.2. IMPORTANCE OF HIGH GROWTH FIRMS: VALUE CREATION

While high growth firms are found to be highly important for the economy due to their job creation potential, as was illustrated above, investors and economists look at high growth firms from a different perspective, which is their value creation potential. The importance of firm growth in general has been confirmed by many researchers, as firms with a better growth record are found to be more likely to survive (Phillips & Kirchhoff, 1989; Kirchhoff, 1994; Cosh & Hughes, 2000). Focusing on younger and smaller firms, Gilbert (2006) argues that these firms have a liability of smallness where, in the absence of growth, their survival may be significantly reduced and therefore truly matters (Freeman, Carroll, & Hannan, 1983; Buederal, Preisendoerfer & Ziegler, 1992; Reynolds & White 1997). As firm size and age increase, the adverse impact of lack of growth on firm survival is reduced (Audretsch 1994; Keasey & Watson 1991; Storey, 1985). Garnsey (2010) found that firms that had grown less than the mean growth of firms in their sector were more likely to be closed. Although growth in general can therefore be considered as highly important for the survival of a firm, it is high growth that is widely perceived as the true indicator of market acceptance and firm success (Covin & Slevin, 1997; Low & MacMillan, 1988; Barringer et al., 2004). This is confirmed by Garnsey (2005) who found that fewer than 5% of new firms, identified as high growth firms, provided investors with 90% of their returns. More recently a McKinsey study (Kutcher et al., 2014) with the dramatic title: grow fast, or die slow, analyzed the life cycles of about 3000 technology firms from around the globe between 1980 and 2012 and confirmed the importance of high growth for value creation: high growth firms were found to offer a return to shareholders five times greater than normal growth companies between US$100 million and US$200 million revenue and twice as much between US$1,0 billion and US$1,5 billion (Kutcher et al., 2014). Kutcher et al. (2014) also noted that growth mattered most in the early stages of a firm's life: revenue growth rates were found to drive twice as much market-capitalization gain as alternative economic measures such as margin or cost structure for companies with less than US$4 billion in revenues. Only when companies reached US$4 billion in revenues or more, margins become more important to value multiples (Kutcher et al., 2014).

3.3. SUSTAINABILITY OF HIGH GROWTH FIRMS

However, despite the positives surrounding the high growth firm with regards to its job creation and value creation potential, high growth is found to be more the exception than the rule: companies only have a very small probability of making it big. In the McKinsey study by Kutcher et al. (2014) introduced earlier, it was found that only 28 percent of firms reached a revenue of US$100 million, just 3 percent reached US$1 billion revenue, and exactly 17 achieved US$ 4 billion in revenue as independent companies. And while high growth in itself is rare, sustained high growth is found to be even rarer. Out of a sample of 10% fastest growing firms, Storey (1997) found that 1 out of 5 firms showed a decline in performance within 4 years. In a similar way Zook and Allen (1999) found that only one in seven firms of the 10% fastest growing firms was able to generate sustained, profitable growth. Parker (2010) found sustained high growth to be fragile as well. When studying a sample of high growth firms between 1992 and 1996 their mean annual sales growth was found to be 36 percent, but in the successive period (1996-2001) the surviving high growth firms of this sample grew by just 8 percent. Also the McKinsey study by Kutcher et al. (2014) introduced earlier found that just 15 percent of the so-called super growers, firms experiencing annual growth greater than 60 percent, were able to maintain their growth over the observation period.

However, although sustained high growth is found hard to realize, Kutcher et al. (2014) found that super growers were eight times more likely than stallers to grow from US$100 million to US$1 billion and three times more likely to do so than regular growers, hereby noting that high growth is a strong predictor of sustained growth. In a similar way, for sustained growth Deloitte (2015) found that a good start is half the work done: the top 20 percent of high growth firms in terms of 1st year revenue had a 70 percent chance to stay in this top-league over the next 5 years, high growth firms that started in the mid-quintile in terms of 1st year revenue only had a 7 percent chance of becoming a top revenue player later on, and high growth firms that started in the bottom quintile in terms of 1st year revenue were found to be simply unable to ever reach the top 20 percent. Both Deloitte (2015) and McKinsey (Kutcher et al., 2014) also found that firms that missed just one growth period almost never regained their initial speed later on. Kutcher et al. (2014) have written the following.

> *"…taking their foot off the pedal for even a short stint had dramatic long term consequences. Once growth is broken, it is impossible to put back together again…"*

Thus despite its rarity, sustained growth and especially sustained high growth is of crucial importance for firm success, as growth is more likely to follow growth than to follow an episode of plateau or decline (e.g. Wagner, 1992; Blanchflower and Burgess, 1996; Stanley et al., 1996; Cosh and Hughes, 2000; Garnsey, 2007).

3.4. STATUS QUO OF KNOWLEDGE DEVELOPMENT ON HIGH GROWTH FIRMS

Considering the importance of high growth firms for value and job creation and the small odds of making it big, entrepreneurs, managers, investors and policymakers alike have been keen to better understand the phenomenon of the high growth firm and unravel its mysteries. Therefore high growth firms have received considerable attention from academia (a.o. Weinzimmer et al., 1998; Davidsson & Wiklund, 2000; Delmar et al., 2003; Garnsey et al., 2006; Gilbert, 2006; Moreno, 2007; Yehezkel, 2009; McKelvie, 2010; Parker, 2010; Kutcher, 2014). The outcome of these studies, however, generally show mixed or non-conclusive results (e.g. Davidsson & Wiklund, 2000; Delmar, Davidsson & Gartner, 2003; Shepherd & Wiklund, 2009). Garnsey (2005) writes there is still division on the relative importance of internal and external factors on growth prospects for a firm. Parker (2010) adds that although numerous studies demonstrate relationships between growth and a large variety of influences the strong impression remains that the vast bulk of cannot be explained by the current theoretical frameworks. Some critics, for example, point out that as much as 80 percent of sample variance is left unexplained in some of these studies (Woo et al., 1994: 507; Curran and Blackburn, 2001). Coad (2009) argued that, after reviewing 12 studies addressing growth and finding that 8 of these studies reported R2 values below 10 percent, it was hard to dismiss Gibrat's Law (1931) that hypothesis that firm growth is simply a random walk.

In response a number of studies have attempted to summarize and validate findings from studies on the variables influencing the likelihood of growth (Baum, 2001; Barringer et al., 2004; Gilbert, 2006; Song, 2008; Wiklund, 2009). These studies stress the complex dynamic processes of high growth, but at the same time have to conclude that these dynamics have generally been studied based on academic specialization and little conversation has existed between the different fields of study (Baum, 2001; Garnsey, 2005; Wiklund, 2009). In a similar way, Barringer (2005) found that none of the categories of variables examined to be holistic in nature, as they all studied high growth firms from a narrow point of view. Gartner (1985), Baum (2001) and Barringer et al. (2004) argue that explaining firm growth is a complex process, influenced by a variety of interrelated micro and macro domains, and these domains should be studied in a cohesive and integrated way. Others have suggested a complexity theory approach in order to provide a more comprehensive prediction of firm development and growth by combining individual, organizational, and environmental dimensions (Sandberg; 1986; Herron & Robinson, 1993; Naffziger, Hornsby, & Kuratko, 1994; Lumpkin & Dess, 1996; Covin & Slevin, 1997; Chrisman, Bauerschmidt, & Hofer, 1998; Baum, 2001). In 2005 Barringer writes: although the literature on high growth firms is converging, there is still a need for more integration across the categories of variables that are associated with firm high growth. However, over 10 years later Gulati (2016) states that a coherent framework for sustainable firm high growth is still missing and a knowledge gap continues to exist.

3.5. INTRODUCTION: SUMMARY

In this introduction, the importance of the high growth firm has been clearly illustrated from both a job and value creation point of view. In a similar way, the small odds of making it big as a high growth firm were illustrated as well, including the importance of growth for the long term survival of a firm. Although a considerable amount of studies have addressed the high growth firm, most of the research done has not looked at the high growth firm in a multi-dimensional way. Therefore, an overall view on success factors for a sustainable high growth firm is still found to be missing (Gulati, 2016). In response to this important observation, this study attempts to provide a comprehensive overview of the various success factors for a sustainable high growth firm through a review of previous studies on the subject. Additionally, the success factors identified from literature will be assessed against a number of real cases of high growth firms in order to validate the findings from literature. In this way this study aims to contribute to filling the knowledge gap on the sustainable high growth firm. In the next chapter the research design chosen for this study will be introduced.

4. RESEARCH DESIGN

In the Introduction, the importance of high growth firms from the perspective of value and job creation was illustrated. At the same time the rarity of sustained high growth was addressed including great interest the subject has received in attempt to unravel the mysteries of the high growth firm. Unfortunately, efforts made to unravel the mysteries of the high growth firm have resulted in a fragmented body of knowledge on the subject that continues to exist. This chapter will address the research design chosen for this study.

4.1. RESEARCH GOAL

A research goal concerns why a specific study is undertaken and what it would like to accomplish (Baarda et al., 1995; Recker, 2013). Based on the importance of high growth firms from a job and value creation potential and the apparent fragmented nature of the body of knowledge on high growth firms, as were illustrated in the Introduction of this study, the following research goal for this study was defined.

Contribute to overcoming the fragmented body of knowledge on success factors for sustainable high growth firms

4.2. PROBLEM STATEMENT

While a research goal refers to why a certain study is undertaken, a problem statement refers to what will be studies (Baarda et al., 1995; Recker, 2013). In order to provide a contribution to overcoming the fragmented body of knowledge on success factors for high growth firms, in this study a comprehensive literature study will be conducted in order to structure the various findings on variables found relevant for sustainable high growth firms.

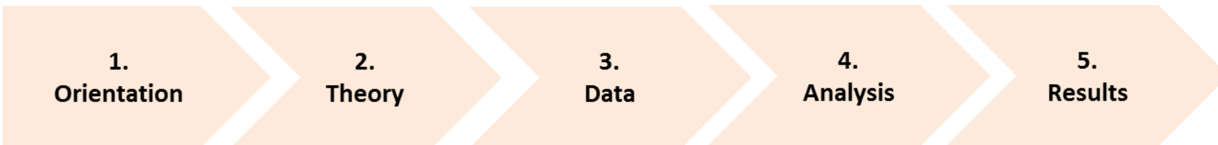
What are success factors for a sustainable high growth firm?

4.3. RESEARCH STRATEGY

Due to the exploratory nature of this study and in order to address the problem statement in a holistic way a qualitative research strategy to this study was chosen. Baarda et. al (1995) confirm that a qualitative research strategy is indeed a suitable approach when the problem at hand knows a variety of perspectives that need to be addressed in a cohesive way. This matches the structure of this study, as this study looks from different theoretic perspectives at high growth firms. Recker (2013) confirms the suitability of a qualitative research strategy stating such a strategy scores positively on a) explorability, referring to the extent to which a research strategy encourages or enables the discovery of previously unknown or unconsidered observations or findings, and b) complexity, referring to the extent to which a research design leads to comprehensive, exhaustive, and multi-facetted knowledge contributions.

4.4. RESEARCH DESIGN

Doorewaard (2015) provides guidelines for crafting a proper research design by identifying five steps.



The first step Doorewaard (2015) identifies is a global orientation on the subject at hand providing the researcher with an overview of dominant theories and perspectives. Outcome of the orientation stage is a research goal and problem statement. In the second step Doorewaard (2015) notes the development of a conceptual model to provide the study with a solid with a solid scientific foundation. The third step Doorewaard (2015) refers to is the execution of the research which focuses on collection of data. In the fourth step the data collected is confronted with the conceptual model to provide the input for the final stage where the results of the study are presented (Doorewaard, 2015).

By applying the above framework on this study, the following research design was drafted. The different steps will be motivated in sub paragraphs below.

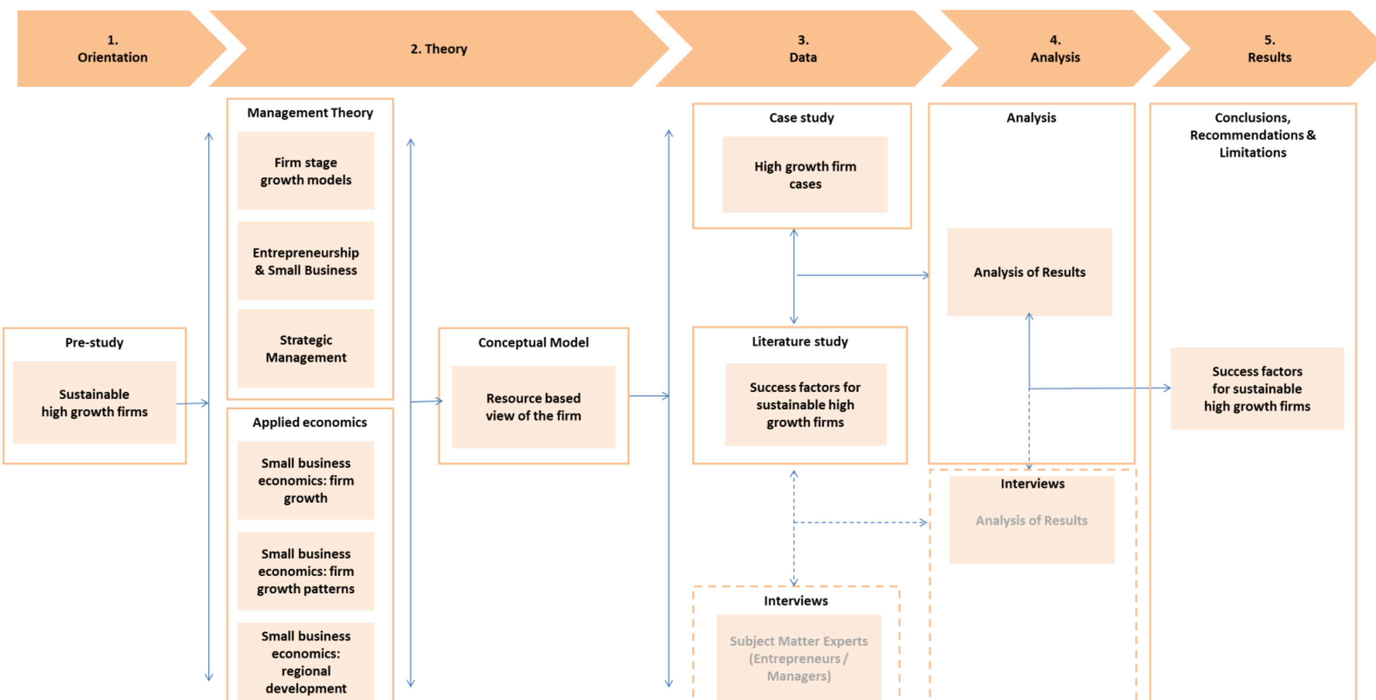
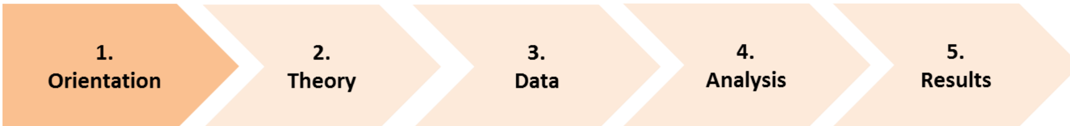


Figure 1: Research design - Taking the high growth firm to the next level

4.4.1. INITIAL ORIENTATION ON SUSTAINABLE HIGH GROWTH FIRMS



The first step consisted of a pre-study on the subject of high growth firms. Initial search of academic journals identified over 100 articles, 20 plus books and dozens of Internet pages related to the subject of the high growth firms. Initial scanning of articles and Internet pages confirmed the fragmented body of knowledge reported by a variety of scholars. This scanning also revealed that most studies on high growth firms identified that internal adaption of firm as critical for sustainable high growth, clearly illustrated by the following quotes. For example, Fairbairn (2015) describes the high growth experience as follows;

> *"…Each time your business doubles everything seems to break; your sales process, finance processes, management information flow, so every time your company doubles in size, you end up re-designing every process you have…"*

Sullivan (2016) adds some extra drama;

> *"…When facing high growth you throw yourself off a cliff and assemble your airplane on the way down. If you don't solve the right problem at the right time, that's the end. Mortality puts priorities into sharp focus.."*

On the challenges of a high growth firm Coleman (2015) writes:

> *"…the main challenge lies in predicting (high-)growth and updating your processes before they break. However, when scaling really quickly, all your processes and procedures are under pressure all the time, so it is hard to spot which one is about to fail next.."*

Well-known venture capitalist Ben Horowitz (2010) stresses:

> *"…Different sizes of company impose different requirements on the company's architecture. If you address those requirements too early, your company will seem heavy and sluggish. If you address those requirements too late, your company may melt down under the pressure. Be mindful of your company's true growth rate as you add architectural components…"*

Completing this picture on the challenges of high growth firms Coleman (2015) writes:

"...Scale at a speed beyond your company's capabilities and you can end up in over your head. Scale too slowly and you risk losing momentum and vital opportunities..."

Based on the above findings from the initial orientation on the body of knowledge on the high growth firm, different theoretic perspectives were identified providing the basis for the actual literature study and motivation of this study, as marked in the research goal and problem statement of this study.

4.4.2. Theoretic perspectives on sustainable high growth firms

Based on the initial orientation on high growth firms, as described above, a number of dominant theoretic perspectives on the subject of the sustainable high growth firm were identified. These perspectives were found to be relatively evenly distributed between Management Theory and Applied Economics.

4.4.2.1. *Management Theory on sustainable high growth firms*

Within Management Theory three streams were found to be dominant. Firstly, it was found that firm stage growth models addressed the various lifecycle stages of firm, including firm growth. These models tend to address a dynamic perspective on the high growth firm by covering the characteristics and challenges of a firm across its different lifecycle stages, and, sometimes, providing guidelines in overcoming these challenges. Although the firm stage growth model by Greiner (1972) and Adizes (1979) tend to be the best-known models, a number of scholars have used these models to zoom in on the growth challenges of smaller and newer firms, notably Adizes' stage growth model (1979), as illustrated below, Churchill's stage growth model (1987) and Kanzanjian's stage growth model (1990). Due to their focus on growth firms the models of Adizes, Churchill and Kanzanjian were taken into account for this study. For a more detailed overview of these firm stage growth models, see Annexes A to D.

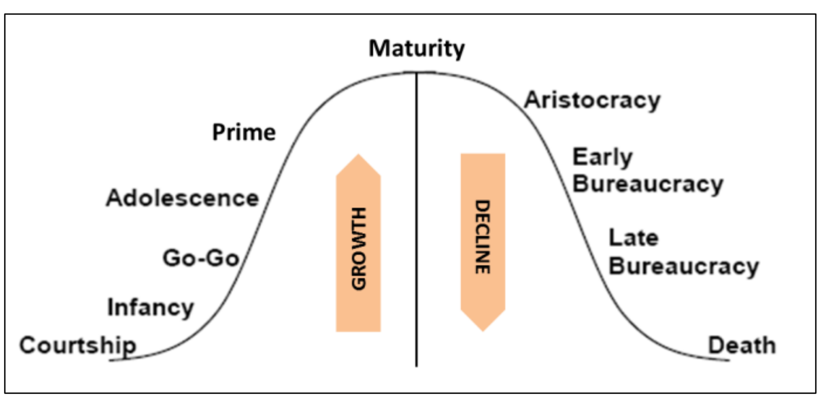


Figure 2: Adizes' Firm Stage Growth model (1979)

Secondly, Management Theory on Entrepreneurship & Small Business has provided insights on the characteristics of successful high growth firms. Contrary to the dynamic nature of firm stage models, this perspective has provided primarily cross-sectional insights in the high growth firm. McKelvie (2010) points to the predominant 'growth as an outcome'- approach in analyzing high growth firm in which growth is treated as the dependent variable and has as its primary goal to explain variance in the growth outcome using a set of, cross-sectional, independent variables. Considering the challenges of high growth firms, as illustrated earlier, Management Theory on Entrepreneurship has addressed these challenges through the lens of Organizational Design, highlighting the importance of adjusting organizational structure, culture, people and resource alignment for sustainable high firm growth (Daft, 2005).

Thirdly, Management Theory on Strategic Management has contributed to the understanding of the high growth firms by addressing both the favorable strategies for high growth considering the environment a firm operates in, i.e. the 'environment – strategy' interface, and the guidance strategic management practices provides in steering the internal arrangements of a firm, i.e. the 'firm – strategy' interface, as is illustrated below (Grant, 2005).

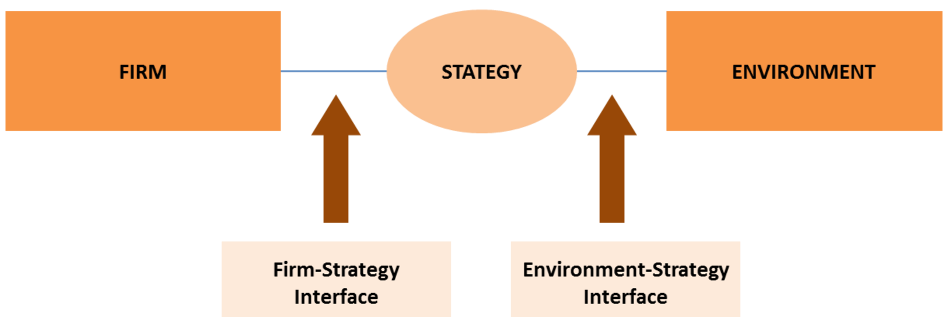


Figure 3: Strategic Interfaces Environment - Firm (Grant, 2005)

4.4.2.2. *Applied Economics on sustainable high growth firms*

Within Applied Economics three streams were found to be dominant as well. In a similar way, but relatively detached from insights on high growth firms developed by the Management Theory perspectives illustrated above, the field of Applied Economics has addressed (high) growth firms as well. A surprising large number of economic studies has addressed the measurement of growth, as considerable debate is found to exist on what measures represent firm growth best.

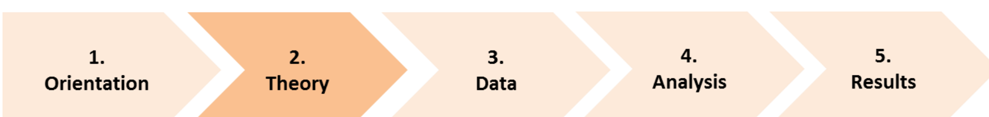
The first dominant subject in the field of Applied Economics, when studying firm growth, is (dis-)confirming 'Gibrat's Law'. 'Gibrat's Law' (1931) stated that the proportional rate of growth of a firm is independent of its absolute size, but this is since been disputed to hold firm younger and smaller firms. As such growth patterns for younger and older and smaller and larger firms have since been studied to determine whether 'Gibrat's Law' still stands.

Secondly, another dominant subject in Applied Economics is Penrose's 'theory of the growth of the firm' which was first published in 1959 (e.g., Garnsey et al., 2006; Macpherson & Holt, 2007; Mishina, Pollock, & Porac, 2004; Pettus, 2001). According to Penrose (1995) firm growth is driven by a 'productive opportunity' in a cumulative process of interaction between the firm's resource base and market opportunities. Penrose (1995) writes firm growth is ''[…] a result of a process of development […] in which an interacting series of internal changes leads to increases in size accompanied by changes in the characteristics of the growing object''. Growing firms tend to experience a critical resource deficit to deal with the demands of growth. If firms do not create or acquire the complementary resources required, their growth will be inhibited and a period of ''stagnation'' may follow (Penrose, 1995). This applies not only to firms faced with resource shortages, but also to firms that allow resources they have to remain unused, as these are failing to exploit a key growth mechanism, the building of complementary resources (Penrose, 1995). Penrose (1995) also noted the perverse effects of (too) early high growth, as the high growing firm must draw in new resources to support growth, but faces planning delays and coordination problems because it is impossible to synchronize resources to requirements precisely in a dynamic system. The need for internal coordination sets a brake on the rate at which market opportunities can be pursued (Penrose, 1995).

Finally Applied Economics has addressed the environmental variables relevant for regional economic development, including stimulation of firm and employment growth. This area attracts a lot of attention from public policy makers and also here the measurement of growth receives a lot of attention (Birch, Tracy, 2011; Coutu, 2016; Shane, 2009).

Based on the above dominant perspectives from both Management Theory and Applied Economics what seems to bind them together is in what way resources are utilized in order to progress firm growth. Based on this initial finding and the predominantly internal challenges of high growth firms, the conceptual model for this study was chosen for structuring for the various success factors for sustainable high growth firms as found from literature.

4.4.3. Conceptual model for structuring success factors for sustainable high growth firms



In 'Contemporary Strategic Analysis' Grant (2005) writes that a successful strategy is based on goals that are simple, consistent, and long term, profound understanding of the competitive environment, objective appraisal of resources and effective implementation. A dominant element is the matching of a firm's resources and capabilities to the opportunities that arise in the external environment (Grant, 2005). This perspective is key to the resource-based view of the firm (Barney, 1991; Mahoney & Pandian, 1992; Peterlaf; 1993; Collis & Montgomery, 1995) in which a firm is essentially a pool of resources and capabilities, and that these resources and capabilities are the primary determinants of its strategy and performance (Grant, 2005). Grant (2005) distinguishes between the resources and capabilities of the firm: while resources are the productive assets owned by the firm, capabilities define what the firm can do with them. Grant (2005) continues: individual resources do not confer competitive advantage, but they must work together to create organizational capability. Nelson and Winter (1982) write that organizational routines, predictable patterns of activity made up of a sequence of coordinated actions by individuals, form the basis of organizational capabilities. As such it is not the size of a firm's resource base that is the primary determinant of a capability, but the firm's ability to leverage its resources, into routines and eventually capabilities (Hamel & Prahalad, 1990, 1992). See for an overview of possible resources and organizational capabilities Annex E.

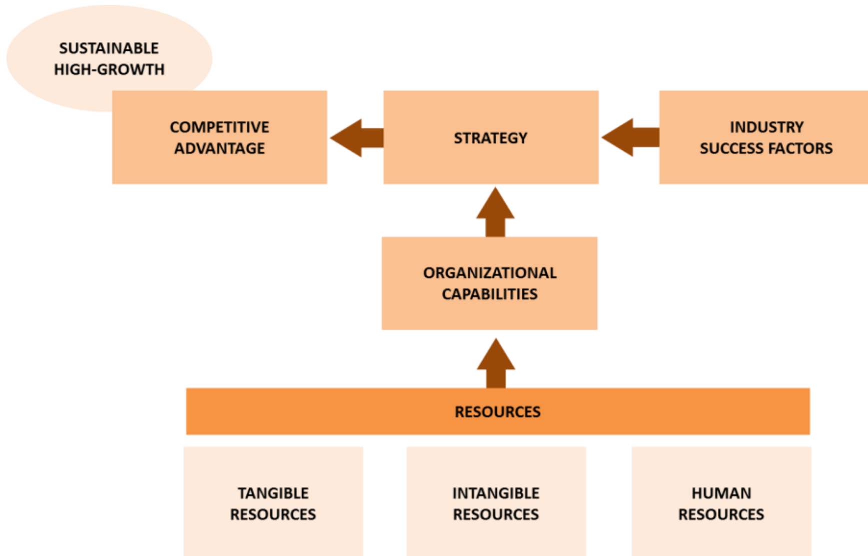


Figure 4: Resource based view of the firm (Grant, 2005)

As was illustrated earlier, the challenges of high growth firms were found to focus on getting the internals of the firm to keep working effectively, despite the changing demands of high growth. Furthermore, as was addressed Management Theory tends to address high growth from both a strategic and organizational point of view, while Applied Economics dominantly looks at the dynamics of resource accumulation and implementation. For example, Kotter & Sathe (1978) and Hambrick (1985) argue that high growth firms lack systems and structures, trained staff and other resources to support the required rapid adaptation to the changing environmental conditions when a firm finds itself in a first mover position. This kind of speed is necessary as a business may require a certain scale to be valuable and scaling faster than competitors means reaching customers first and potentially owning them as winner-takes-all (Eisenmann et al.2006; Schilling 2002). Furthermore, Quinn & Cameron (1983) state that successful firms progressively alter their systems as different criteria of effectiveness become relevant for their operations in successive stages of evolution. As another example, Gilbert (2006) writes: growth will occur when the entrepreneur possesses the resources that enable growth, has a strategy that fosters growth, operates in an industry conducive for growth, and develops structures and systems that accommodate growth (e.g., Storey, 1994; Kakati, 2003; Baum et al. 2001; Box et al., 1993; Chrisman et al., 1998; Thakur, 1999; Barringer et al., 2004; Wiklund, 2009). Stressing the importance of resources, the resources most often related to new firm growth are the financial (Bamford, Dean, & McDougall, 2000a; Cooper et al., 1994; Lee, Lee, & Pennings, 2001) and human (Birley, 1987; Cooper et al., 1994).

Based on the above it could therefore be argued that the 'resource based view of the firm' would provide a valuable conceptual model for addressing the variety of success criteria for sustainable high growth firms that earlier studies have accumulated.

4.4.4. Literature study on success factors for sustainable high growth firms

1. Orientation | 2. Theory | **3. Data** | 4. Analysis | 5. Results

In response to the reported fragmented body of knowledge on success factors for sustainable high growth firms, the primary focus of this study consisted of an extensive explorative literature study on the success criteria for sustainable high firm growth firms. By integrating findings on success criteria for sustainable high growth firms from both Management Theory and Applied Economics, each adopting its fairly isolated perspective on the same subject, this study claims 'theoretical triangulation' (Baarda et al.,1995), as different theoretical perspectives on high growth firms are combined and as such solidifying the external validity of this study.

The initial search was conducted by using the following keywords (and their combinations) in structured searches in the Scopus, Web of Science, Springer and Elsevier Science Direct databases in order to find relevant academic articles, books or conference notes:

High growth, fast growth, rapid growth, scale-up, firm growth theory, firm life cycle, scaling, scalability, scalable, startup, start-up, small companies, small firms, gazelles, design principles, design rules, architecture, enterprise architecture, enterprise engineering, enterprise design, business model

---

Secondly, initial search results were expanded by identifying and adding relevant references from scanning articles, books and conference notes found in the initial search. Thirdly, Google Scholar was used to identify any further relevant articles, books or conference notes. Although a structured search was conducted on the following primary information management sources, the subject of this study was found to be less a topic within this field of study;

MIS Quarterly, Information Systems Research, Journal of Management Information Systems, Management Science, European Journal of Information Systems, Information & Management, Information Systems Journal, Journal of Strategic Information Systems and IEEE Software

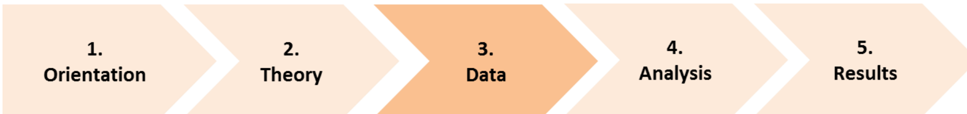
---

As the 'resource based view of the firm' was found to provide a valuable framework to structure findings on success factors for sustainable high growth firms the following keywords and their combinations were added:

Resources, capabilities, competencies, physical resources, financing, financial resources, finance, capital, loan, debt, equity, high growth, fast growth, rapid growth, scale-up, firm growth theory, firm life cycle, scaling, scalability, scalable, startup, start-up, small companies, small firms, gazelles.

Eventually over 75 of these articles and over 15 books were reviewed for this study. See the Bibliography for further details.

4.4.5. CASE STUDIES (& INTERVIEWS) ON HIGH GROWTH FIRMS



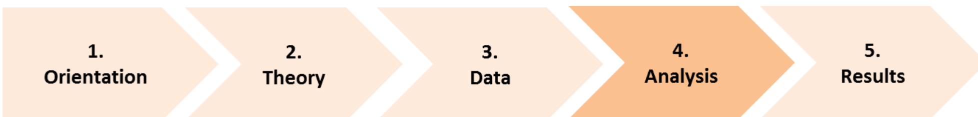
As introduced earlier, the primary focus of this qualitative study was on conducting a comprehensive analysis of literature on success factors for sustainable high growth firms. One of the limitations of a qualitative research strategy is the low generalizability of findings, as findings and observations can generally only be extended beyond the data being observed or examined to a limited extent (Recker, 2013). Triangulation attempts to overcome this limitation improve generalizability of findings by using a variety of data collection methods and cross verify outcomes obtained by two or multiple research methods that study the same phenomenon (Baarda et. al, 1995; Recker, 2013). Although Baarda et al. (1995) address various ways to establish triangulation, including ‘theoretical triangulation’ as covered in the previous subparagraph, the use of a variety of data collection methods and the cross-verification of outcomes is referred to as ‘methodical triangulation’.

In order to cross-verify findings on success factors for sustainable high growth firms found from the literature review, a number of cases of high growth firms were introduced in this study and analyzed as well. Although case studies have been often dismissed as being conceptually and empirically unproven and non-predictive (Storey, 1997; Churchill and Lewis, 1983; Kazanjian and Drazin, 1989; Churchill, 1997), case studies can still be considered a valuable research method in order to establish methodological triangulation and improve the generalizability of findings from the literature study. The following four Dutch cases were selected based on the information availability, namely Minihouse | Multihouse, Baan Company, Bol.com and Prospex. These cases are covered in Chapter 6 of this study.

Although it was the intention to conduct a number of interviews with subject matter experts with real-life experience with high growth firms, in addition to validation of findings from literature through case studies, to add another research method to strengthen the methodological triangulation claim (Baarda et al, 1995)., this unfortunately proved largely unfeasible. Although a number of (ex) high growth firms were contacted and followed up upon, including Minihouse | Mulithouse, Baan Company, Bol.com, Prospex, Digidentity, Floorplanner, Websend and Viewbook, only the interviews with professor Mulder of Minihouse | Multihouse, see Annex G for a transcript, and Maxim Spek of Prospex, see Annex H for a transcript, were held and included in this study. Therefore an intended chapter to discuss findings from interviews with SMEs was dropped and interview results included in the coverage of the Minihouse | Multihouse and Prospex cases.

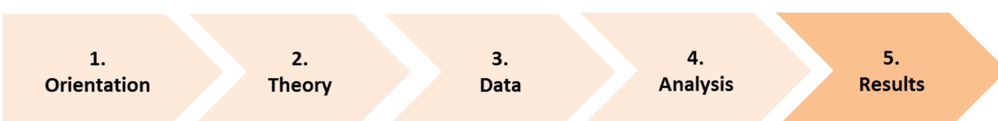
Still, for the two interviews, in order to further improve generalizability of findings from this study, a semi-structured interview was prepared. For the interview format see Annex F. A semi-structured approach was chosen to support interviewing the interviewees in an identical way, but also enabling open exploration when deemed necessary by the interviewer as questions and possible answers are not predefined (Baarda et al., 1995). The first part of the interview addressed the interviewees’ experience with high growth. It was chosen to start with the experience of the persons interviewed in order not to limit or lead their thinking, hereby interfering with the reliability of this study (Baarda et al. 1995). The second part of interview questions was structured around the general domains of the ‘resource based view of the firm’ addressing industry success factors, strategic success factors and success factors consisting of resources and organizational capabilities. The final part of the interview would have interviewees react on the presentation of the various success factors for firm high growth as identified from the literature study. In order to improve reliability of findings, interview transcripts were added to Annex G and H of this study.

4.4.6. Analysis of results



The success factors for high growth firms, as identified from literature, were assessed against findings from each high growth case (and the two interviews) and analyzed in order to identify the fit of the various success factors identified. In this assessment, success factors were either supported (Yes), not supported (No), potentially supported, as no direct evidence was presented in the case, but through logical reasoning one could come to an indirect positive conclusion (Maybe) and what success factors were unable to be classified for both direct and indirect information was found to be missing (Unknown). In addition, any notable success factors identifiable from the different cases not covered by the success factors for a high growth firm from literature were discussed. As guideline for this assessment it was decided beforehand that at least three out of the four cases needed to support a success factor for a high growth firm to make it the final list of success factors.

4.4.7. Conclusions, limitations and recommendations



Finally, based on the results of the analyses as described in the previous sub paragraph, conclusions, limitations and recommendations were written in order to address the problem statement of this study introduced earlier;

What are success factors for a sustainable high growth firm?

And by addressing the problem statement of this study reaching the goal of this study;

Contribute to overcoming the fragmented body of knowledge on success factors for sustainable high growth firms

In support of the above research goal and problem statement a number of central research questions and sub questions were formulated. These will be covered below.

4.5. RESEARCH QUESTIONS

In support of the research goal and problem statement of this study a number of central research questions and sub questions were formulated. By answering these central questions and sub questions the problem statement should be able to be answered and through answering the problem statement the research goal of this study should be attained (Doorewaard, 2015, Recker, 2014 and Baarda et al., 1995). Every research questions addresses a particular part of the research model (Doorewaard, 2015), as introduced in the previous sub paragraph.

4.5.1. FIRST CENTRAL RESEARCH QUESTION

The first central research question concerns the theoretic part of this study, addressing the definition of a high growth firm. Considering the fragmented body of knowledge on high growth firms and the different perspectives taken on the subject, as identified in the introduction, a clarification is considered pivotal;

1. *What is the definition of a high growth firm?*

In support of this first central research question the following sub questions were formulated;

a. *In what way can a high growth firm be defined based on how its performance is evaluated?*

b. *In what way can a high growth firm be defined based on relevant firm lifecycle stages?*

4.5.2. SECOND CENTRAL RESEARCH QUESTION

The second central research questions also concerns the theoretic part of this study, addressing the findings from literature on success factors for high firm growth derived from the various theoretic perspectives on the subject. The introduced conceptual model provides the framework for integrating the various success factors;

2. *What are success factors for sustainable high growth firms that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?*

In support of this second central research question the following sub questions were formulated;

a. *What are the industry success factors for sustainable high growth firms that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?*

b. *What are strategic success factors for sustainable high growth firms that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?*

c. *What are success factors for sustainable high growth firms from a capabilities and resources point of view that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?*

4.5.3. THIRD CENTRAL RESEARCH QUESTION

The third central research question addresses the validation of findings from literature on success factors for high firm growth against the data from various case studies covered as part of this study in order to establish triangulation;

> 3. *What is the fit of success factors for sustainable high growth firms identified from literature against the selected case studies in this study?*

In support of this third central research question the following sub questions were formulated to present the results of the 'fit'-analysis;

> a. *What success factors for sustainable high growth firms can be confirmed through analysis of the various cases?*
>
> b. *What additional success factors for sustainable high growth firms (if any) can be derived through analysis of the various cases?*

4.6. RESEARCH DESIGN: SUMMARY

In this chapter, the research design of this study was covered. As in the Introduction it was noted that knowledge on success factors for high growth firms still to be fragmented, the research goal for this study aims to contribute in overcoming this fragmentation of knowledge on the high growth firm by providing an overview of success factors for high growth firms as can be found from available studies. Dominant theoretic perspectives on high-firm growth are found in Management Theory and Applied Economics. As successful high growth is by many addressed as predominantly internal challenge, the 'resource based view of the firm' was introduced as a potentially valuable theoretical conceptual model to provide the necessary structure to the variety of success factors for a sustainable high growth firms identified. It was also noted that, although the primary focus of this study lies in an extensive literature study on the success factors for high growth firms, a number of case studies were introduced to validate findings form literature and to, in this way, establish methodological triangulation. Finally, the various central research questions and sub questions defined for this study were introduced, in which the first research questions tries to provide a definition of a high growth firm, the second research questions addresses the findings from the literature study on success factors of sustainable high growth firms and the third and final research question addresses the fit between the various success factors of sustainable high growth firms found from literature and their assessment with regards to the cases of high growth firms in order to establish triangulation of findings. The next chapter covers the review of literature on high growth firms and the success factors for sustainable high growth.

5. LITERATURE STUDY

This chapter reports on the findings in literature on the subject of high growth firms. These findings have been collected through the analysis of over 75 articles and 15 plus books on the subject of the high growth firm, published by the different fields of study, as introduced in the research design.

In the first paragraph of this study the definitions used for high growth firms will be covered in order to better understand what a high growth firm is. Through reviewing the large number of studies on high growth firms, as indicated above, it was found that the definition of a high growth firm differed considerably across these studies. The lack of clear definitions for high growth firms has by some even been identified as one of the main reasons why the body of knowledge on high growth firms is still found to be fragmented (e.g. Davidsson & Wiklund, 2000; Delmar, Davidsson & Gartner, 2003; Shepherd & Wiklund, 2009). Although a variety of definitions will be covered as part of this paragraph to illustrate this diversity, in Annex I a random overview of various definitions for a high growth firm is provided as well. In order to provide clarity on this matter first, in the next paragraph the definition of a high growth firm will be discussed. In this way the first research question of this study will be addressed. While answering this first research question the most dominant way of defining a high growth firm currently in use will be discussed, including its shortcomings. As a response to these shortcomings an attempt will be made to provide an alternative way to define a high growth firm based on relevant lifecycle stages.

The second paragraph in this study will address the various success factors for sustainable high growth firms found from reviewing earlier studies on the subject from the perspective of Management Theory and Applied Economics. By applying the 'resource based view of the firm' relevant success factors for high firm growth at the industry level, strategy level and organizational capabilities and resources level will be identified. In this way the second research question of this study will be addressed.

5.1. DEFINING A HIGH GROWTH FIRM

In this paragraph an attempt will be made to provide a definition for a high growth firm in order to answer the first research question of this study.

What is the definition of a high growth firm?

Surprisingly, there does not seem to be one clear definition of a high growth firm and this is acknowledged by many (a.o. Tracy, 2011; Onetti, 2014). When reviewing the available literature and other relevant publications, in total over 75 articles and 20 plus books, two dominant ways of defining a high growth firms were identified.

By far the most dominant way of defining a high growth firm is based on measuring a firm's performance on one or more growth measures and, based on a set threshold, a high growth firm emerges when a firm's performance is found to surpass this threshold (Tracy, 2011). As this way of defining a high growth firm is by far the most dominant way, it will be covered first. However, as this dominant way of defining a high growth firm was found to be anything but trouble-free, in attempt will be made to present an alternative way of defining a high growth firm. This alternative way is based on the positioning of a high growth firm on the growth stages of a firm's lifecycle. Being an alternative way of defining a high growth firm, this attempt will follow the coverage of the most dominant way of defining a high growth firm below.

5.1.1. Defining a high growth firm through performance evaluation

As was noted earlier, most definitions of high growth firms tend to be based on the outcome of growth, for example taking the top 10% of firms out of a sample of firms based on one or more parameters, or introducing a certain threshold which a firm's performance has to surpass before being classified as high growth, for example a minimum of 20% growth over a certain period of time. Although using the outcome of growth tends to be the most dominant way of defining high growth firms of both measures and thresholds used vary considerably - see Annex I for a random overview of definitions based on this way of defining a high growth firm. Therefore, this sub paragraph attempts to provide clarity in this variation by answering the following sub question (1a) of this study;

In what way can a high growth firm be defined
based on how its performance is evaluated?

As was illustrated in the Introduction of this study, two perspectives of interest on high growth firms tend to dominate, namely the perspective of interest focusing on the value creation potential of high growth firms and the perspective focusing on their job creation potential. These perspectives of interest are reflected in the way high growth firms are defined based the outcome measures of growth used. As such each of these perspectives define a high growth firm differently. What defines a high growth firm is therefore largely dependent on the eye of the beholder. Due to the dominance of these perspectives, both will be covered separately below. More recently a third perspective is emerging on defining a high growth firm based on the outcome of growth. This perspective integrates the value creation and job creation perspectives into a measure of productivity growth. As this emerging perspective contains promising elements in identifying high growth firms, this perspective will be covered as well.

5.1.1.1. *Performance evaluation of value creation success*

Focusing on the value creation potential of high growth firms, the original definition by Birch et al. (1995) for a high growth firm adopted sales growth as primary measure. High growth firms from a sales growth point of view were called 'gazelles' .

"...gazelles are firms whose sales have increased by
at least 20% per year over the four-year period of analysis.."

Similarly the 'High Growth Awards' (2016) n The Netherlands addresses sales growth, but adds a number of restrictions.

> *"…a high growth firm exists at least three years, employ at least ten persons, have had an total annual revenue of at least one million Euro in the first year of the observation period and have experienced an average annual sales growth of at least 10% over the last three years…"*

Using sales growth as primary indicator for identifying a high growth firm has been applied by many, as Shepherd & Wiklund (2009) found that in 60% of 84 reviewed studies on firm growth sales growth was used as most popular indicator. This popularity is explained as annual level of sales is generally readily available, easy to measure and non-confidential (Doutriaux, 1992; Brush & Vander Werf, 1992). More importantly, sales or revenue growth indicate the extent to which customers are increasingly accepting the products or services offered by the firm (Robinson, 1998) and is therefore most commonly used indicator of new firm growth (Murphy et al., 1996; Weinzimmer, Nystrom, & Freeman, 1998). Other financial measures were found to be used a well, such as profit growth (8.7%), equity or assets growth (5.8%) and a variety of other measures (14,4%), such as margin growth, growth in market share or return on capital employed (Shepherd & Wiklund, 2009). Although Tsai et al. (1991) advocate market share growth as the best measure of high growth performance as market share growth measures the market acceptance of the new firm's product, this measure may be problematic for high growth firms being one of the first entrants in new markets. These firms would initially have 100% of the market, only to have this reduced as new firms entered (Miller et al., 1988). This was also found by Kerin, Varadarajan, & Peterson (1992) who wrote that market share depends in part on the state of competition in the industry the firm operates in and can be evaluated in a variety of ways, such as on industry level of a given product category, hampering comparability.

Therefore, based on the above, when addressing the value creation success of a high growth firm, the following contribution can be made to a definition of a high growth firm.

> *When taking the perspective of value creation success,*
> *a high growth firm is a high performer measured by sales growth*

As it was found that high growth firms were responsible for the majority of new jobs being created in the economy, it was found that the definition of a 'gazelle' did not take into account the element of employment growth. In fact it was found that a considerable number 'gazelles' did not add jobs at all (Tracy, 2011). Therefore others, particularly public policy makers, introduced new definitions to for high growth firms that suited their perspective of interest better. Their perspective is covered in the following sub paragraph.

5.1.1.2. *Performance evaluation of job creation success*

From the 82 studies on measuring firm growth reviewed by Shepherd & Wiklund (2009), 12,5% used employment growth as the main growth indicator. As employment growth is seen as an indicator of the contribution a firm makes to the broader community, it is the principal measure of policy makers (Kirchoff & Phillips, 1988; Venkataraman, Van de Ven, Buckeye, & Hudson, 1990). For example, the US National Commission on Entrepreneurship (NOCD, 2001) has adopted employment growth as the principal measure for "defining" high growth firms, using the definition below:

"…a high growth firm is a firm that grows its employment by at least 15% per year…"

In a similar way in The Netherlands the 'Centraal Bureau voor de Statistiek' (CBS) also addresses employment growth as its primary measure to define high growth firms. Remarkably threshold percentages , 15% vs 10%, and observation periods, none versus three years, vary between the NOCD and CBS definitions, as is illustrated below by the definition CBS (2016) uses for defining a high growth firm.

"…A firm that experiences an average annual growth rate of at least 10% over period of three consecutive years based on the number of employees. This means that over a three year period a total growth in number of employees has to be achieved of at least 33,1%..."

Furthermore, CBS (2016) adds a number of restrictions as well, as is illustrated below.

"…As a prerequisite high growth firms needs to employ at least 10 persons at the start of the observation period. Companies that were established in the starting years of the observation period are excluded. High growth firms therefore need to be more than three years old…"

As growth percentages, thresholds and their values cannot be validated across the different definitions, only the following will be added to the definition of a high growth firm.

When taking the perspective of employment growth, a high growth firm is a high performer measured by employment growth

While growth percentages, thresholds and their values tend to differ across definitions used to represent the employment growth perspective of interest, to add to the confusion, CBS (2016) also recognizes 'gazelles' by adding the below to its main definition.

"…Gazelles are high growth firms that are not older than five years…"

However, the term 'gazelle' was originally intended to identify high growth firms taking the value creation point of view with sales growth as its main growth measure as was illustrated earlier. To add further add to the confusion, CBS also places an age restriction to its definition, while Birch's original definition of 'gazelles' simply requires growth over a period of four years.

As is illustrated above, clearly defining a high growth firm by growth performance measures quickly becomes fuzzy indeed and, not surprisingly, interpretation of results across studies on the high growth firm becomes either highly complex or proves simply to be incomparable. Furthermore, by either focusing solely on sales growth or employment growth, Carucci (2016) argues that there is a great risk that results of these studies are obscured by firms that find themselves fortunate enough to find a market niche for a service or product that is growing rapidly and apply "rinse and repeat" or "ride the wave as long as we can" as plan to manage growth. Carucci (2016) argues that being able to quickly multiply successes is not the same as building for sustainable growth. According to Carucci (2016) sustainable growth is based on building an organization that can scale without replicated costs. This perspective addressing the productivity growth of a firm provides an alternative way of defining a high growth firm, besides sales growth and employment growth. Therefore this will be covered in the next subparagraph.

5.1.1.3. _Performance evaluation of productivity growth success_

Carucci (2016) makes a strong argument to define a high growth firm based on the relationship between output, i.e. sales, and input, i.e. employees. Carucci (2016) introduces the term 'scaling' which he defines as adding sales at a much greater rate than cost. Interestingly enough the term 'scale-up' is widely used as synonymous to high growth firms when taking either the value creation growth perspective or the employment point of view, adding to the confusion and further incomparability of findings of studies on high growth firms.

One of the first to address the relationship between sales growth and employment growth for defining high growth firms was the U.S. Small Business Administration's Office of Advocacy (SBA). The SBA Explicitly distinguish what they refer to as 'high-impact firms' (Tracy, 2011), although it needs to be noted that yet another name for a high growth firm is introduced. According to Tracy (2011) so-called high-impact firms do not only experience sales growth, such as 'gazelles', but simultaneously experience job growth. According to the SBA a 'high-impact firm' is defined as below (Tracy, 2011).

> *"…A firm whose <u>sales</u> at least doubled over a four-year period and which has experienced an <u>employment</u> growth quantifier of two or more over the same period…"*

The employment growth quantifier (EGQ) is the product of a firm's absolute and percent change in employment and helps to mitigate the bias of computing change statistics solely on the basis of either absolute or percent terms (Tracy, 2011). When comparing the firms defined as high growth applying the 'gazelle' definition and the firms defined as high growth applying the 'high-impact definition, Tracy (2011) noted a number of differences. While in the employee-size segment of 1-19 'gazelles' were found to represent 94% of high growth firms, only about 87% could be classified as 'high-impact' firms. And while the 20-499 segment were found to contain around 5,5% of 'high-impact' firms, it was found by contrast that 12,5% if firms in the 20-499 segment could be defined as 'gazelles'. Thus not all 'gazelles' add jobs in the same way as 'high-impact' firms do and thus not all 'gazelles' are as important as 'high-impact' firms with regards to their contribution to society (Tracy, 2011).

Tracy (2011) found that productivity for all firms studied grew irrespective of 'impact' status, thus sales per employee increased with firm size. However, Tracy (2011) also found that 'high-impact' firms were consistently more productive than all other firms. Across all industries, employee-size segments, and periods of analysis, 'high-impact' firms generated more sales with the same share of human capital inputs. Tracy (2011) found that 'high-impact' firms in the 20-499 segment were about 40 percent more productive than all other firms in the same employee-size segment. During the same period, 'high-impact' firms in the 1-19 and 500-plus segment were respectively about 10 and nine percent more productive than all other firms in corresponding segments. Tracy (2011) notes that this observation supports Schumpeter's "creative destruction" theory in which younger, efficient companies drive out older, inefficient ones, resulting in higher productivity in younger firms.

Based on the above the following will be added to the definition of a high growth firm.

When taking the perspective of productivity growth, a high growth firm is a high performer measured by sales growth relative to employment growth

Some have noted that traditional growth measures, such as illustrated above, tend to be less relevant for digital firms (Oliva et al. 2003; Prasad et al. 2010; Sun et al. 2004; Ismail et al. 2014). Taking the productivity growth perspective on defining high growth firms further, Ismail et al. (2014) have defined, what they call, the exponential firm. The exponential firm seizes the disruptive opportunities provided by information-enablement of a large variety of technologies (Ismail et al., 2014). While all the earlier definitions, in particular the ones focusing on either sales growth or employment growth, define high growth firms based on growth measured in a linear way, Ismail et al. (2014) focus on measuring growth in an exponential way. Ismail et al. (2014) define the exponential organization as;

"…A firm that experiences a minimum 10x improvement in output over their peers over four to five years…"

Ismail et al. (2014) replace the classic sales output measure of growth by any other output measure relevant for a specific firm or industry, for example, Airbnb publishes 90x more listings per employee than its peers, GitHub manages 109x more repositories per employee than its peers, Quirky realizes 10x faster product development than its peers and Tangerine serves 7x more customers per employee over its peers. While this new approach on high growth seems to capture the impact of information-enablement better than traditional measures, it actually adds to the complexity of defining the high growth firm. As the singular definition of a high growth firm is already proven to be troublesome, the approach Ismail et al. (2014) take by leaving the output measure undefined and open for interpretation, does not help to improve comparability of studies on the high growth firm. Therefore, although thought-provoking, this study perceives the definition of the exponential firm to be an extreme extension of the productivity growth perspective, which does not help to bridge the knowledge gap on the high growth firm. However, the definition of the exponential firm does address the scalability aspect of growth well. Also it does stress the comparison of performance to peers, which exponential firms outperform by a wide margin. Therefore, based on the above, the following will be added to the definition of a high growth firm.

A high growth firm is firm that is able to scale by growing its sales at a much higher rate than it needs to add employees and does this in a way that it consistently outperforms it peers

The fuzziness in defining high growth firms, as was illustrated above, has not been without consequences: the lack of clear definitions for high growth firms has by some been identified as one of the main reasons why the body of knowledge on high growth firms is still found to be fragmented (e.g. Davidsson & Wiklund, 2000; Delmar, Davidsson & Gartner, 2003; Shepherd & Wiklund, 2009). Due to the dominance of defining a high growth firm by its outcomes measures in explaining the limited progress in theory development on the high growth firm, the problems associated with this method will be discussed next.

5.1.1.4. *Performance evaluation of high growth firms: recommendations for improvement*

As was noted earlier, the most dominant way of defining a high growth firm is based on measuring its outcome performance success in which sales growth and employment growth were found to be the most popular measures (Shepherd & Wiklund, 2009). This way of defining a high growth firm has formed the basis of the majority of the studies aimed at unravelling its mysteries. As was also illustrated in the previous sub paragraph, growth definitions, thresholds and other restrictive criteria used for defining a high growth firms tend to vary considerably. This variation has not been without consequences and is widely seen as one of the primary reasons why results of studies on high growth firms have largely shown mixed results, as comparability of studies has been greatly hampered due the use of such different growth definitions, thresholds and other restrictive criteria (e.g., Davidsson & Wiklund, 2000; Delmar, Davidsson & Gartner, 2003; Shepherd & Wiklund, 2009). As a consequence, theory development on firm growth has been seen as slow despite the strong interest in high growth firms (Storey, 1994; Weinzimmer et al., 1998; Davidsson & Wiklund, 2000). In line with these findings, this study confirms the following.

The great variation in definitions of high growth firms, measures used and thresholds (and other restrictions) applied hampers the comparability of studies on firm growth, limiting progress in knowledge development on high firm growth.

The major debate in literature on high growth firms has dealt with arguing what growth measure would best represent firm growth. Some have claimed if only one indicator were to be chosen, then sales growth should be the most preferable as it is already found to be used in 60% of the studies, as reviewed by Shepherd & Wiklund (2009). Others, however, have noted that sales are sensitive to inflation and currency rates. Furthermore, Delmar (2003) argues that sales is not always a leading indicator of growth, as firms invest in assets or employment first before being able to effectuate growth. Also some scholars argue employment growth is a much more direct indicator of organizational complexity than sales, and therefor preferable if the focus of interest is on the managerial implications of growth (Greiner, 1972; Churchill & Lewis, 1983; Delmar, 2003). Yet others have claimed that multiple growth indicators provide richer information, and thus, are better than any single indicator (Birley & Westhead 1990; Weinzimmer et al. 1998). Although being skeptical whether firm attributes that are unique to individual firms could be ‘‘reducible to any common denominator and are therefore incapable of quantitative treatment’’ (Penrose, 1995), Penrose recognized the need to measure growth performance on some common basis as such measures are needed for the purpose of comparing the growth experience of firms.

Delmar (2003) suggested, as a solution, to use both sales and employment growth, as these were found to be most widely used and ready available in empirical growth research. In response, however, a number of definitions of a high growth firm have not only adopted both sales growth and employment growth, but have started using them interchangeably. One has argued that employment growth, being a strong indirect indicator of firm success (Hanks, Watson, Jansen, & Chandler, 1993), reflects changes in the organizational composition of a firm due to expansion in the scope of a firm's operations or an increase in its business just as well as sales growth (Gilbert, 2006). For example, the influential Organization for Economic Co-operation and Development (OECD) has adopted this interchangeable way of using sales growth and employment growth, by applying the following definition for a high growth firm.

"…A high growth firm is a firm with average annualized growth in employees or sales greater than 20% over a three year period, and with more than 10 employees at the beginning of the observation period…"

In a similar way, the Erasmus Centre for Entrepreneurship (ECE) of Erasmus University Rotterdam has applied almost the same definition as the OECD, but adds the following restriction.

"…with more than 10 employees or sales of more than €5 million at the beginning of the observation period…"

While this study ignoring the introduction of yet more threshold criteria, adding to the confusion with regards to the definition of a high growth firm, more importantly, the interchangeable use of sales growth and employment growth is only found to hold for firms up to three years old, as only for this time period concurrent validity between these measures were found to be high (Shepherd & Wiklund, 2009). Shepherd & Wiklund (2009) therefore claim that studies investigating absolute and relative sales growth and employee growth are likely to be somewhat comparable up to three years. However, as high growth firms tend to be on average around 10 years old (Tracy, 2011), the interchangeable use of sales growth and employment growth seems not supported to be supported. Based on the above, the following guideline is introduced to better define a high growth firm and compare like with like.

When defining a high growth firm by its measures,
sales growth, employment growth or productivity growth should not be used interchangeable

Remarkably, while the discussion has been taking place on what growth measure(s) would best represent firm growth, there does not seem to be any discussion on the variety definitions for a high growth firm being applied, although it has been illustrated there is a plenty of fuzziness on this matter as well. This study argues that one seems to ignore that different measures represent different perspectives if interest in studying the same subject. This study believes that by clearly identifying and acknowledging the perspective of interest one takes on a high growth firm, the discussion on what measure(s) would be the best representative of growth could be simplified. In overcoming this problem, it is recommended to explicitly state the perspective of interest one takes on the high growth firm, being sales growth, employment growth, productivity growth or all when one is interested in the firm differences between these three categories.

When defining a high growth firm it is recommended to explicitly state the perspective(s) of interest one takes, being value creation, job creation or scaling productivity

Besides the discussion on what growth measures to best represent high growth, Shepherd & Wiklund (2009) found that the formula used to calculate growth further add to the confusion when trying to "define" high growth firms" by "classifying" them, as growth can either be measured in relative terms (found to be used in 45% of studies), or in absolute terms (found to be used in 39% of studies). The dominant approach in studies on high growth firms adopting the relative measurement of firm growth, is to observe the total distribution of employment or sales growth of a sample of firms and select the upper 10% of the respective distribution (Storey, 1996; Lessat and Woywode, 1999; Zook and Allen, 1999; Bürgel et al., 2000; Parker, 2010; Kutcher et al., 2014). Garnsey (2010) refers to these as the ''Ten Percenters". Other studies have looked high growth firms using thresholds in absolute terms (e.g. Birch & Medoff , 1994; Birch, Haggerty & Parsons , 1995; Brüderl & Preisendörfer; 2000; Tracy, 2011; ECE, 2016). It seems preferable to use relative growth measures instead of absolute growth measures as the latter ignores differences in growth rates across sectors of industry. And as it was illustrated earlier that high growth firms were to be found in any sector of industry (Tracy, 2011) regardless of industry growth rates, firm growth rates would preferably be compared relative to peers within the same sector of industry. However, the bias of relative measures towards smaller firms should be controlled for by applying, for example, the Birch Index, illustrated below, which multiplies absolute job growth by relative job growth and in this way reveals the employment-creation power of differently sized enterprises (Birch, 1987);

$$BI = (E_\tau - E_t)\,\frac{E_\tau}{E_t}$$

Figure 5: Birch Index (Birch, 1987)

Therefore the following guideline is introduced to properly define a high growth firm and compare like with like;

When defining a high growth firm relative measures are better suited to compare sector peers if corrected for size bias

Surprisingly, the studies using thresholds in absolute terms (e.g. Birch & Medoff , 1994; Birch, Haggerty & Parsons , 1995; Brüderl & Preisendörfer; 2000; Tracy, 2011; ECE, 2016), when counting the number of firms identified as high growth based on these thresholds against the total number of firms consistently report that around 5% of all firms can be classified as high growth. For example, Birch & Medoff (1994) reported on 4% 'gazelles', Birch, Haggerty & Parsons (1995) reported on 3%, Brüderl & Preisendörfer (2000) reported on 4% high growth firms, Tracy (2011) reported on 5,5% to 6,7% depending on observation period and the Erasmus Centre for Entrepreneurship (2016) reported on 5,6% high growth firms. This results in a "gap" of approximately 5% between the "Ten Percenters" and the findings of studies "classifying" high growth in absolute terms. While measuring growth in relative terms tends to favor small firms as small firms reach impressive growth in percentage easier (Delmar, 2003; Sutton, 1997; Almus, 2010), it could therefore be argued that "Ten Percenters" might include too many small firms. Most studies applying absolute measures to identify high growth firms control for size bias by stratification by firm size (e.g. Birch & Medoff , 1994; Birch, Haggerty & Parsons , 1995; Brüderl & Preisendörfer; 2000; Tracy, 2011). Therefore it could be argued that these findings on the relative number of high growth firms are closer to the "truth" than the arbitrary threshold of 10%. Therefore the following guideline is introduced to properly define a high growth firm and compare like with like;

When defining a high growth firm the most sustainable high growth firms are most likely to be found amongst the 5% best performers

An element not addressed in the studies highlighted and not addressed in the existing definitions is the regularity (or irregularity) of growth over time. Empirical research on firm growth has usually studied differences in sales or employees between two points in time, hereby smoothening out a firm's growth pattern (Delmar, 1997; Weinzimmer et al., 1998), while the regularity or irregularity of growth over time may be an important topic to study in itself as in general firms with a better growth record are more likely to survive (Kirchhoff, 1994: Phillips & Kirchhoff, 1989; Cosh and Hughes, 2000) and growth is more likely to follow growth than to follow an episode of plateau or decline (e.g. Wagner, 1992; Blanchflower and Burgess, 1996; Stanley et al., 1996; Cosh and Hughes, 2000). However, out of a sample of 10% fastest growing firms Storey (1997) found that 1 out of 5 firms showed a decline in performance within 4 years. Parker (2010), when studying a sample of "Ten Percenters" between 1992 and 1996, found their mean annual sales growth was 36%, but in the successive period (1996-2001) the surviving high growth firms of this sample grew by just 8%. Similarly, for sustained growth Deloitte (2015) found that the top 20% of high growth firms in terms of 1st year revenue had a 70% chance to stay in this top-league over the next 5 years, while high growth firms that started in the mid-quintile in terms of 1st year revenue only had a 7% chance of becoming a top-revenue player later on. In a similar way Garnsey (2007), when studying firm growth patterns, found that sustained growth was rare: only 6% of firms were able to sustain their growth-rates (Garnsey, 2007), as is illustrated below. See Annex J for more detail on these dominant growth patterns.

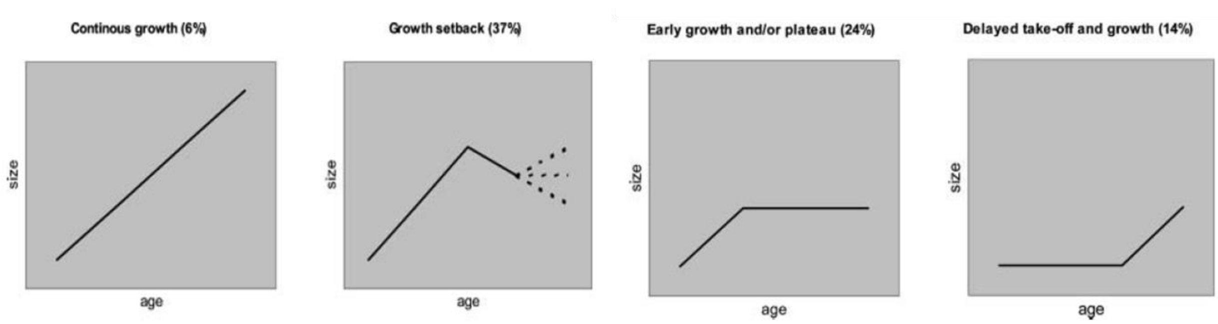


Figure 6: Dominant firm growth patterns (Garnsey, 2007)

It could be argued that applying the stricter 5% threshold for selection of high growth firms, would show a more positive picture of sustained growth, as it was argued that the "Ten Percenters" might show an inflated number of high growth firms and as a result a poorer performance on sustained high growth. In overcoming this problem, the following guideline is introduced to properly define a high growth firm and compare like with like;

When defining a high growth firm the most sustainable high growth firms are most likely to be found amongst firms that have not experienced plateauing or negative growth over time

As illustrated above, the approach to define high growth firms based on outcome measures of growth is far from without problems. Despite the discussions and efforts to integrate findings on high growth firms from studies taking this approach, although representing the bulk of studies on high growth firms, the knowledge gap today seems as large as yesterday, and considering the above findings this is not surprising. In order to progress theory development on firm growth this study has argued that much stricter use of definitions, measures applied and restrictive thresholds are needed.

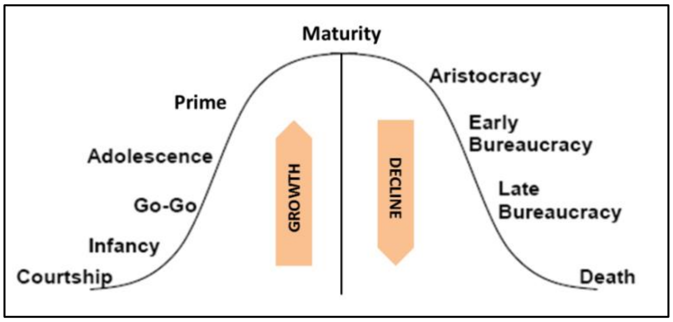
Although the use of outcome measures of growth, including the improvements recommended, help to better identify high growth firms, this better identification in itself does not help to better characterize a high growth firm. The method to define a high growth firm by its outcome measures is, although being the most dominant way to define a high growth firm, very limited in its description and characterization of a high growth firm. In an attempt to overcome this limitation of this method, in the next sub paragraph the relevant lifecycle stages of a high growth firm will be identified to provide a more informative definition of a high growth firm.

5.1.2. DEFINING A HIGH GROWTH FIRM BASED ON RELEVANT STAGES IN ITS LIFECYCLE

In the previous sub paragraph it was found that defining a high growth firm by outcome measures of growth is, besides troublesome, limited in its ability to characterize a high growth firm. Therefore, in this sub paragraph, an attempt is made to provide a more informative definition of a high growth firm based on the various stages of a firm life cycle. In this way this sub paragraph answers the following sub question (1b) of this study.

In what way can a high growth firm be defined based on relevant firm life cycle stages?

In analogy with the human biological life cycle starting with birth or inception and coming to an end with death, Adizes (1979) developed the most comprehensive firm stage growth model covering the various growth stages of a firm, including of the stages of decline, as is illustrated below.



In Adizes' model (1979), see Annex B for a full coverage of the model, it can be seen that the Go-Go, Adolescence and Prime stages show the steepest curve. This suggests these are the stages in which fastest growth occurs. It could therefore be argued that these are the stages most relevant for a high growth firm. Therefore, this study focuses on these stages. In the analogy to the human biological life cycle, Adizes (1997) compares the Go-Go stage as a baby who can finally see and focus: everything looks like an opportunity, and only in retrospect does baby realize that some opportunities are threats that should have been avoided. In Go-Go stage a firm moves fast, but often makes decisions intuitively since it lacks experience. In this stage almost every opportunity seems to become a priority and its interest span is short. It moves from task to task trying to cover them all simultaneously. When moving into adolescence the firm is in the process of developing into an adult. The analogy with biology is vivid, as Arnett (2007) describes: adolescence can be defined biologically and socially, as a period of preparation for adult roles. Major changes include changes to the sex organs, height, weight, and muscle mass, as well as brain structure and organization. Cognitive advances encompass both increments in knowledge and in the ability to think abstractly and to reason more effectively. In a similar way, prime adulthood can be considered the healthiest time of life. Young adults are generally in good health, subject neither to disease nor the problems of aging. Strength and physical performance reach their peak (Zastrow & Kirst-Ashman, 2009). From the above the following is added to the definition of a high growth firm.

A high growth firm is a firm that is rapidly maturing
through the firm lifecycle stages of childhood, adolescence and prime adulthood

Such a definition could make one belief that a high growth firm is synonymous to a start-up. However, a variety of scholars stress that a high growth firm is not a start-up (Kutcher et al., 2014; Harnesh, 2014). Rajan and Zingales (1998) found that two-thirds of the growth in industry comes from growth in the size of existing firms, and about one-third from the creation of new firms. Focusing on high growth firms the Erasmus Centre for Entrepreneurship (ECE) found that only 1 out of 20 high growth firms find their origins in a start-up (2016). Although a limited number, the ECE (2016) sees a positive trend of the contribution start-ups make in the total number of high growth firms over the last years. Giardino (2014) writes on the characteristics of a start-up being a newly created firm that is characterized by a lack of

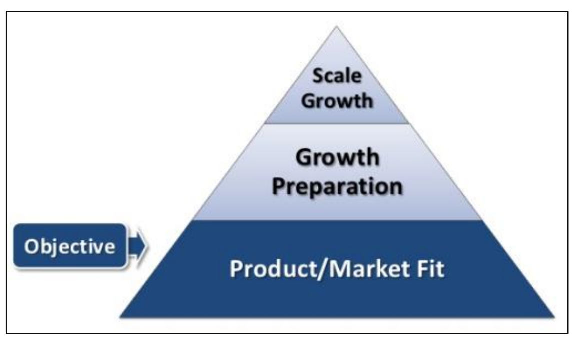


Figure 7: Pyramid of Growth (Ellis, 2017)

economical, physical, and human resources, activities that are normally evolved around one product/service, is often highly reliant in the early stages on external funding to sustain its activities, operates in a highly uncertain ecosystem under different perspectives, such as market, product features, competition, people and finance and therefore works generally in a small and informal team under constant pressure to release fast and demonstrate initial success. The primary focus of a start-up is primarily surviving as a viable system (Lippitt & Schmidt, 1967), trying to successfully take a number of critical steps, such a picking the right market, defining a monetization or business model enabling growth, ensure rapid adoption and maintaining a low profile while alpha and beta products are being developed and tested (Kutcher, 2014). As such, a start-up is a highly risky business experiencing extremely high failure rates reality as 60% of the startups do not survive the first five years, and 75% of venture capital funded startups fail (Nobel, 2014). The high failure rate of start-ups, illustrated above, has inspired a number of authors to suggest models to help entrepreneurs increase their likelihood of success, including Ellis, author of ‘Hacking growth’ (2017), Blank, author of ‘The startup owner’s manual’ (2012) and Ash Maurya, author of ‘Running lean” (2012). See for an overview of dominant start-up themes Annex K.

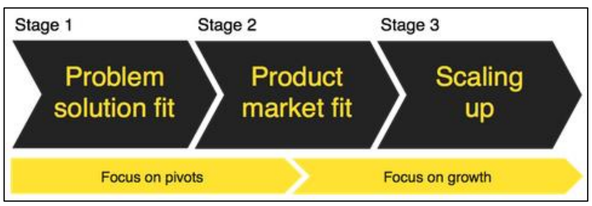


Figure 8: Star-up growth model (Maurya, 2012)

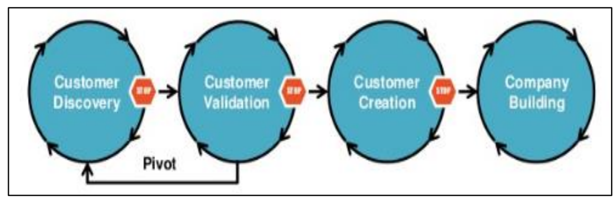


Figure 9: Start-up growth model (Blank, 2012)

Addressing the challenges of a start-up to get beyond the survival stage the focus of these authors lie on getting the firm off the ground and established by finding a solution to a problem, translating it into a product or service in such way that is strongly supported and validated by the market or customers. Only then these authors, but only briefly, address growth or scaling, as is illustrated below. From these characteristics, one could argue that the stages of a start-up these authors have detailed out resemble the “courtship” and “infancy” stages in Adizes’ firm stage growth model (1979). Based on these insights, the following is added to the definition of a high growth firm.

A high growth firm is a firm that has left the birth and infancy lifecycle stages behind by successfully finding a solution to a problem, translating it into a product or service and is receiving strong support and uptake by customers

From these definitions one could still argue that high growth firms are by definition very young firms that have just outgrown the start-up phases. However, this does not necessarily have to be the case. Many studies have indeed found a non-linear effect of age on growth (Almus & Nerlinger 1999; Evans, 1987) indicating that younger firms grow faster than older and larger ones, irrespective of whether the sample of firms studied comes from multiple industries or from a single industry (Barron et al., 1994; Sutton, 1997). But as firms become larger and older growth rates start to conform to what is known as Gibrat’s Law (1931), where growth is independent of size and age (Jovanovic, 1982; Kirchhoff & Acs, 1997; Sutton, 1997). The Netherlands the Erasmus Centre of Entrepreneurship (2016) found a high growth firm to consist of 18 employees at start of the observation period. Tracy (2011) also found that 46% of high growth firms sizing between 1-19 employees, covering 94% of all high growth firms, are younger than 10 years old, as measured over 2004-2008 (Tracy, 2011). The rest of high growth firms are older and larger firms (Tracy, 2011). Tracy (2011) however noted that a slow, but steady trend is visible from 1994 onwards showing that high growth firms tend to become younger.

Table 1: Age of high impact firms, by segment and period of analysis

Age	1994-1998			1998-2002			2002-2006			2004-2008		
	1-19	20-499	500+	1-19	20-499	500+	1-19	20-499	500+	1-19	20-499	500+
0-4	2.83	0.67	0.56	4.13	0.90	1.35	5.55	0.89	0.38	4.68	0.25	0.24
5-7	16.72	7.94	4.89	22.42	9.89	9.73	23.26	10.19	6.2	24.28	7.04	4.63
8-10	16.81	11.49	7.94	15.46	11.56	7.70	17.3	13.04	10.63	16.97	12.78	8.55
11-14	17.85	16.82	14.60	15.08	13.92	9.98	14.34	13.82	10.76	15.73	15.20	10.45
15-19	15.22	16.19	13.95	13.75	16.09	15.57	11.95	14.41	13.04	11.56	13.60	12.23
20-24	10.51	11.49	9.22	9.61	11.68	11.68	8.59	12.44	9.75	8.20	12.53	11.76
25-29	6.75	9.13	9.30	6.24	8.43	6.77	6.09	8.62	7.72	5.75	9.45	9.86
30-39	6.62	9.96	11.39	6.54	10.72	10.58	6.74	10.97	10.89	6.75	12.34	10.45
40-49	3.32	6.12	6.82	2.98	5.75	5.33	2.67	5.47	6.96	2.61	5.90	7.24
50-69	2.42	6.31	10.67	2.40	6.30	8.63	2.27	5.46	9.49	2.24	6.08	9.26
70-99	0.95	3.90	10.67	0.94	3.40	7.02	0.86	3.2	7.85	0.84	3.38	8.08
100-plus	-	-	-	0.45	1.36	5.67	0.39	1.48	6.33	0.39	1.45	7.24
Avg. Age	**17.40**	**24.30**	**32.00**	**17.00**	**25.20**	**33.50**	**16.40**	**24.70**	**35.70**	**16.30**	**25.90**	**37.50**

Source: Corporate Research Board, LRDHIC Database (2008).

Tracy (2011), besides noting that high growth is not only for the younger firms in absolute sense, it was also found that high growth firms are younger than all other non-high growth firms and this differences in age increases with firm size: in the 1-19 segment high growth firms were found to be 5 years younger than all other companies in the same segment, in the 20-499 segment 8 years younger and in the 500-plus segment 16 years younger than all other companies in the same segment.

Greiner (1972, 1998) explains this phenomenon of both young and older firms being able to grow through his firm stage growth model, originally published in 1972 in HBR, and what probably is the best-known model taking the life cycle approach. See Annex A for a complete overview of Greiner's model. Greiner solely addresses the growth of a firm. According to Greiner (1972, 1998) a series of developmental phases can be identified through which a firm tend to pass as its grows. Each phase begins with a period of evolution, with steady growth and relative stability. These are quiet periods because only modest adjustments appear to be necessary for maintaining growth under the same overall pattern of management. A period of evolution ends with a revolutionary period of substantial turmoil and change. A revolutionary period typically exhibits a serious upheaval of management practices. As the size of the firm grows – sales volume and number of employees increase- a firm's problems and solutions tend to change markedly. The critical task for management in

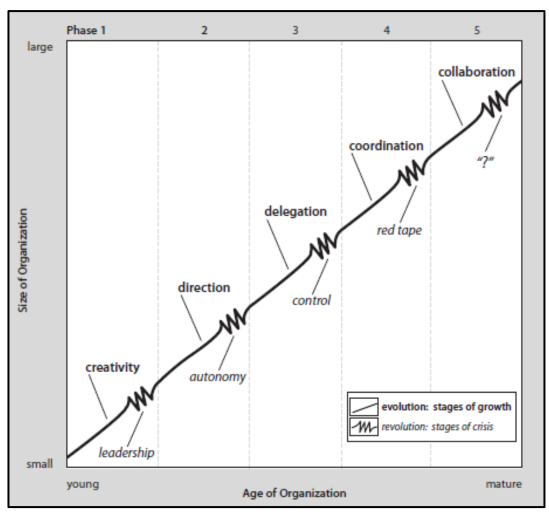


Figure 10: Greiner Firm Stage Growth Model (1972)

each revolutionary period is to find a new set of organizational practices that will become the basis for managing the next period of evolutionary growth. The resolution of each revolutionary period determines whether or not a company will move forward into its next stage of evolutionary growth. Interestingly enough, those new practices eventually sow the seeds of their own decay and lead to another period of revolution. As such each phase is at once a result of the previous phase and a cause for the next phase (Greiner, 1972, 1998). According to Greiner (1972, 1998) the speed at which a firm experiences phases of evolution and revolution is closely related to the market environment of its industry. Whereas evolutionary periods tend to be longer in mature or slow-growing industries, they tend to be relatively short in fast-growing industries and as a result various periods of crises follow each other, sometimes very, shortly in high growth firms. This is vividly illustrated below Fairbairn (2015);

> *"…Each time your business doubles everything seems to break; your sales process, finance processes, management information flow, so every time your company doubles in size, you end up re-designing every process you have…"*

In a similar style Sullivan (2016) dramatically illustrates:

> *"…When facing high growth you throw yourself off a cliff and assemble your airplane on the way down. If you don't solve the right problem at the right time, that's the end. Mortality puts priorities into sharp focus.."*

Thus, based on the reasoning from Greiner's firm stage growth model, the following is added to the definition of a high growth firm.

> *A high growth firm is a firm that is able to successfully navigate the challenges of the various firm growth stages in a (very) short timeframe*

As well as the following.

> *A high growth firm is likely, but not necessarily, a younger and smaller firm*

Greiner's firm stage growth model (1972, 1998) directly links a high growth firm to high growth industries. Many studies have found a similar significant impact of the stage of the industry on new firm growth (Brush & Chaganti, 1998; Covin, Slevin, & Covin, 1990; Eisenhardt & Schoonhoven, 1990; Chandler & Hanks, 1994; McDougall et al., 1994; Koberg et al., 1996; Park, Chen & Gallagher, 2002; Robinson & McDougall, 2001; Kakati, 2003). The more mature the market becomes the more environmentally hostile these markets tend to become. Environmental hostility is found to suppress both market share and employment growth of new firms, which is generally being attributed to the limited resources and immature structures these firms have in place and are insufficiently able to counter competitor moves: new firms are therefore easily pushed out of mature market (Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999).

However, this is not supported by the SBA-study (Tracy, 2011), as high growth firms were found in a large variety of industries and were found to be relatively evenly distributed across all sectors of the economy: no industry, growing, average performing or declining, dominates consistently in its share of high impact companies (Tracy, 2011).. This claim was copied by Coutu (2014), although no direct evidence for this claim is provided in her study. See Annexes L and M for an overview of industry distribution of high impact firms in the USA and Netherlands.

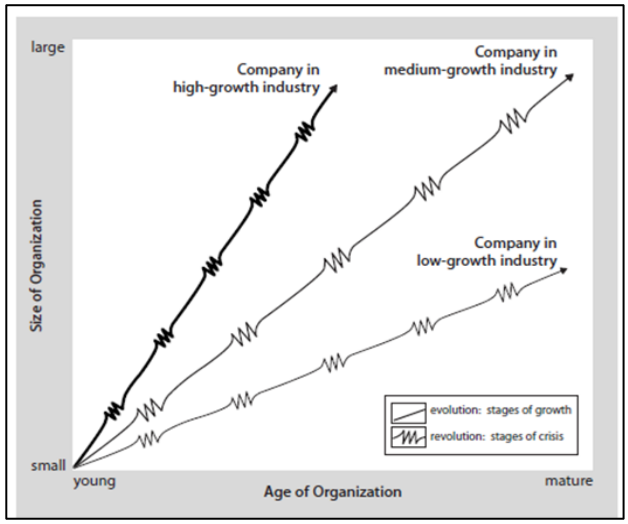


Figure 11: Firm growth rate dependency on industry growth rate (Greiner, 1972)

In explanation of this discrepancy it could be argued that although high growth firms do exist in more mature industries, sustainable high growth in these industries is less likely to occur than in high growth industries. This sustainability aspect of high growth is not addressed in the findings of Tracy (2011). It could also be argued that industry segmentation in itself is troublesome, as within seemingly mature or even declining industries there may be growing sub segments that are not captured or lost in the broader industry segmentation. To take position in this discrepancy, although this study recognizes the finding of Tracy (2011) that high growth firms can be found in any sector of the economy, this growth is likely to be attributed to specific emerging or growth niches within the broader industry. As such firms operating in seemingly more mature markets would still be able to attain high growth due to these pockets of growth in sub industries. This hypothesis however would have to be tested and confirmed in future research. This study therefor agrees with more prevalent beliefs and findings that emerging and growing markets are more susceptible for high growth (Brush & Chaganti, 1998; Covin, Slevin, & Covin, 1990; Eisenhardt & Schoonhoven, 1990; Chandler & Hanks, 1994b; McDougall et al., 1994; Park, Chen & Gallagher, 2002; Robinson & McDougall, 2001; Kakati, 2003). Based on the above, the following is added to the definition for a high growth firm.

A high growth firm can be found in any sector of the economy
with a preference for high growth sectors or high growth niches

Tracy (2011) also noted that high growth firms outperform their peers by manifold in the same observation period. For each employee-size segment across all observation periods Tracy (2011) found on average at least 100% increase in size, with the 1-19 segment, containing 95% of all high growth firms, consistently experiencing increases with a low of about 300 percent and a high of nearly 450 percent. Tracy (2011) found that the larger segments, 20-499 and 500-plus, also grew quite impressively, despite starting off with a larger employee base. The 20-499 segment grew on average between 175 percent on the low end to 220 percent on the high end, and the 500-plus segment grew consistently between 115 and 150 percent. In comparison Tracy (2011) found that non high growth firms experienced little change in size, and that which occurred was limited primarily to the smallest companies—those within the 1-19 employee-size segment. On average, these companies grew by about four to six percent, which is in stark contrast to the 300-450 percent growth experienced by high growth companies in the same segment. Tracy (2011) also found striking differences between the 20-499 and the 500-plus segments. Non high impact firms in the 20-499 segment did grow in the first two periods of analysis, however in the third period, they declined and in the final period they exhibited almost no growth. By contrast, high impact firms in the same segment grew on average between 175 and 220 percent. In the 500-plus segment, all other firms experienced a decline in each period of analysis, ranging on average from about 37 to nearly 62 percent, while high growth firms in this segment grew consistently between 115 and 150 percent (Tracy, 2011).

The differences illustrated above between high impact firms and non-high impact firms are substantial, however, as was noted earlier, it could be the case that one does not compare 'apples with apples' due to the emergence of growth niches that a broad definition of a sector of industry would (initially) miss. Although considerable debate exists whether industry or firm effects are more dominant for the profitability of a firm, the general perspective is that firm-specific factors are the one more dominant than industry effects in explaining firms' profitability (Rumelt, 1991; McGahan & Porter, 1997; Hawawini et al., 2003; Garnsey, 2005). Therefore based on the above, the following is added to the definition of a high growth firm.

A high growth firm's growth rate is independent from growth rates in its sector of the economy

In the previous sub paragraph information on the characteristics of a high growth firm was derived from the positioning of a high growth firm on a firm life cycle for which Adizes's and Greiner's firm stage growth models (1979, 1972) provided valuable insights. Together with the definition of a high growth firm based on its performance with regards to outcome measures, a richer definition was able to be deduced. Based on this definition the following paragraph will look into the success factors for a high growth firm as identified by previous studies on the subject.

5.1.3. DEFINING A HIGH GROWTH FIRM: SUMMARY

In this paragraph an attempt was made to provide a clear definition of a high growth firm in order to answer the first research question of this study;

What is the definition of a high growth firm?

Defining a high growth firm was based on growth outcome measures and the position of a high growth firm on the relevant stages of a firm's life cycle, which were both formulated in individual sub questions to be answered.

In what way can a high growth firm be defined based on how it's measured?

In what way can a high growth firm be defined based on relevant firm lifecycle stages?

Providing a clear cut definition was found to be troublesome as considerable fuzziness surrounding the definition of a high growth firm was found to exist. Despite this fuzziness the following relevant characteristics were identified in order to answer the first research question of this literature study. Firstly the findings with regards to the first sub question are summarized below.

<u>Based on how it is measured, a high growth firm is a firm that;</u>

…is a high performer measured by sales growth when taking the perspective of value creation success

…is a high performer measured by employment growth when taking the perspective of employment growth

…is a high performer measured by sales growth relative to employment growth when taking the perspective of productivity growth

… is able to scale by growing its sales at a much higher rate than it needs to add employees and does this in a way that it consistently outperforms it peers

It was found that the method of defining a high growth firm by measuring the outcome of growth, although representing the bulk of studies on high growth firms, proved particularly cumbersome. Based on the findings the knowledge gap observed by many on theory development of firm growth is far from surprising. Therefore the following finding was confirmed.

The great variation in definitions of high growth firms, measures used and thresholds (and other restrictions) applied hampers the comparability of studies on firm growth, limiting progress in knowledge development on high firm growth.

In order to progress theory development on firm growth this study argued that definitions, applied measures and thresholds need to be harmonized to improve comparability of studies. Based on findings in this study the following recommendations are made to improve the definition of the high growth firm.

<u>Based on how it is measured, the following recommendations are made to better define a high growth firm:</u>

…When defining a high growth firm by its measures, sales growth, employment growth or productivity growth should not be used interchangeable

…When defining a high growth firm it is recommended to explicitly state the perspective(s) of interest one takes, being value creation, job creation or scaling productivity

…When defining a high growth firm relative measures are better suited to compare sector peers if corrected for size bias

…When defining a high growth firm the most sustainable high growth firms are most likely to be found amongst the 5% best performers

…When defining a high growth firm the most sustainable high growth firms are most likely to be found amongst firms that have not experienced plateauing or negative growth over time

Secondly, the findings with regards to the second sub question are summarized below.

Based on relevant lifecycle stages, a high growth firm is a firm that…;

… Is rapidly maturing through the firm lifecycle stages of childhood, adolescence and prime adulthood.

…Has left the birth and infancy lifecycle stages behind by successfully finding a solution to a problem, translating it into a product or service and receiving strong support and uptake by customers

…Is able to successfully navigate the challenges of the various firm growth stages in a (very) short timeframe

…Is likely, but not necessarily, a younger and smaller firm

…Can be found in any sector of the economy with a preference for high growth sectors or high growth niches

…Has a growth rate independent from growth rates in its sector of the economy.

The following paragraph addresses the first element of the 'resource based view of the firm' which was chosen as conceptual model for this study, namely the industry success factors that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics. These factors will be discussed to answer the second research question of this literature study.

What are success factors for sustainable high growth firms that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?

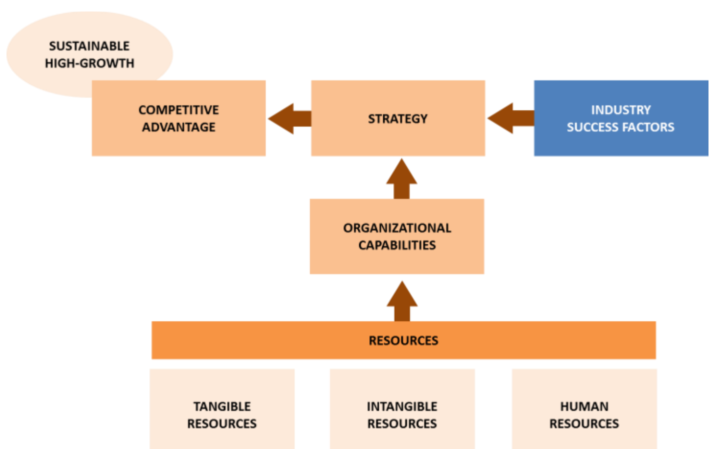
5.2. INDUSTRY SUCCESS FACTORS FOR A SUSTAINABLE HIGH GROWTH FIRM

This paragraph is the first paragraph to answer the second research question of this study.

What are success factors for sustainable high growth firms that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?

As was introduced earlier, while considerable debate exists whether industry or firm effects are more dominant for the profitability of a firm, the general perspective is that firm-specific factors are the one more dominant than industry effects in explaining firms' profitability (Rumelt, 1991; McGahan & Porter, 1997; Hawawini et al., 2003; Garnsey, 2005). This was covered in the definition of a high growth firm by the assertion that a high growth firm's growth rate is independent from growth rates in its sector of the economy. However a number of studies still report on 20% of firm differences in profitability that were found to be attributable to industry factors (Schmalensee, 1995; Hawawini et al., 2003). As the importance of industry specific factors cannot simply be ignored this paragraph addresses the findings from literature on the first element of the 'resource based view of the firm' which was chosen as conceptual model for this study,. In this way it will be attempted to answer the first sub question of the second research question of this literature study (2a).

What are the industry success factors for sustainable high growth firms
that can be derived from earlier studies on the subject
from the perspective of Management Theory and Applied Economics?



5.2.1. MARKET MATURITY

In the definition of a high growth firm it was asserted that a high growth firm can be found in any sector of the economy with a preference for high growth sectors or high growth niches, as many studies have found a significant impact of the stage of the industry on new firm growth (Brush & Chaganti, 1998; Covin, Slevin, &

Covin, 1990; Eisenhardt & Schoonhoven, 1990; Chandler & Hanks, 1994; McDougall et al., 1994; Koberg et al., 1996; Park, Chen & Gallagher, 2002; Robinson & McDougall, 2001; Kakati, 2003). The more mature the market becomes the more environmentally hostile these markets tend to become. Environmentally hostility has been found to suppress both market share and employment growth of new firms, this generally being attributed to the limited resources and immature structures of these firms proving to be insufficient to counter competitor moves successfully. New firms are therefore easily pushed out of mature market (Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999). As in the definition of a high growth firm is was asserted that a high growth firm is most likely a younger and smaller firm, this directly argues the unattractiveness of mature markets for high growth firms and the preference for high growth sectors or niches. Surprisingly, although Koberg et al. (1996) found that firms competing in growth industries had greater opportunities than firms competing in mature markets, they also found that early stage growth markets, emerging markets, were less desirable than more matured growth markets.

Emerging markets do provide great opportunity: from a winner-takes-all perspective firms that are able to establish and maintain a first mover position in emerging markets could end up dominating their respective markets (Eisenmann et al.2006; Schilling 2002). It is found that, normally, after a period of early growth, a shakeout of firms occurs and consolidation takes place. Firms shaken out are often those that failed to lead (Klepper & Grady, 1990). However for leading, Sullivan (2016) notes, a firm needs to move as fast as possible for other competing firms might not have the momentum yet, but might not be far behind. Furthermore, due to the speed required to maintain a first mover position, a firm in emerging markets needs to take on far more risk than a firm going through a more normal, rational growth process (Sullivan, 2016). While resources need to be added constantly to sustain high growth, these are either found inadequate to maintain high growth or are channeled insufficiently into organizational capabilities supporting growth as adequate systems and structures are missing (Kotter & Sathe, 1978; Hambrick, 1985; Penrose, 1995). Furthermore, emerging markets are characterized by high levels of uncertainty, lack of structure and lack of standardization. When betting on the wrong horse, it might turn out to be impossible for a firm to implement corrective action due to its limited resource base or due to competitors having bypassed it (Garnsey, 2005).

Therefore growth markets are seen as the better opportunity: one can achieve initial success more easily and rapidly in the growing market instead of creating a new market (Koberg et al., 1996; Kakati, 2003). Growth markets are less uncertain, as industry structure and standards are generally more defined. However, growth markets do tend to be more crowded places with already a number of players, some of which might already be large, and more firms entering that specific growth market (Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999). As growth markets in their early stages are larger than can be swallowed by one of these players, competition is mostly directed at gaining market share as quickly as possible, instead of firms directly competing against each other, as would be the case in more mature markets (Johnson et al. 2005). However, also when firms operate in growth markets, they still need to move as fast as possible to gain a dominant market share and avoid being on the losing end when the initial shakeout of firms occurs and consolidation takes place (Klepper & Grady, 1990).

Also the (potential) size of the market cannot be ignored as relevant industry success factor for high growth, as it determines how soon a firm will run up the limit of either the natural market-size of its attainable market share. Picking the right market is a crucial element and is ideally a 'limitless' market with millions of users or devices (Kutcher et al., 2014).

5.2.2. B2B versus B2C markets

Furthermore, serving business-to-business (B2B) market instead of business-to-consumer (B2C) was more likely to be a successful strategy (Kutcher et al., 2014; Deloitte, 2015; Parker, 2010). This is remarkable as Tracy (2011) reported on an even distribution of high growth firms across all sectors of industry. It was argued by the author of this study however, that this study did not follow growth patterns of individual high growth firms and as such it cannot report on the whether B2B or B2C markets provide better opportunities for growth. In the Netherlands the Erasmus Centre for Entrepreneurship (ECE) found that 66 percent of high growth firms in 2016 to be found in 5 industries (retail & wholesale: 19,3%; professional services: 15,1%; R&D: 12,4%; industry: 11,0%; ICT: 8,2%) and although there seems to be a slight preference for B2B markets this cannot be confirmed. However, the studies identifying the preference of B2B-markets for successful high growth (Kutcher et al., 2014; Deloitte, 2015; Parker, 2010) argue that in the B2B-market high growth firms that win over a particular large 'lighthouse' customer, are able to secure revenue streams that provide a more solid foundation for further growth, while firms in the B2C-market are not able to secure such a revenue stream easily, as investing heavily in marketing in required to reach consumers (Coutu, 2014). However, when serving the B2B market, firms should be alert on not making major concessions on product and price to win over a large account and get caught up in the demands of serving a particular customer set, as this is found to greatly hamper further growth (Kutcher, 2014).

5.2.3. Resource availability

While for high growth firms the most favorable industry success factors are provided by respectively growth and emerging markets, preferably sizeable, as was illustrated above, the growth of firms operating in these markets needs to be supported by resources of which financial resources (Bamford, Dean, & McDougall, 2000a; Cooper et al., 1994; Lee, Lee, & Pennings, 2001) and human resources are found to be the most critical ones (Birley, 1987; Cooper et al., 1994). Coutu (2014) writes that leaders of high growth firms reported the number one problem preventing them from accepting customer orders and thus growth, was access to talent, namely a skilled supply of people who they can hire. Therefore, successful high growth firms are found to base themselves in urban areas and close to educational institutes that could supply the skills required for their particular business and their growth (Romanelli & Schoonhoven, 2001; Coutu, 2014). As such the geographic location can be seen as an important influencer of firm (high-)growth (Folta et al., 2006; Stuart and Sorenson, 2003). However, when that specific location was found to have over 65 competing firms in a market, a firm entering the market in that region was more likely to fail, either by the level of competition or by the unavailability of required resources (Folta et al., 2006). Furthermore, besides access to skilled human resources, also access to the right kind of finance is seen as crucial to enable and sustain high growth (Coutu, 2014). It is found that start-ups that have successfully established itself face a 'growth chasm' with regard to finance required to fuel further growth (Tracy, 2011; Harnish, 2014; Onetti, 2014). Coutu (2014) writes that many high growth firms are confronted with an insufficient pool of follow-on capital to match their needs: investors often have short-term goals which do not match the long-term aims of the high growth firms, while banks are considered to be uninterested in financing expansion. For example, in the UK it was found that banks are 70 percent more likely to reject innovative firm – defined as those which have introduced a new product or service in the past 12 months – for finance than non-innovative firms (Coutu, 2014).

5.2.4. INDUSTRY SUCCESS FACTORS FOR A SUSTAINABLE HIGH GROWTH FIRM: SUMMARY

In this paragraph an attempt was made to identify the industry success factors for sustainable high growth firms in order to answer first sub question of the second research question of this literature study (2a).

What are the industry success factors for sustainable high growth firms
that can be derived from earlier studies on the subject
from the perspective of Management Theory and Applied Economics?

Below these success factors, including their sources, are summarized.

I. INDUSTRY SUCCESS FACTORS	SOURCES
a) Emerging or growing markets offer most favorable growth opportunities. ○ Emerging markets offer greatest potential for first movers *Getting it right and moving as fast as possible is essential to dominate respective market before shakeout of firms occurs and consolidation takes place.* ○ Growing markets less risky due to structure and standardization *Moving as fast as possible to gain sufficient market share before a shakeout of firms occurs and consolidation takes place.*	Brush & Chaganti, 1998; Covin, Slevin, & Covin, 1990; Eisenhardt & Schoonhoven, 1990; Chandler & Hanks, 1994; McDougall et al., 1994; Koberg et al., 1996; Park, Chen & Gallagher, 2002; Robinson & McDougall, 2001; Kakati, 2003; Eisenmann et al. 2006; Schilling 2002; Klepper & Grady, 1990; Garnsey, 2005; Johnson et al. 2005; Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999
b) Sizeable emerging or growth markets offer most favorable growth opportunities	Kutcher et al., 2014; Deloitte, 2015
c) B2B markets favored above B2C markets for offering most favorable growth opportunities *Early stable revenue streams easier to realize without considerable marketing costs*	Kutcher et al., 2014; Deloitte, 2015; Parker, 2010; Coutu, 2014
d) Locating in urban areas with right educational institutes close at hand preferable *Provides easier access to skilled resources to fuel growth.*	Romanelli & Schoonhoven, 2001; Coutu, 2014; Folta, Cooper, & Baik, 2006; Stuart and Sorenson, 2003
e) Locating in areas with access to follow-up capital is preferable	Bamford, Dean, & McDougall, 2000a; Cooper et al., 1994; Lee, Lee, & Pennings, 2001; Coutu, 2014

Table 2: Industry success factors for firm high growth

Although for high growth a firm needs to be preferably in growth or either emerging markets, its success is still very dependent on the strategies the firm implements (McDougall, Robinson, & DeNisi, 1992; Park et al., 2002; Sandberg & Hofer, 1987). As firm specific factors were found to more important than industry factors to explain the profitability differences amongst industry peers, in the next paragraph the strategies favorable for high-firm growth are discussed in order to answer the second sub question of the second research question of this study (2b);

What are the strategic success factors for sustainable high growth firms
that can be derived from earlier studies on the subject
from the perspective of Management Theory and Applied Economics?

5.3. SUCCESSFUL FIRM STRATEGIES FOR SUSTAINABLE HIGH GROWTH FIRMS

Researchers argue that high growth not only stems from favorable market conditions or market attractiveness, but these should be backed-up by strategies and resource based capabilities (Chandler and Hanks, 1994; Mahoney and Pandian, 1992; Kakati, 1999). This claim is fully in line with the ‘resource based view of the firm’, chosen as conceptual model for this study. Due to the importance of the congruence between market conditions and strategies by the firm, often addressed as ‘strategic fit’ (Song, 2008), the fitting strategies for high growth are discussed in this paragraph in an attempt to answer the second sub question of the second research question of this literature study (2b).

What are the are strategic success factors for sustainable high growth firms
that can be derived from earlier studies on the subject
from the perspective of Management Theory and Applied Economics?

5.3.1. PRODUCT STRATEGIES

When identifying successful product strategies of high growth firms, studies have made a distinction between the ones most appropriate in each of the different industry life cycle stages, namely emerging industries, growth industries and mature industries (Roger, 1962; Levitt, 1965; Kotler, 2002). Grant (2005) notes that in the emerging industry life cycle stage sales are small and the rate of market penetration is low because products and services are little known and customers are few as these are limited to the ones that tend to be innovation-oriented and risk-tolerant. Therefore Sandberg & Hofer (1987) found that in emerging industries broad-based product differentiation strategies helped firms to capture higher level of sales growth. Grant (2005) writes that a broad-based differentiation strategy tries to serve a broader market and in the emerging stage would address the whole, limited, market. Grant (2005) further notes that in the growth stage market penetration is accelerated as product technology becomes more standardized, prices drop and ownership spreads to the mass market (Grant, 2005). Sandberg & Hofer (1987) found that in industries in the growth stage more focused differentiation strategies helped firms to capture higher sales growth. Grant (2005) writes that a focused differentiation strategy tries to serve a specific niche, and that attaining dominance in a niche when new competitors are entering and competition is rising (Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999), is found to be a more successful strategy than trying to address the whole, larger, market. Grant (2005) also notes that while broad-based differentiation is seen as the most appropriate strategy in emerging markets, the tendency is for focused differentiation to displace broad-based differentiation as the market matures, as in general customers prefer a targeted product offering that matches their particular preferences to one that is designed to appeal to a broad range of tastes. In such environmental circumstances Siegel et al. (1993) found that firms with a focused product differentiation strategy, operationalized as revenue being generated by a single product, had higher sales growth rates.

Differentiation being a favorable product strategy for high growth is supported by Baum (2001), who assumed that, while assessing Porter’s three competitive product strategies (Porter, 1980), focus (i.e. focused differentiation), differentiation (i.e. broad based differentiation) and low cost, that only firms that would fail to select one of these strategies would get "stuck in the middle" and would therefore not be able to sustain their high growth (Porter, 1980). However, Baum (2001) found that not only ‘stuck in the middle’ strategies correlated negatively with high growth, but low-cost strategies as well. This was confirmed by Kakati (1999; 2003) who found that firms pursuing a low-cost strategy were less likely to attain high growth. Only differentiation strategies related positively to firm growth, this being in harmony with Sandberg & Hofer’s (1987) earlier finding. Kakati (1999; 2003) explains this by arguing that firms adopting a differentiation strategy can charge higher premiums for their unique and customized offerings and price may not be as important a purchase criteria. Also Barringer et al. (2005) found that creating unique value based on deep level of customer knowledge to be strong discriminator between high growth and slow-growth firms in a sample of firms studied: firms experiencing highest growth were able to claim increasing the effectiveness of their customers’ products or internal operations radically, hereby setting new standards for the industry. Kakati (2003) found that applying a strategy emphasizing on meeting unique customer requirement and tastes proved to the best strategy to pursue for high growth firms in an high-tech environment. Other studies have also report that initial product entries that are more novel than those that exist in the marketplace have the strongest potential to build the firm’s market share (Banbury & Mitchell, 1995; Robinson, 1990; Gilbert, 2006).

Furthermore, Deloitte (2015) found that if a firm is able to provide a unique product or service that is ‘designed to scale’, it greatly enhanced the likelihood of sustainable high growth as it enables addressing larger markets and it is well suited for international roll-outs. For example, Deloitte (2015) found that 85% of high growth firms had products or services that were scalable, such as software products, online services, media and entertainment formats and content, electronics, infrastructure, and energy. Some companies successfully grow when they transform their core product into a platform, around which an “ecosystem” of complementary products and services can arise. ‘Open’ business models that were designed to take advantage of customer networks, such as Airbnb and Uber, were found to allow for high growth as well, but were inherently more difficult to execute (Deloitte, 2015).

Parker (2010) also found that high growth firms initially refrain from developing new products or services and have a main product that is a major contributor to sales. From the perspective of Applied economics it is argued that when a new firm has achieved early high growth, it could still have an immature resource base with crises as a likely outcome of this uncontrolled early growth. Garnsey (2007) noted the perverse effects of early high growth: the growing firm must draw in new resources to support growth, but it faces planning delays and coordination problems because it is impossible to synchronize resources to requirements precisely in a dynamic system. This effect can tip previously high growth firms out of the growth league and into the faltering or declining categories (Garnsey, 2007). Therefore need for internal coordination sets a brake on the rate at which market opportunities can be pursued (Penrose, 1995). Therefore, only once a firm has matured its resource base, incremental introductions, and in particular rapid introductions, become important for sustained (high-) growth (Zahra & Bogner, 1999; Banbury & Mitchell,1995).

Besides providing unique value as part of a product differentiation strategy other product related aspects have been found to contribute to high growth as well. Especially raising entry barriers for competitors (Porter, 1995) by being able to protect products or services through patents, copyright or trademarks (Zahra & Bogner, 1999) or use of advanced technologies (Siegel et al, 1993) were found to contribute greatly to high growth as well.

Finally Ellis (2017) writes that making a compelling product is not in itself sufficient enough for high growth, as what is needed is a clear growth strategy in which customer acquisition, customer activation and customer retention play a dominant role. Kakati (2003) therefor notes the importance for a high growth firm to transform to a market-led enterprise first in order to provide a viable basis for producing further products and services providing unique value to its customer, as development of new products or services was found to not in itself guarantee commercial success. Barringer et al. (2005) noted that high growth firms have a deeper level of customer knowledge than slow growth firms. In support of this finding Parker (2010) found that one of the key strategies safeguarding this customer orientation driving deep understanding of customers was the adoption of a market-orientation through the implementation of a marketing department.

5.3.2. MARKET EXPANSION STRATEGIES

Kutcher et al. (2014) write that when a firm has a very robust business model and operates in an already sizeable or rapidly expanding target market, it can simply expand to fuel further growth of the firm. This would especially be the case for firms that offer a unique product or service ‘designed to scale’ and that are able to successfully transform this core product or service into a platform (Kutcher et al. 2014; Deloitte, 2016). Sullivan (2016) notes that therefore some technology firms are global from day one.

However, most firms reach run up the limit of either the natural market-size of market share of their core product and service (Kutcher et al., 2014). Kutcher et al. (2014) note that firms running up to these limits experience slowing acquisition of customers due to market saturation, declining lifetime value of new customers, decreasing participation of ecosystem partners (developers or channel resellers), market disruption from new entrants and loss of key talent from sales, presales, or engineering. For these firms, to fuel further growth, Kutcher et al. (2014) and Carucci (2016) identified two successful growth strategies, namely extending into new product markets or expanding into new geographies. For example, Carucci (2016) found that of a sample of successful high growth firms 65% were enjoying new markets, while 61% were finding new opportunities in international markets.

While extending into new product markets successful high growth firms prefer acquisitions over organic growth and focus on acquiring targets that extend their proven business model into adjacent markets (Kutcher et al., 2014). From the perspective of Applied Economics the preference for acquisitive growth is found in the reasoning that organic growth will lead to the development of new resources that are similar to resources already existing in the firm's productive opportunity set, and thus, over time, it is increasingly difficult for the firm to rely on organic growth for maintaining a current or stable growth (Gilbert, 2006). Similarly Penrose (1995) theorizes there are specific limits as to the extent to which a firm can grow organically. This limit is determined by the matching capabilities of perceived productive opportunities with resources available, and not only the amount of resources under control. This limit comes about as firms develop routines that begin to constrain the ability to recombine existing resources (e.g., Nelson &Winter, 1982). This prompts firms to become increasingly myopic and search "close in" before moving to less familiar areas (Cyert & March, 1963). This argumentation explains why successful high growth firms have a strong preference for complementary targets over similar targets as these are found to create more value for high growth firms (Harrison, Hitt, Hoskinsson, & Ireland, 2001) by enhancing product or service offerings (Penrose, 1995), by extending reach into complementary markets without developing the competencies required to do so independently and by benefitting from the reputation that target firms established in their market (Banbury & Mitchell, 1995).

Besides acquiring targets in adjacent markets, another successful market expansion strategy is to move operations international (Coutu, 2014; Kutcher et al.; 2014). D'Souza and McDougall (1989) and Gilbert (2006) have argued that internationalization of activities may be essential for a firm's ultimate survival and growth. Carucci (2016) found in his study that 61% of high growth firms were finding new opportunities in international markets. Shrader (1996) found when assessing 127 domestic new firms and 87 international new firms found that internationals outperformed the domestics in sales growth and were found to be more than twice as efficient in generating sales per employee. Sullivan (2016) writes that companies in the USA at the size of more than 1000 employees usually make the move to go global. However, although the above numbers are based on the US situation with a sizable home market, in less sizable home markets it was found that high growth firms were internationalizing their operations much earlier and even from the inception of the firm (e.g., McDougall, 1989). Coutu (2014), for example, notes that in the UK high growth firms with around 100-500 employees already seek geographic expansion to fuel further growth and this topic stays on the management agenda the further a high growth firm grows. However, it needs to be noted that most firm growth research does not account for differences in domestic or international growth strategies (Zahra & George, 2002), but especially for firms with small home markets, this might be essential for sustainable growth, as was stated earlier.

5.3.3. SUCCESSFUL FIRM STRATEGIES FOR SUSTAINABLE HIGH GROWTH FIRMS: SUMMARY

Favorable market conditions need to be back-up by firm strategies to seize the entrepreneurial opportunities provided, as the congruence between market conditions and strategies by the firm, often addressed as 'strategic fit' (Song, 2008), is seen as pivotal for high growth (Chandler and Hanks, 1994; Mahoney and Pandian, 1992; Kakati, 1999). In this paragraph the successful firm strategies for high growth were discussed in an attempt to answer the second sub question of the second research question of this literature study (2b).

What are the strategic success factors for sustainable high growth firms
that can be derived from earlier studies on the subject
from the perspective of Management Theory and Applied Economics?

Below the findings including their sources are summarized.

II.	SUCCESSFUL STRATEGIES	SOURCES
a)	Broad based product differentiation strategy when operating in emerging markets Focused product differentiation strategy when operating in growth markets. Shifting from broad based product differentiation strategy to focused product differentiation strategy when market matures	Roger, 1962; Levitt, 1965; Kotler, 2002; Kutcher et al., 2014; Deloitte, 2015; Sandberg & Hofer, 1987; Grant, 2005; Siegel et al., 1993; Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999; Baum, 2001; Kakati, 1999
b)	Providing unique value and product superiority for customers	Banbury & Mitchell, 1995; Robinson, 1990; Gilbert, 2006; Barringer et al., 2005; Kakati, 2003; Deloitte, 2015.
c)	Providing products and services 'designed to scale'	Kutcher et al., 2014; Deloitte, 2015.
d)	Ability to protect products and services	Zahra & Bogner, 1999; Siegel et al, 1993.
e)	Growing single product or service first before developing additional ones *More mature processes and transformation towards market-orientation pivotal*	Barringer et al., 2005; Kakati, 2003; Parker, 2010.
f)	Expanding markets by transforming products or services into platforms.	Kutcher et al. 2014; Deloitte, 2016.
g)	Expanding markets by acquisitions in complementary markets when home markets become saturated.	Penrose, 1995; Banbury & Mitchell, 1995; Harrison, Hitt, Hoskinsson, & Ireland, 2001; Gilbert, 2006; Kutcher et al., 2014; Carucci, 2016.
h)	Expanding markets through internationalization when facing small home markets or when home markets become saturated.	Coutu, 2014; Kutcher et al.; 2014; D'Souza and McDougall, 1989; Gilbert, 2006; Carucci, 2016; Shrader, 1996.

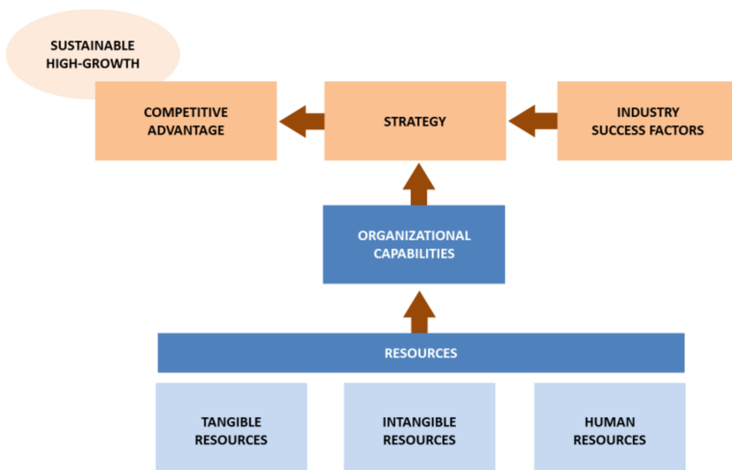
Table 3: Successful strategies for firm high growth

As was stated in the beginning of this paragraph, researchers argue that high growth not only stems from favorable market conditions or market attractiveness, but these should be backed-up by strategies and resource based capabilities (Chandler and Hanks, 1994; Mahoney and Pandian, 1992; Kakati, 1999). Therefore this paragraph covered the strategies high growth firms pursue. However, Bhide (1996) writes that a great strategy is worthless, unless being able to execute on it. Therefore, the following paragraph addresses the organizational resources and capabilities that support the execution of high growth strategies in pursuit of the entrepreneurial opportunities in the market place in order to answer the third sub question of the second research question of this study (2c).

5.4. RESOURCES AND ORGANIZATIONAL CAPABILITIES FOR SUSTAINABLE HIGH GROWTH FIRMS

While in the previous paragraphs the industry success factors and firm strategies for sustainable high growth firms were identified to address the importance of congruence between market conditions and firm strategies, i.e. ‘strategic fit’ (Song, 2008), this sub paragraph covers the organizational resources and capabilities required for sustainable high growth firms, as researchers argue that high growth not only stems from ‘strategic fit’, but needs to be backed-up by resource based capabilities as well (Chandler and Hanks, 1994; Mahoney and Pandian, 1992; Kakati, 1999). Therefore this paragraph attempts to answer the third sub question of the second research question of this study (2c).

What are success factors for sustainable high growth firms from a resources and capabilities point of view that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?



Resource based capabilities are found to be unique to each firm and require the expertise of various individuals to be integrated with capital equipment, technology, and other resources (Grant, 2005). Nelson and Winter (1982) write that organizational routines, predictable patterns of activity made up of a sequence of coordinated actions by individuals, form the basis for such organizational capabilities. As such it is not the size of a firm’s resource base that is the primary determinant of a capability, but the firm’s ability to leverage its resources, into routines and eventually capabilities (Hamel & Prahalad, 1990, 1992). Hamel & Prahalad (1989, 1993, 1994) emphasize that in the continual development of a firm’s capabilities, the drive to “create the future” is more important in building sustainable competitive advantage than initial resource advantage.

This study recognizes the dynamic and evolving nature of resource, routines and capabilities required for high firm growth. Management Theory has addressed the evolving nature of a high growth firm’s resources, routines and capabilities in high growth firms by matching their development through the different growth stages in the firm life cycle. This perspective on high growth firms has resulted in a number of firm stage growth models specifically addressing the growth of young and small firms (Adizes, 1979; Churchill, 1987; Kanzanjian, 1990), this being in line with one aspect of the definition of a high growth firm;

"…A high growth firm is likely, but not necessarily, a younger and smaller firm…"

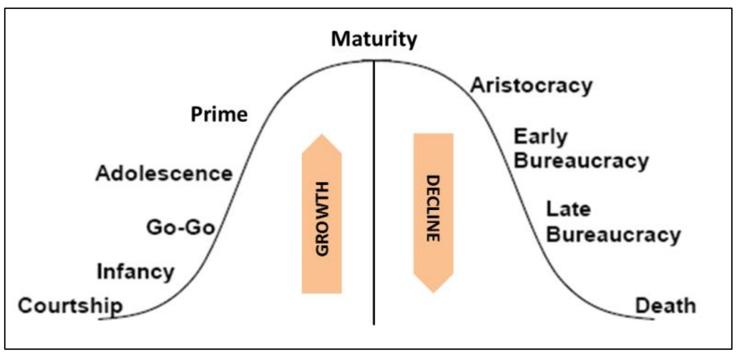
As such, by matching the above aspect of the definition of a high growth firm and their recognition of the internal dynamics of a high growth firm, these models were found to provide a practical umbrella to map findings on resources, routines and capabilities for successful firm high growth. Therefore these will be covered first in the following sub paragraph. Although most studies from Management Theory and Applied Economics on Entrepreneurship were found to offer a cross-sectional perspective on success factors for high firm growth, they do provide for deeper analysis of high firm growth success factors found by the various firm stage growth models illustrated above. Therefore these will be covered afterwards in response to the findings from the firm stage growth models introduced.

5.4.1. FIRM STAGE GROWTH MODELS ON DYNAMIC EVOLVEMENT OF RESOURCES AND ORGANIZATIONAL CAPABILITIES

Organization theory on firm stage growth models addresses the internal dynamics of (high-)growth firms by applying a life cycle analogy. Firm stage growth models take the assumption that every growth stage represents its own set of problems or tasks, and that the resolution of these problems or tasks leads to the emergence of a new set in the following growth stage, which a firm should then address (Greiner 1972). The problems associated with each stage impose unique demands and require organizational structures, personnel, leadership styles, and decision-making processes suited to meeting those demands (Kazanjian 1988). This perspective is not without debate as it is contested issue how literally a biological analogy should be applied to social systems such as organizations (Whetten, 1987). Central in this debate are the number of stages in a lifecycle model, and the deterministic nature of these stages, including whether movement through the stages is linear or recursive (Whetten, 1987). Also, the primary use of cases in studies on firm growth adopting the life cycle analogy is not without debate (Garnsey, 2007). While case studies are seen to allow greater recognition of growth interruptions and crises than quantitative studies in applied economics (Garnsey, 2005), at the same time case evidence for stage theories of growth has been held to be conceptually and empirically unproven and non-predictive (Kerlinger, 1986; Audretsch, 1994; Storey, 1997; Churchill and Lewis, 1983; Kazanjian and Drazin, 1989; Churchill, 1997). Despite all debate firm stage growth models have found acceptance amongst a large public as the analogy has been found to be simple and highly accessible (Whetten, 1987). Also considerable consensus exists about sequential movement through early stages of development, from birth into maturity (McAvoy, 1984). Other researchers have taken a less controversial view suggesting that "stages" are simply clusters of issues or problems that social systems must resolve, and that the inherent nature of these problems suggests a roughly sequential ordering (Miller & Freisen, 1980; Cameron & Whetten, 1983; Tushman & Romanelli, 1985). Whetten (1986) writes there is considerable logical and empirical support for this view of organizational development defining stages as clusters of subsystem problems or issues that are linked sequentially and embedded within the natural evolutionary processes of organizations (Lyden, 1975; Kimberly, 1979; Quinn & Cameron, 1983).

The earliest stage growth models, most notably Lippitt en Schmidt (1967), Steinmetz (1969) and Greiner (1972), have generally been found to fail to capture the important early stages in a firm's origin and growth in detail (Churchill, 1983). In response, Adizes (1979), Churchill (1983) and Kanzanjian (1990) developed stage growth models providing more detail on the growth stages of newer and smaller firm and were therefor found to be most valuable for providing the umbrella for the dynamic evolvement of resources, routines and capabilities in high growth firms. See for a more detailed overview of these models Annex B to D. Adizes' firm stage growth model (1997) was already shortly introduced to help better define a high growth firm. Based on this model, shown below, it was stated that a high growth firm is;

"...A high growth firm is a firm that is rapidly maturing from childhood, through adolescence into prime adulthood..."



Based on this definition findings from all three firm stage growth models concerning successful (high) growth will be covered next, but limited to these three growth stages.

5.4.1.1. *Adizes' firm stage growth model*

Adizes (1979) made a first attempt to deepen knowledge on the required management practices to enable firm growth and argued that a firm in order to be well-managed needed to be effective in four areas: Production, Administration, Entrepreneurship and Integration. According to Adizes the relationship between these four areas needed to shift according to the challenges of the respective life cycle stage. If this shift in the relationship between the four areas: Production, Administration, Entrepreneurship and Integration would not occur successfully the result would most likely be premature mortality (Adizes, 1979). To overcome the various risks and premature mortality scenarios, Adizes (1979) defined a number of "preventive treatments". As was defined that the childhood, Go-Go in terms of Adizes, adolescence and prime adulthood represented the stages relevant for high firm growth best, only these are illustrated below. See for a complete overview of this model Annex B.

STAGE	FOCUS AREAS	DESCRIPTION	RISK	PREMATURE MORTALITY	TREATMENT
Go-Go	**Production** **Entrepreneurship**	Analogy with baby who can see and focus Strong entrepreneurial appetite Vision on bringing product to markets	Personification of management process preventing scaling	Founders trap	Strong board of directors to plan for organization to grow, Depersonalize leadership Institutionalize plans and policies.
Adolescent	**Administration** **Entrepreneurship**	Administrative role rises in importance More time spent on planning and coordination to set up for further growth Less focus on production in short run.	Inability to overcome tension between administrative and entrepreneurial needs	Divorce	Facilitate analyzing the future, identifying threats and opportunities, determining goals, and designing strategies. Build a new commitment to the organization.
Prime	**Production** **Administration** **Entrepreneurship**	Strong results orientation Plans and procedures to achieve efficiency Strong outward focus Stable and predictable growth rates	Mismatch amongst management on aspirations (desires vs expectations)	Early maturity	Decentralization to maintain a high entrepreneurial orientation and focus

Table 4: Adizes firm stage growth model – growth stages (1979)

From a resources and capabilities perspective, Adizes addresses both the intangible and human resources requirements for successful (high-) firm growth. From the perspective of intangible resources, Adizes emphasizes the importance of maintaining an entrepreneurial culture across the childhood, adolescence and prime adulthood stages, through detachment of this culture from the leadership of the founder and the decentralization of functions. Also, from a human resources point of view Adizes stresses the importance of installing a management team that has the competencies to management growth successfully. This is in accordance with Greiner's firm stage growth model (1972) in which the leadership crisis is the first crisis to occur and can be resolved by installing such a team. Furthermore, in leveraging the above resources adequately, Adizes finally notes the development of strategic management routines to safeguard the strategic fit of the firm and its environment.

5.4.1.2. *Churchill's firm stage growth model*

Churchill's growth model (1987) addresses the growth of small and young firms towards maturity as well, describing the problems arise at the various stages in small firm development. According to Churchill, as a small firm successfully grows, it will increase in size and complexity which impact is reflected in five areas, namely Major strategic goals (G), Organizational structure (S), Formality of systems (F), Management

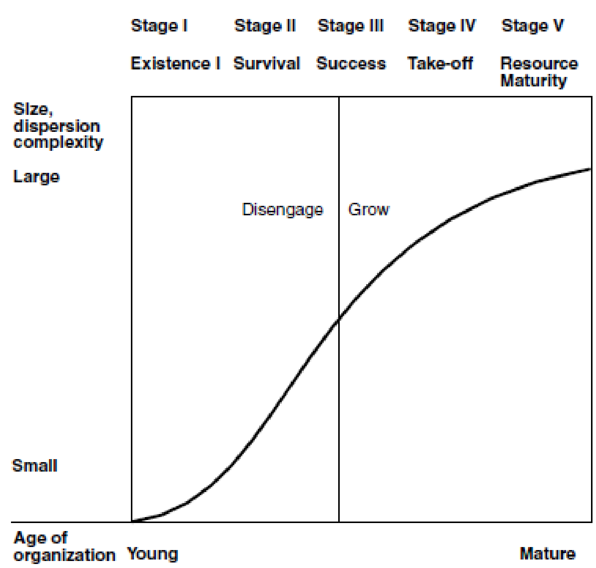


Figure 12: Churchill firm stage growth model (1987)

style (M) and Owner's involvement in the business (O), as is summarized below. Although Churchill's model consists of five stages up to firm maturity, Churchill addresses growth from stage III "Success" onwards with a strategic decision by the entrepreneur whether to grow or to disengage. The growth stages Success Growth, Take-Off and Resource Maturity greatly resemble the childhood, adolescence and prime adulthood stages as included in the definition of the high growth firm. As stage I "Existence", Stage II "Survival" and Stage III "Disengagement" are not in scope of this study these are not included in the analysis. See for a complete overview of this model Annex C.

STAGE	CHARACTERISTICS
Success	Key question is whether to exploit company's accomplishments and use it as a platform for growth or keep the company stable and profitable.
Success - Growth	**G** - Focus on setting firm up for growth, i.e. making sure basic business stays profitable so it will not outrun its source of cash and develop managers to meet needs of growing business. **S** - Hiring managers with an eye to firm's future rather than its current condition. **F** - Systems are installed with attention to forthcoming needs. Planning in the form of operational budgets to support functional delegation. **M** - Owner is deeply involved in all aspects concerned with setting company up for growth. **O** - Owner still dominates stock control.
Take Off	**G** - Focus on growing rapidly and how to finance growth **S** - Organization is at least in part decentralized and, usually in sales or production. Competent management required **F** - Systems are becoming more refined and extensive. Both operational and strategic planning is being done and involves specific managers. **M** - Owner increasingly delegates to improve the managerial effectiveness of a fast growing and increasingly complex enterprise. **O** - Owner still dominates stock control
Resource Maturity	**G** - Focus on consolidating and controlling gains brought by rapid growth **S** - Focus on retaining advantages of small size, flexibility and entrepreneurial spirit. Management is expanded to eliminate inefficiencies of rapid growth. Management is decentralized to maintain entrepreneurial spirit **F**- Systems are professionalized without stifling entrepreneurial qualities **M/O** - Owner and business are increasingly separated, both operationally and financially

Table 5: Churchill firm stage growth model – growth stages (1987)

From a resources and capabilities perspective, Churchill addresses the human resources aspect of firm growth by pointing out the need to develop managers capable of managing growth. While the firm is maturing management of the firm needs to be increasingly delegated by the entrepreneur (Churchill, 1987). According to Churchill (1987) this is greatly dependent on his/her willingness and ability to delegate responsibility. If this willingness or ability is limited this will directly result into what Greiner (1972) identified as the leadership crisis. Furthermore, from a financial resources point of view Churchill notes that the entrepreneur's ownership decreases towards resource maturity. In leveraging the various resources Churchill also addresses the need to develop increasingly sophisticated strategic management capabilities to look beyond the present and match the strengths and weaknesses of the firm with its goals, and financial control capabilities to maintain control of sufficient financial resources while growing fast. Finally, in order to maintain flexibility and entrepreneurial spirit Churchill notes the need for further decentralization towards resource maturity.

5.4.1.3. *Kanzanjian's firm stage growth model*

Finally, Kanzanjian (1990) presented a firm stage growth model to hold for new firms as well, consisting of four stages: Conception & Development (broadly similar to Churchill's Existence stage and Adizes' Courtship stage), Commercialization (broadly similar to Churchill's Survival stage and Adizes' Infant stage), Growth, (broadly similar to Churchill's Success-Growth and Take-Off and Adizes' Go-Go and Adolescent stages) and Stability (broadly similar to Churchill's Resource Maturity Stage and Adizes' Prime stage). Regarding the scope of this study only the characteristics and challenges of Kanzanjian's Growth and Stability stages are illustrated below. See for a complete overview of this model Annex D. The contribution made of Kanzanjian's firm stage growth mode is that it argues that a firm's rate of growth depends on the "'fit" between its stage of growth and certain organizational design elements, including decision-making centralization, decision-making formalization, and functional specialization in the areas of marketing and sales, manufacturing, and engineering technology. Kanzanjian (1990) found that centralization of decision-making decreased as firms matured, while formalization of decision making increased. This directly refers to second crisis identified in Greiner's (1972) original firm stage growth model, namely the Delegation crisis which can only be resolved if autonomy is given to decentralized units. Functional specialization in successful growth firms was found to be high across both the growth stage and stability stage, although high specialization of Marketing & Sales was found to become important in Growth stage, while specialization of Marketing & Sales was still found to be Low in Stage 2: Commercialization. In this stage high specialization of Manufacturing and Technology/Engineering was already found to be necessary for successful growth (Kanzanjian, 1990)

STAGE	CHARACTERISTICS	CHALLENGE	DECISION-MAKING	FUNCTIONAL SPECIALIZATION
Growth	Focus on producing, selling, and distributing product in volume Organization moves toward more professionally trained and experienced personnel. Each function faces difficulty of building an efficient and effective task system Increasing sense of hierarchy: the advent of functional specialization	Manufacturing in volume, efficiently and with high quality Establishing market share to avoid shakeout of less effective or efficient firms from the market Managing personnel problems associated with high growth. Carefully balancing profits against future growth.	Centralization: Medium Formalization: Medium	Marketing & Sales: High Manufacturing: High Technology/Engineering: High
Stability	Focus on maintain growth momentum and market position Focus on development of a second generation product Professional management to replace or support owner Highly specialized employees Formal structure established Rules and procedures are standardized and formalized.	Launching a second generation product while simultaneously managing efficiency of existing product line	Centralization: Low Formalization: High	Marketing & Sales: High Manufacturing: High Technology/Engineering: High

Table 6: Kanzanjian firm stage growth model - growth stages (1990)

From a resources and capabilities perspective, Kanzanjian (1990) addresses the human resources aspect of firm growth by pointing out the relevance of more specialized and professional skills, particularly in Marketing & Sales. The increased importance of a market orientation to fuel growth was already mentioned earlier in the different favorable strategies for firm growth. Kanzanjian (1990) also stresses the importance of onboarding professional management to replace or support the founder/entrepreneur. From a tangible resources point of view Kanzanjian refers to ability of manufacturing facilities to produce in volume and quality. Furthermore, from a financial resources perspective, Kanzanjian (1990) points out the importance of financial control. Kanzanjian also mentions the increased delegation of decision-making as the firm grows while routines across all functions are increasingly formalized. Finally, Kanzanjian (1990) hints at the need for launching a second generation product to fuel further growth when the firm has reached the stability stage, which was also covered in the favorable strategies for high growth: firms should refrain from introducing new product until having matured successfully.

5.4.2. Resources and organizational capabilities for a sustainable high growth firm

The above firm stage growth models all address the growth of firms and small and young firms in particular, providing a dynamic overview of the development of resources, routines and capabilities across the various growth stages. As such Organization Theory provides valuable insights to better understanding of (high) growth firms. In this sub paragraph success factors for high firm growth from the perspective of Management Theory and Applied Economics on Entrepreneurship will be covered. As was introduced earlier most studies taking this perspective have adopted the so-called ‘growth as an outcome’ approach (McKelvie, 2010). This approach identifies high growth firms based on one or several measures and tries to isolate the independent variables explaining high growth for a specific firm or set of firms. As a result findings take a cross-sectional view on high growth firms, and tend to ignore the dynamic nature of high growth as was illustrated earlier. However, these findings do provide for a deepening in understanding of the various success factors identified from the coverage of the dynamic evolvement of resources and organizational capabilities supporting firm high growth. In order to structure the findings on success factors for high growth firms from Management Theory and Applied Economics on Entrepreneurship, a clustering was identified, which proved largely in line with the findings on firm stage growth models presented above. The first clustering of findings was found to address the (d)evolving role of the entrepreneur. Secondly, the need for functional specialization could be identified as a cluster as this aspect of (high-) growth was addressed by many studies as well. Thirdly, the need for further formalization whilst growing was addressed by many studies on high growth firms, in particular in the areas of financial control, strategic management and HRM. Notably, quite a number of studies have addressed the role of strategic management within small, younger and rapidly growing firms. While formalization of strategic management systems and financial control were already explicitly identified as success factors in the various firm stage growth models covered, formalizing HRM systems was not yet. Fourthly, the importance of maintaining an entrepreneurial culture whilst fast growing was addressed by many studies on high growth firms.

5.4.2.1. *Importance of the entrepreneur or entrepreneurial team*

A key element in studies on high growth firms and entrepreneurship is the entrepreneur as individual or group, as it is widely believed that the founders of a firm have a lasting influence on the culture and behavior of their firm (Mullins, 1996). Shane and Venkataraman (2000) characterize entrepreneurship as the nexus between the individual (or team) and the opportunity. Therefore, it is argued, studying high growth firms on the individual and/or team level is very important (Barringer et al., 2005). This importance is further stressed on a more practical level as investors often assess a new firm by evaluating the characteristics of its founders, considering it a relevant factor for firm success as well (MacMillan, Siegel, & SubbaNarisimha, 1985; Barringer et al., 2005). A variety of studies have found effects of individual or team characteristics on firm (high-)growth.

Firstly, it is observed by various researchers that the majority of firms having successfully established themselves will never become a high growth firm and will remain small during their life spans (e.g., Birley & Westhead, 1990; Gimeno, Folta, Cooper, &Woo, 1997; Harnesh, 2014). Explanations are found in the absence of growth intentions amongst a large number of entrepreneurs who only scale to a limited extent to reach the minimum efficient scale (MES) of production in their industry that enables them to survive (Sutton, 1997; Shane, 2009; Tracy, 2011; Sutton, 2014). Therefore limited growth is not always associated with an inability to grow, but may actually be reflective of a limited desire of the entrepreneur to grow the firm (e.g., Bellu and Sherman 1995; Kolvereid and Bullvåg 1996; Cliff, 1998; Miner et al. 1994; Wiklund and Shepherd 2003; Sutton, 2014). This was also acknowledged by Churchill (1987) who in his firm stage growth model presents the key question for the entrepreneur whether to exploit a firm's accomplishments and use it as a platform for growth or keep the company stable and profitable. According to Wiklund et al. (2003) the concern of the entrepreneur to what extent a firm's larger size would compromise the well-being of employees, the independence of the firm relative to key stakeholders, the owner's ability to control the growth, and the ability to ensure that the firm would survive any crises are all elements influencing the entrepreneur's motivation to grow and actually decision to grow (Chandler & Hanks, 1994; Cliff, 1998; Sutton, 2014). Barringer et al. (2005) confirms this as high growth entrepreneurs were found to have a more growth-oriented entrepreneurial story or motivation, than founders of slower-growth firms. Therefore the clear decision of the entrepreneur and/or entrepreneurial team to pursue growth is a prerequisite, but not a guarantee for high firm growth.

Secondly, personality theories point to the importance of personal traits for firm success (McClelland, 1965). Some studies have proposed that tenacity and proactivity-initiative are important for the successful establishment and operation of new firms (Bird, 1989, Chandler & Jansen, 1992). Smilor (1997) has suggested that passion is "perhaps the most observed phenomenon of the entrepreneurial process". Other researchers found that the personal belief of the entrepreneur whether he or she would be able to actually manage growth was very important for the actual growth the firms realized (Box et al., 1993;.Baum and Locke, 2004; Cliff, 1998; Orser, Hogarth-Scott, & Riding, 2000). However, personality traits are now believed to have more indirect rather than direct effects on the growth of the firms, as general competencies, organizational variables and industry variables were found to completely dominate trait-level variables as causes of firm success (Sandberg & Hofer, 1987; Baum et al., 2001; Baum & Locke, 2004). Competencies of the entrepreneur found to have a direct significant effect on the performance of a new firm were general organization competencies, such as oral presentation skill, decision-making ability, conceptualization ability, diagnostic use of concepts, and use of power, and specific competencies, such as technical skill and industry skill (Boyatzis, 1982). Although some claim that specialist technical experience is highly relevant for firm performance (Boyatzis, 1982; Baum, 2001), Barringer et al. (2005) found that specific specialist expertise in the field of research and development (R&D) was not significantly associated with high growth performance. Furthermore, interestingly enough, while firm stage growth models explicitly note the decreasing role of the entrepreneur and his or her ability to delegate to enable growth so he or she does not become a bottleneck in information flows and decision-making (Adizes, 1979; Churchill 1987, Kanzanjian, 1990; Bhide, 1996; Yehezkel, 2009; Gulati, 2016) the above studies do not address this competence, most likely as these studies have not taken a dynamic perspective on growth of the firm. Therefor the author of this study chooses to add this general competence to the findings from studies introduced.

Thirdly, a number of researchers found that entrepreneurs of high growth firms are generally better educated (Sapienza & Grimm, 1997; Baum, 2001; Barringer et al., 2005).

Fourthly, prior related industry experience of the entrepreneur(s) was confirmed by many researchers to show significant direct effects on performance of the firm (Barringer et al., 2005; Baum et al., 2001; Box et al., 1993; Cooper, Gimeno-Gascon, & Woo, 1994; Eisenhardt & Schoonhoven, 1990; Siegel, Siegel, & MacMillan, 1993). While prior entrepreneurial or start-up experiences was found by some to have significant positive effects on firm performance (Box et al., 1993; Baum, 2001), such a relationship could not be confirmed by others (Barringer et al., 2005; Song, 2008). Baum (2001) writes the following.

> *"…we can speculate that the entrepreneur's industry and technical skills and high motivation influence his or her firm's growth through the establishment of growth oriented organizational processes and structures that facilitate the implementation of this strategy…"*

Baum (2001) summarizes the role of the entrepreneur in high growth firms:

> *" …The story begins with a hard-working, proactive entrepreneur with a strong set of technical, organizational, and industry skills. This entrepreneur is highly motivated, which is reflected in a clear organizational vision, high growth goals, and confidence in achieving these goals. Perhaps because of tenacity and proactivity, organizational skills, or high motivation, this entrepreneur is capable of delineating an effective differentiation strategy that works to generate high growth…"*

Finally, mixed results appear in studies whether new firms founded by teams rather than individuals show significantly different performance. While some found that the experiences of founders as a group were of substantial importance (Eisenhardt & Schoonhoven, 1990; Kor, 2003; Timmons and Spinelli, 2004; Song, 2008), others could find no difference between foundation by team or individual (Barringer et al. 2005). Yehezkel (2009) notes that four-fifths of high-performing new firms are established by teams rather than by individuals (Reynolds 1993) and that friendship and solidarity among entrepreneurial teams have been recognized as important factors in improving performance (Francis and Sandberg 2000). Several characteristics in particular have been claimed to relate to high team performance, among them, openness, sensitivity, flexibility, cooperation, commitment, and shared responsibility (Buchholz and Roth, 1987). Therefore evidence tends to pivot towards a group of founders outperforming individual founders when the group composition is right all other things being equal.

5.4.2.2. *Importance of functional specialization*

Many studies address the need of raising the level of internal differentiation into specialized roles and functions whilst growing (a.o. Child & Kieser, 1981; Whetten, 1986; Horowitz, 2010; Gulati, 2016). When a firm is small, its operations may be insufficient to sustain functional specialization to any great extent. Gulati (2016) writes that founders in the start-up phase basically do whatever it takes to get the business off the ground. As the firm grows and faces new challenges, specific functional expertise is needed to manage new roles for the firm (Kazanjian & Drazin, 1990). Horowitz (2010) writes the following.

> *"...In startups, everybody starts out as a jack-of-all-trades in the beginning, because everybody knows everything and the need to communicate is minimized. As the company grows, it becomes increasingly difficult to add new engineers, because the learning curve starts to get super steep. At this point, you need to specialize..."*

Grant (2005) writes that the fundamental source of efficiency in production is specialization, especially the division of labor into separate tasks. Functional specialization enables specialists to use their knowledge to tackle their functions' work more efficiently. Also, as they introduce and implement best practices within their domains, they catalyze future growth by creating slack in the rest of the firm (Gulati, 2016). Specialization also enables firms to become more innovative with their product and service offerings, to engage in higher levels of environmental scanning and more formal internal planning, and to experience higher levels of growth (Olson & Bokor, 1995).

A dominant fear is that a firm stalls as a result of complexity and bureaucracy that accumulates when growing a business, characterized by loss of internal metabolism, speed, self-awareness, sense of urgency, and general bloat of staff (Zook, 2016). However, Child & Kieser (1981) push back that it is not growth per se that causes the problems, but rather, poor management, therefore stressing the need for management team experienced in management growth.

Answering to this dominant fear, Hambrick (1995) promotes the use of decentralized task teams instead of a simple functional structure in order to overcome the typical coordination problem across completely separated functions (Grant, 2005). Typically these are cross-functional groups which are responsible for an integrated project or product effort. In similar way Ellis (2017) promotes the formation of so-called 'growth teams' in which marketing and product development cooperate. Using decentralized task teams, cross-functional groups or 'growth teams' has three advantages over the simple functional structure. First, it allows for speed in decision making, since the team is relatively small and oriented towards a specific target (Hambrick, 1995; Ellis, 2017). Second, it allows a quicker rate of assimilation and familiarization of new people, since they become part of a small, bounded group with frequent interaction among members and hierarchy is minimized (Hambrick, 1995).

Thirdly, it facilitates learning within the team on the product and service it is working on (Ellis, 2017). Also Peters and Waterman (1982) confirm that highly successful firms tend to have very flat organizational structures with a host of semi-autonomous task or project groups. This approach to organizational design is not necessarily "efficient," since it lessens economies of scale and could create duplication of effort, however, it creates tightly knit entrepreneurial groups which are particularly well-suited for the turbulent environments in which high growth firms find themselves (George 1977, Kotter and Sathe 1978).

Interestingly enough, although the above studies identify the necessity of functional specialization, they do not address the question what functions to specialize in first. In response Parker (2010) notes four functional strategies that have been analyzed with evidence provided for their effect on firm performance. The first function is Innovation and Technology (Itami & Numagami, 1992; Stam & Wennberg, 2009). This is in line with findings from Kanzanjian's firm stage growth model (1990) noting functional specialization Technology/Engineering as a prerequisite for growth. The second function mentioned is Marketing and sales (Slater and Olson 2001; Matsuno et al. 2002; Kakati, 2003; Ellis, 2017). Also this is in line with findings from Kanzanjian's firm stage growth model (1990) noting that in the growth stages Marketing & Sales was becoming increasingly important. In a similar way Parker (2010) found that one of the key strategies for high firm growth was the adoption of a market-orientation through implementation of a marketing department. The third function mentioned is Human Resource Management (HRM) (Huselid 1995; Storey 2003). The importance of HRM will be elaborated on further below. The fourth function mentioned is administration and governance (Naman and Slevin 1993; Daily et al. 2002). Although this seem to address one particular function directly it could easily be related to the need for better financial control and strategic management, as was found from the various firm stage growth models (Adizes, 1979; Churchill, 1984; Kanzanjian, 1990). These functions will be covered further below as well. Surprisingly Parker (2010) does not address the importance of specialization in Production as found by Kanzanjian (1990). An explanation could possibly be found in the reasoning that Parker (2010) specifically focused on functions supporting high growth and Production is seen as a hygiene function and not a differentiator for high growth.

5.4.2.3. *Importance of formalization of systems & procedures*

Many studies address the need of increasing the use of formal systems and procedures (a.o. Child & Kieser, 1981; Hambrick, 1985; Whetten, 1986). Hambrick (1985) writes that small firms that are quickly becoming big must modify some of their organizational arrangements. Hambrick (1985) notes that managerial skills needed in a 1000-person company are different from a 100-person company and generally tend to be in short supply when the company has reached that size rapidly. As firms expand and specialize functions, new levels of complexity are introduced that require them to define and assign tasks more formally (Hambrick, 1985; Gulati, 2016). Founders will need to delegate many of the tasks they used to perform themselves to specialized functions in order to prevent their centralized authority becoming a bottleneck that hinders information flow, decision making, and execution (Bhide, 1996; Yehezkel, 2009; Gulati, 2016). To support delegation and help overcoming the resulting coordination problem more formal systems are needed (Grant, 2005). On formalization Grant (2005) refers to the programmed coordination or the degree to which divisions of labor and procedures are explicit (e.g., written or otherwise manifested in the form of guidelines, rules and routines) rather than implicit (Price 1972). To get employees to perform delegated tasks and solve problems competently controlling mechanisms need to be established, such as management structures, standard operating procedures and policies (Child & Kieser, 1981; Whetten, 1986; Bhide, 1996).

With regard to the earlier introduced fear that a firm stalls as a result of complexity and bureaucracy that accumulates when growing a business (Zook, 2016), a high growth firm faces the dilemma balancing mechanistic (highly formalized) and organic (less formalized) solutions (Burns & Stalker 1961; Lawrence & Dyer 1983). While organic forms of organizations are found to be more innovative than formalized mechanistic ones (Aiken, Bacharach, and French), at the same time sufficient integration mechanisms should be introduced to foster some degree of collaboration across functions (Aiken et al. 1980; Zaltman, Duncan, and Holbek 1973). Yehezkel (2009) found that relationship between the level of formalization and high growth firm performance is nonlinear, with a negative slope at both low and high levels of formalization: too little is not good, but too much is not good either. Hambrick (1985) writes new “big-company” processes should be introduced gradually as supplements to, rather than replacements for, existing approaches. Successful high growth firms tend to introduce these new systems gradually, introducing only limited control initially, and often in advance of when they are absolutely crucial (Hambrick, 1985; Sutton, 2014). This gives the organization a chance to become accustomed to them, refine them, and take advantage of them (Hambrick, 1985; Sutton, 2014).

From the analysis of the various firm stage growth models (Adizes, 1979; Churchill, 1984; Kanzanjian, 1990) and the functions required to specialize first covered earlier, it was found that the areas of financial control, strategic management and HRM need to formalize ahead of other functions and processes within high growth firms (Hambrick, 1995). Therefore these are covered separately below.

Formalizing systems & procedures: Human Resource Management

A scarce resource examined often and found to be most clearly related to new firm growth, besides financial capital, is human capital (Birley, 1987; Cooper et al., 1994). Bhide (1996) found that the lack of talented employees is often the first obstacle for sustainable high growth. Sutton (2014) writes high growth starts and ends with individuals: success depends on the will and skills of people at every level of an organization. Also Kotter and Sathe (1978) pointed to the strain that high growth places on firms in terms of the lack of trained staff. Hambrick (1985) noted that successful high growth firms seek to acquire needed expertise before it is needed, recognizing that at the rate they are growing it will be needed very soon, and that it is more difficult to correct chaos than to prevent it by having good talent available. Therefore successful high growth firms dedicate exceptional attention to recruiting and developing talented employees in which the HRM-function plays a pivotal role (Hambrick, 1985). However, although recruitment, selection and development are crucial for high growth firms, it is also an onerous task as generally so many people are hired in such a short time that high growth firms easily can become careless and indiscriminant in the hiring process: formalization of HR-processes aims at preventing this potential slacking to occur (Barringer et al., 2005; Sullivan, 2016; Sutton, 2014).

Furthermore, building a strong growth culture is seen as a crucial success factor for firm high growth. Although this factor will be covered further below, high growth firms reinforce their original core vision constantly and zealously (Hambrick, 1985), for example by clearly articulating cultural values in mission and vision statements, in job descriptions and on-boarding practices of new employees (Gulati, 2016). At Facebook, for example, all new employees go through a six-week Bootcamp which is led almost entirely by engineers. This boot camp is designed so that new employees immediately start living Facebook's most sacred beliefs and values (Sutton, 2016). The HRM-function plays a pivotal role in recruiting and developing talent fitting the firm's culture (Harnish, 2014).

Finally, with regards to development of formal employee compensation strategies the HRM-function is leading. As high growth firms are typically cash starved (Bamford, Dean, & McDougall, 2000; Cooper et al., 1994; Lee, Lee, & Pennings, 2001), successful high growth firms are found to be able to convert compensation into a variable or even deferred cost (Hambrick, 1985). Instead of having high salaries which must be paid regardless of a performance, successful high growth firms tend to have moderate salaries with substantial bonus opportunity for all levels of employees (Hambrick, 1985). The other major implication of variable and/or deferred compensation is that it injects a sense of ownership and common fate into the organization (Hambrick, 1985). Although sharing ownership in the firm is generally stated as a critical element in entrepreneurial firms (Sutton, 2016), both Barringer et al. (2005) and Parker (2010) found that stock option plans for management, employees and outside investors should be kept to the minimum. However, Harnish (2014) argues that paying people the same as everyone else will most probably lead to an average firm. Building a strong culture in which employees bring a substantial amount of intrinsic motivation about what is happening and feel they are participating in something big, is seen as valuable strategy to help not only save cash, but prevent a firm to become mediocre as well (Hambrick, 1985; Sullivan, 2016).

Formalizing systems & procedures: Financial Planning & Control

The task of attracting resources into a new high growth firms is perhaps the greatest challenge faced by entrepreneurs as the lack of both reputation and a track record creates a heightened perception of risk by potential resource providers (Brush, Greene, & Hart, 2001; Garnsey, 2005), while at the same time financing high growth requires extraordinary resources. High growth firms are therefore typically cash starved and lead a bare-bones existence (Hambrick, 1985; Bamford, Dean, & McDougall, 2000a; Cooper et al., 1994; Lee, Lee, & Pennings, 2001). Sullivan (2016) writes the following.

> *"…When you're blitz-scaling, a whole bunch of things are inevitably broken, and you can't work on them all at once. You fix the things that will get investors to give you more cash. The lift that capital provides means you have a longer time in the air to get things right. The only exception to this rule is that if you have team dynamics problems, you fix them right away…"*

Therefore high growth firms need good systems to forecast and monitor the availability of funds (Bhide, 1996) to avoid exhausting resource until and forced to close or plateau early (Garnsey, 2005) or to avoid hitting difficulties when early growth feeds further growth but leads to resource shortages (Harrison and Taylor, 1996).

Hambrick (1985) mentions two measures successful high growth firms take to avoid running out of cash. Firstly, as was introduced under the required formalization of HRM practices, is conversion of compensation to a variable or even deferred cost, as labor costs generally are the largest costs for a firm (Hambrick, 1985). Secondly, as was already highlighted by Sullivan (2016) above, setting clear priorities on what to spend money on was found to a measure high growth firms take (Hambrick, 1985). High growth firms initially introduce simple financial plans and budgets, focusing on cash management first as, often cited, cash are king (Churchill & Mullings, 2001; Gibson, 2005; Harnish, 2014). Churchill & Mullings (2001) argue that understanding of a firm's operating cash cycle (i.e. the amount of time a firm's money is tied up in inventory and other current assets before a firm is paid for the goods and services it produces), the amount of cash needed to finance each dollar (or any other currency) of sales including working capital, and operating expenses, and the amount of cash generated by each dollar (or any other currency) of sales, enables a firm to establish its self-financeable growth (SFG) rate. According to Churchill & Mullings (2001) the SFR-rate helps a growth firm to determine the growth rate at which it can sustain its growth through the revenues it generates without going hat in hand to financiers. Also Harnish (2014) argues that as granular as possible understanding of gross margin, profit and cash flow is required to determine where a firm makes and loses money, recognizing accounting at (high-) growth firms is often underappreciated and underfunded. After getting the basics in place, Gibson (2005) writes that as part of introduction of a more externally focused market-orientation, covered more extensively below when addressing the need for a strong growth culture, more forecast-based, strategic and proactive financial planning needs to ensure a firm does not merely reactively responds to changes within the marketplace (Berry, 1998; Gibson, 2005). Therefore formalization of financial planning & control goes hand in hand with the formalization of strategic management which will be covered next. Berry (1998) writes that where firms had not evolved towards a marketing orientation and lacked the use of more sophisticated financial and strategic management techniques to support firm growth, rapid unplanned growth resulted in these firms to experience severe financial difficulties even threatening their survival.

Formalizing systems & procedures: Strategic Management

The firm stage growth models of Adizes (1979) and Churchill (1984) covered in the previous sub paragraph already noted the importance of developing strategic management routines and capabilities for successful high growth. This subject has received considerable attention in studies originating from Management Theory and Applied Economics as well (a.o. Hambrick, 1985; Robinson and Pearce, 1986; Low & MacMillan, 1988; Bird, 1989; Bhide, 1996; Kakati, 2003; Brinkcmann, 2008). Grant (2005) defines strategic management as follows.

> *"…The determination of the long-run goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals…"*

Hambrick (1985) notes many entrepreneurs start businesses to seize short-term opportunities without thinking about long-term strategy. When successful, these firms often view their strategies and behaviors as infallible and fail to take appropriate measures to the growth challenges while in a turbulent environment large competitors enter. Successful entrepreneurs, however, soon make the transition from a tactical to a strategic orientation so that they can begin to build crucial capabilities and resources (Bhide, 1996). It is found that even in high growth environments it is important to set aside time for strategy as decisions made in a firm's early years are found to have profound long-lasting implications for performance (Bamford, Dean, & Douglas, 2004; Boeker, 1989; Eisenhardt & Schoonhoven, 1990; Park & Bae, 2004; Stinchcombe, 1965; Gibson, 2005; Gulatti, 2016; Sullivan, 2016). Hambrick (1985) found that successful high growth firms developed routines to aggressively scan their environments for events and trends and were found to give data, especially controversial data, a fair airing in order to avoid being lulled into a sense of infallibility (Hambrick, 1985). Successful high growth firms were able to objectively evaluate unforeseen risks and opportunities and react to them proactively (Kakati, 2003). Bhide (1996) writes the following.

"…The range of options—and problems—that high growth firms confront is vast. Entrepreneurs must continually ask themselves what business they want to be in and what capabilities they would like to develop…"

Bhide (1996) argues that in order to build a sustainable high growth firm bold and explicit strategies must be formulated embodying the entrepreneurs' vision of where their company is going instead of where it is. Hambrick (1985) uses "anticipation of bigness" as best describing the mentality and actions of successful high growth firms: instead of waiting until struggling with its increased size, they look ahead to lay an early foundation for future growth. Strategy provides the integrating mechanism that enhances communication and helps speed decision making (Robinson and Pearce, 1986). Also Sullivan (2016) writes that successful high growth firms are able to think about the firm as a whole and envision the firm as a larger entity (Sullivan, 2016). Sutton (2014) writes the following.

"…To scale fastest and most effectively over the long haul, you can't always be charging ahead at breakneck speed, grabbing up resources or territories and slapping your logo on them. There are times when you've got to reflect and slow things way down…"

However, there has been a long debate on the value of strategic management for firm performance (Ansoff, 1991; Mintzberg & Waters, 1985; Porter, 1985). While the 'planning' school' beliefs rational economic behavior should dictate the structured and formal evaluation of alternatives as the basis for decision making in firms of all sizes and stresses the importance of such formal processes for firm performance (Gibson, 1997; Gibson and Cassar, 2002), the 'learning' school' challenges this assertion and argues that the emergent character of strategies requires a more adaptive and incremental approach towards strategy development as emergent patterns do not necessarily follow a predefined, explicit or formal plan (Quinn, 1980; Mintzberg, 1994; Brews and Hunt, 1999; Hough and White, 2003). Also in the entrepreneurship domain this debate is very much alive (Bhidé, 2000; Sarasvathy, 2001; Delmar and Shane, 2003; Gruber, 2007). Entrepreneurial environments tend to be highly dynamic with rapid changes in demand, technology, and competition and decision making is often a complicated endeavor. Given these dynamics however both "schools" claim their approach suits this environments best (Gruber, 2003).

A contingency approach has been proposed (e.g. Berry, 1998; Van Gelderen et al., 2000; Schwenk & Shrader, 1993; Castrogiovanni, 1996; Brinckmann, 2008) in which 'planning' and 'learning' school strategic management practices are altered as their effects on performance differ considerably between growth firms and established firms (McGrath and MacMillan, 1995). Van Gelderen et al. (2000) and Brinckmann (2008) found that for more established small firms, complete business planning, a proactive attempt to actively structure the firms' situation, was found to have a stronger positive effect on performance than in samples consisting only of new firms (Van Gelderen et al., 2000; Brinkmann, 2008). Critical point strategy, a strategy that concentrates on main issues planning, was found to have stronger effects with firms in earlier phases (Van Gelderen et al., 2000; Brinkmann, 2008), while a reactive strategy, a strategy that is driven by the situation and in which actions are not planned, was found to be associated with failure of new firms (Van Gelderen et al., 2000; Brinkmann, 2008).

New firms are faced with a higher level of organizational and environmental uncertainty than managers in more established firms, as availability of prior information and prior experience is limited (Hambrick and Crozier, 1985, Brinckmann, 2008; Davidsson, 2004; Gartner, 1990; Forbes, 2007). New firms have to deal with a higher ratio of assumption to knowledge, whereas established firms are able to base their plans on past performance, historical trends, and other information that can help to reduce uncertainty (Gruber, 2006; Brinckmann, 2008). While superior decision quality is likely to be achieved when information is sufficient and unambiguous, in environments with ambiguous and missing information, comprehensiveness of predictive and formal strategic decision-making has been associated with lower firm performance, which indicates that, under these circumstances, its costs might outweigh the benefits (Fredrickson and Mitchell, 1984; Fredrickson and Iaquinto, 1989; Berry, 1998; Sarasvathy, 2007). In such circumstances spending time on information search activities to reduce uncertainty is found to be valuable (Andrews, 1971; Hambrick, 1982; Ottum and Moore, 1997), as it allows entrepreneurs to challenge their intuition and assumptions, and to break out of groupthink (Janis and Mann, 1977; Cooper et al., 1995; Castrogiovanni, 1996). Therefore the greater the novelty of the firm, the greater the information that needs to be acquired and the more learning that needs to take place (Shepherd et al., 2003). Peters and Waterman (1982) warn however that spending too much time on information search activities may eventually lead to “paralysis of analysis” (Peters and Waterman, 1982). At some point gaining new knowledge will become more difficult once the most important planning issues are understood and further reductions in environmental uncertainty become less likely (Bhidé, 2000; Chrisman et al., 2005).

Others warn for cognitive distress, as the limited information-processing capacity of humans can readily be exceeded by the complexity of firm growth in uncertain environments (March and Simon, 1958; Baron, 1998). In highly uncertain environments humans are often found to rely on cognitive heuristics: simplified, semi-rational processes that reduce task complexity and uncertainty (Tversky and Kahneman, 1974; Busenitz and Barney, 1997; Simon et al., 1999). However, such mental shortcuts can also cause severe and systematic decision-making errors (Bazerman, 2002; Franke et al., 2006). It is therefore argued that, as soon as more reliable information becomes available, a firm should start adopting and institutionalizing more sophisticated strategic management techniques to enhance its performance, e.g. frequent planning meetings, market and scenario analysis, portfolio analysis methods and use of advanced software (Berry, 1998; Brinckmann, 2008). Not replacing the oftentimes informal, iterative, incremental, unstructured and irregular planning processes by more advanced planning practices addressing both output of business planning (written plans) and the process of business planning might hamper the growth of these firms (Castrogiovanni, 1996; Berry, 1998; Gibson, 2005; Brinckmann, 2008). Andersen (2000) however hurries to address that “comprehensiveness and formality” are not synonymous with strategic management and may say little about the effectiveness of the planning process. The adoption of formal and comprehensive strategic management techniques need not become an objective in itself (Gibson, 2005).

5.4.2.4. *Importance of a strong growth culture*

Although functional specialization and formalization, as covered above, help to provide the structures and mechanisms to overcome the challenges of (high-) growth, addressing a firm's culture is found pivotal for successful high firm growth firms as well. Some even argue that firm culture is the most critical success factor for high growth firms (Ismail et al. 2014). Firm culture is a system of shared assumptions, values, and beliefs, which provides guidelines and boundaries for how people behave in organizations and perform their jobs (Schein, 1992; Deal & Kennedy, 2000). As such firm culture has a profound influence on how well a firm can execute its strategy (Bhide, 1996; Sutton, 2014). On the other hand Fombrun (1989) also found that strategy significantly influences the kinds of cultures that evolve in growth firms: at one extreme, cost strategies anchor more hierarchical and formalized processes, while at the other extreme technology strategies favor risk taking and delegation. In the 'resource based view of the firm' firm culture has therefore been identified as an intangible resource, as each strategy ultimately encourages the emergence of a distinct company-wide culture with unique characteristics (Fombrun 1983). Sutton (2016) writes the following.

> *"…Effective scaling isn't just about establishing the biggest footprint you can, and as fast as possible. It's even more a challenge of spreading the mindset your greater scale requires…"*

Sullivan (2016) writes as high growth firms grow so fast they, despite the structures and mechanisms introduced through specialization and formalization, cannot solely depend on vertical, top-down accountability alone. New employees who do not know the firm and each other enter in such large numbers, they easily become disaffected, disoriented and even burnt out (Hambrick, 1985; Strauss 1974; Kotter & Sathe, 1978). People need to be accountable to each other on a horizontal or peer-to-peer basis as well. Building a strong culture is an instrument of overcoming the coordination problem resulting from specialization and further division of labor (Grant, 2005), as it helps to provide the necessary interactions across functions and teams as relationship-building activities are often foregone in favor of more-immediate work demands in high growth firms (Sullivan, 2016). Therefore a culture of informal mentoring and feedback should be fostered as an instrument to keep motivation intact (Gulati, 2016).

Furthermore, Barringer et al. (2005) found that high growth firms having a strongly growth-oriented culture, showed a stronger commitment to growth than slower-growth firms, in which growth orientation refers to the maintenance the entrepreneurial spirit. The importance of maintaining the entrepreneurial spirit was already found to be important for successful high growth in the coverage of the different firm stage growth models (Adizes, 1979, Churchill, 1984). Various studies have also addressed the importance of maintaining entrepreneurial spirit, finding agreement on Entrepreneurial Orientation (EO) being a relevant conceptualization of entrepreneurship in existing firms (Wiklund, 2009). EO refers to a firm's strategic orientation, capturing specific entrepreneurial aspects of decision-making styles, methods, and practices, consisting of risk-taking, innovativeness, and pro-activeness (Miller, 1983): innovativeness is the predisposition to engage in creativity and experimentation through the introduction of new products/services as well as technological leadership via R&D in new processes, risk taking involves taking bold actions by venturing into the unknown, borrowing heavily, and/or committing significant resources to firms in uncertain environments and pro-activeness is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand (Rauch et al;. 2004). Drawing on Miller's (1983) original definition of EO, as introduced above, has been expanded with competitive aggressiveness and autonomy as additional components of the EO construct (e.g. Burgelman, 1984; Hart, 1992; MacMillan & Day, 1987; Venkatraman, 1989) with competitive aggressiveness referring to the intensity of a firm's effort to outperform rivals and is characterized by a strong offensive posture or aggressive responses to competitive threats and autonomy referring to independent action undertaken by entrepreneurial leaders or teams directed at bringing about a new firm and seeing it to fruition (Lumpkin and Dess, 1996). As such EO very much reflects how a firm operates (Lumpkin and Dess 1996). Several empirical studies find support for EO's positive impact on performance (cf. Wiklund 1999; Zahra 1991; Zahra and Covin 1995), and that it is important for firms to sustain or enhance their EO over time to outperform competitors and experience high growth rates (Madsen, 2007).

However, it has been found that when firm grows the introduction of a market orientation was an important success factor for sustained high growth (Kakati, 2003; Barringer et al., 2005; Parker, 2010; Harnish, 2014; Ellis, 2017). Also Kanzanjian (1994) found specialization of the Marketing & Sales function to be an important aspect of successfully managing firm growth. While the construct EO has been found to be an important cultural element in the early stages of growth, when a firm matures, the construct of market orientation (MO), reflecting the extent to which firms establish the satisfaction of customer needs and wants as a key value of the firm (Jaworski and Kohli 1993), becomes an additional cultural construct next to EO (Baker & Minkula, 2009). When EO and MO are modeled separately, research has reported direct effects of both constructs on firm profitability (Baker & Sinkula 2002; Covin & Slevin 1986). When modeled simultaneously, however, the direct effect of EO on profitability seems to disappear (Matsuno, Mentzer & Ozsomer 2002; Slater & Narver 1998) and becomes an indirect effect. While some scholars have proposed that entrepreneurial orientation may be an antecedent to market orientation (Matsuno, Mentzer, & Ozsomer 2002), this is debated by others (Baker & Sinkula, 2009). Baker & Sinkula (2009) suggest that EO and MO complement one another to boost profitability. Since EO is an innovation-based cultural construct and firms in their early stages of growth tend to be focused on getting their product or services right, Kanzanjian (1990) reported on the function of Technology/Engineering being already highly specialized from the onset, high growth firms in later stages start adding MO as a more customer-based cultural construct. As MO is typically measured by assessing firms' commitment to base strategic decisions on customer-oriented market intelligence (Slater and Narver 1995; Day 1994, 1991; Jaworski and Kohli 1993; Kohli and Jaworski 1990; Narver and Slater 1990), thus prioritize learning about customers (e.g., likes and dislikes, satisfaction, perceptions), factors influencing customers (e.g. competition, the economy, sociocultural trends), and factors that affect the ability of the firm to influence and satisfy customers (e.g., technology, regulation), these aspects only come into play later in the growth of a firm (Baker & Sinkula, 2009), supported by the functional specialization of Marketing & Sales (Kanzanjian, 1994; Parker, 2010) and formalization of strategic management practices aiding decision-making in the high growth firm when more reliable information becomes available and organizational and environmental uncertainty levels drop, as was illustrated earlier (Castrogiovanni, 1996; Berry, 1998; Gibson, 2005; Brinckmann, 2008). Thus high growth firms should build a strong growth culture in which in the entrepreneurial spirit is operationalized initially through Entrepreneurial Orientation (EO) and reinforced by adding Market Orientation (MO) to fuel firm growth. Drawing on the resource-based view of the firm, Hult and Ketchen (2001) have even suggested that market orientation (MO) and Entrepreneurial Orientation (EO) contribute to the creation of a unique organizational capability.

The above would suggest pursuing an equally strong market oriented (MO) culture as entrepreneurial oriented (EO) culture as optimal, which tends to be the dominant view (Atuahene-Gima and Ko, 2001). However, Bhuian et al. (2005) found that for high growth firms the best combination is building a strong market oriented (MO) culture, but decreasing efforts to maintain an entrepreneurial oriented culture, in other words: market orientation is most effective when the firm maintains a moderate level of entrepreneurship orientation. This finding seems to be in harmony with the earlier finding that successful high growth firms grow one main product first until it is a major contributor to sales and refrain from developing new products or services (Parker, 2010). Too much innovation, fueled by continuously strong entrepreneurial orientation, could mean a high growth firm that has achieved early high growth is thrown in crises due to its relatively immature resource base (Penrose, 1995).

5.4.2.5. *Importance of an IT infrastructure capable of supporting growth*

Although a firm infrastructure can be seen as a physical resource (Grant, 2005), successful high growth firms are able to leverage this physical resource and turn it into an organizational capability. According to Caruzzi (2016) successful high growth requires building an infrastructure that can scale without replicating costs. Huang & Henfridsson (2017) report on the leanness with which firms having digitized their core processes can grow by drawing on and adding to their digital infrastructures (Brynjolfsson & McAfee, 2014; Henfridsson and Bygstad, 2013; Yoo et al., 2010) and hereby helping to increase the clock speed at which they operate (Fine, 1998). This is made possible by digital technology's characteristics that enable separation of function and form, and separation of contents and medium (Benkler, 2006; Yoo et al. 2010). As a result, after initial digital design of core processes, ideas are 'comparably inexpensive to scale' (Henfridsson et al., 2014) as their subsequent reproduction incurs negligible marginal costs (Brynjolfsson & Saunders 2010; Shapiro & Varian 1999). Mitra (2005) found, as a firm grows in size, a superior IT infrastructure increases the productivity of other inputs by controlling the complexity-related costs that the firm incurs as it becomes larger. This is supported by Deloitte (2015) who writes that successful high growth firms anticipate and avoid the complexity of supporting ill-designed product delivery systems that have not been designed for delivery at scale. In order to leverage infrastructural resources into an organizational capability Caruzzi (2016) propagates the necessity of for high growth firms to standardize processes, as, contrary to the popular view, standardization of processes supports creativity by freeing up distracted energy consumed by reinventing approaches every time something is done. For example, for example less than 0,5 percent of payments require Airbnb's involvement (Deloitte, 2015). Caruzzi (2016) continues by stating the following.

> *"…Over time, organizations without standardized processes become a mass of confusion, redundancies, and cost overruns. Smart executives prepare the organization with processes that promote creative freedom while defining repeatable…"*

The above claim is supported by Weill et al. (2006) who found that out of sample of 103 firms, 34 percent had digitized their core processes and relative to their competitors these were found to have higher profitability, experience faster time to market, and get more value from their IT investments. Furthermore, these firms were found to have better access to shared customer data and lower-risk of mission-critical systems failure. Yet, these companies that had digitized their core processes were found to have, in a similar as was found by Mitra (2005), 25 percent lower IT costs (Weill, et al., 2016). In addition, Harnish (2014) argues that digitizing core processes also provides invaluable information to monitor firm performance, make predictions and conduct experiments. This argument is supported by Huang & Henfridsson (2017) reporting on the practices of successful high growth firms being firstly data-driven operation, depicting the process by which firms frame, hedge, and monitor innovation opportunities and risks through analyzing significant volumes of data, secondly, instant release, denoting the ability by which digital firms minimize the time gap between service idea and deployment by concurrently running user-responsive service trialing and modification, and thirdly, swift transformation, describing the ability by which a digital technology is effortlessly contextualized to support new value-in-use. Therefore Weill et al. (2006) argue that to execute a strategy, a foundation should be built first, hereby referring to the automation of core processes required in support of that specific strategy in IT infrastructure. Huang & Henfridsson (2017) report on the practices such firms employ

Interestingly enough, when studying the levels of IT spending of high growth firms and low-growth firms Mitra (2005) found at average level of free cash flow there was no difference in IT spending levels between high growth and low-growth firms (approx. 1.6 percent of sales for both groups). However, as free cash flow increases above this average level, it was found that high growth firms increased their IT spending presumably to build up their IT infrastructure to support future growth (Mitra, 2005). On the other hand, the IT spending level in low-growth firms was primarily determined by the median level of IT spending within their industry and proved relatively insensitive to the free cash available (Mitra, 2005).

5.4.3. Resources and capabilities for a sustainable high growth firm: summary

In the above two paragraphs both findings from cross sectional studies on high growth firms from the Management Theory and Applied Economics fields of study and findings from different firms stage growth models on the dynamic overview of the development of resources, routines and capabilities relevant for successful high growth were identified in order to answer the third sub question of the second research question of this literature study.

What are success factors for sustainable high growth firms from a resources and capabilities point of view that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?

Combining these findings the following overview emerges as illustrated below.

III.	ORGANIZATIONAL SUCCESS FACTORS	SOURCES
Entrepreneur or Entrepreneurial team		
a)	Strong general competencies	Boyatzis, 1982
b)	Ability to delegate	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Yehezkel, 2009; Gulati, 2016
c)	Previous industry experience	Boyatzis, 1982; Barringer et al., 2005; Baum et al., 2001; Box et al., 1993; Cooper, Gimeno-Gascon, & Woo, 1994; Eisenhardt & Schoonhoven, 1990; Siegel, Siegel, & MacMillan, 1993
d)	Technical skills	Boyatzis, 1982; Baum, 2001
e)	Prior entrepreneurial experience	Box et al., 1993; Baum, 2001
f)	Higher education	Sapienza & Grimm, 1997; Baum, 2001; Barringer et al., 2005
g)	Clear decision and vision to grow	Churchill, 1987; Chandler & Hanks, 1994; Bellu and Sherman 1995; Kolvereid and Bullvág 1996; Cliff, 1998; Miner et al. 1994; Wiklund and Shepherd 2003; Sutton, 2014; Barringer et al., 2005
h)	Entrepreneurial team preferable above entrepreneur as individual	Eisenhardt & Schoonhoven, 1990; Kor, 2003; Timmons and Spinelli, 2004; Song, 2008; Reynolds 1993; Francis and Sandberg 2000; Buchholz and Roth, 1987
Childhood firm life cycle stage		
i)	Installing strong and experienced management team to plan for firm growth	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990
j)	Maintaining Entrepreneurial Orientation (EO) to support strong growth culture	Adizes, 1979; Churchill, 1984; Gulati, 2016; Barringer et al.,2005; Wiklund, 2009; Wiklund 1999; Zahra 1991; Zahra and Covin 1995; Madsen, 2007
k)	Introducing basic Strategic Management practices *Initial focus on main issues* *Start information search activities and experimentation to build platform for sense-making, learning and better informed decision-making*	Adizes, 1979; Churchill, 1987; Van Gelderen et al., 2000; Brinkmann, 2008; Andrews, 1971; Hambrick, 1982; Ottum and Moore, 1997; Janis and Mann, 1977; Cooper et al., 1995; Castrogiovanni, 1996; Shepherd et al., 2003
l)	Introducing Basic Financial Planning & Control practices *Initial internal focus on budgeting to manage cash flows*	Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Churchill & Mullings, 2001; Gibson, 2005; Harnish, 2014
Adolescence firm life cycle stage		
m)	Increase functional specialization to a moderate degree; ○ particularly in Marketing & Sales ○ cross-functional teams responsible for an integrated project, product or service preferable over fully functional organization	Churchill, 1987; Kanzanjian, 1990; Child & Kieser, 1981; Whetten, 1986; Horowitz, 2010; Gulati, 2016; Kazanjian & Drazin, 1990; Olson & Bokor, 1995; Hambrick, 1995; Grant, 2005; Ellis, 2017; Peters and Waterman, 1982; George 1977, Kotter and Sathe 1978; Itami and Numagami, 1992; Stam & Wennberg 2009; Slater and Olson 2001; Matsuno et al. 2002; Kakati, 2003; Parker, 2010; Huselid 1995; Storey 2003; Naman and Slevin 1993; Daily et al. 2002

n) Introducing an market orientation (MO) besides maintaining entrepreneurial orientation (EO)	Adizes, 1979; Churchill, 1984; Slater and Olson 2001; Matsuno et al. 2002; Kakati, 2003; Harnish, 2014; Ellis, 2017; Parker, 2010; Gulati, 2016; Barringer et al.,2005; Wiklund, 2009; Wiklund 1999; Zahra 1991; Zahra and Covin 1995; Madsen, 2007; Baker & Sinkula, 2009; Hult and Ketchen, 2001.
o) Increase formalization of Strategic Management to a moderate degree *Focus on most important topics* *Information availability increasing through real-life experiences enabling learning and better informed decision-making.* *Support introduction of market-orientation by prioritize learning about customers*	Adizes, 1979; Churchill, 1987; Naman and Slevin 1993; Daily et al. 2002; Van Gelderen et al., 2000; Brinkmann, 2008; Berry, 1998; Castrogiovanni, 1996; Gibson, 2005; Slater and Narver 1995; Day 1994, 1991; Jaworski and Kohli 1993; Kohli and Jaworski 1990; Narver and Slater 1990.
p) Increase formalization of Financial Planning & Control to a moderate degree *Introduction of forecast based and market oriented financial planning & control*	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Gibson, 2005; Berry, 1998
q) Increase formalization HRM to a moderate degree *Focus on recruitment, development and compensation* *Support building strong growth culture*	Kanzanjian, 1990; Churchill, 1987; Hambrick, 1985; Barringer et al., 2005; Sullivan, 2016; Sutton, 2014, 2016; Gulati, 2016; Harnish, 2014; Parker, 2010.
r) Digitize core processes in IT to leverage growth	Deloitte (2015), Caruzzi (2016), Mitra (2005); Weill et al. (2006); Harnish (2014); Huang & Henfridsson (2017), Brynjolfsson & McAfee (2014); Henfridsson & Bygstad (2013); Yoo et al. (2010), Henfridsson et al., (2014)
Prime adulthood firm life cycle stage	
s) Foster strong Market Orientation (MO) over Entrepreneurial Orientation (EO) to prevent overstretching of resources and capabilities	Churchill, 1987, Bhuian et al., 2005; Parker, 2010; Penrose, 1995; Hult and Ketchen, 2001.
t) Increase formalization of Strategic Management to a high degree *Comprehensive and more formal approach enabled by reduced informational uncertainty* *Introduction of more sophisticated strategic management techniques*	Churchill, 1987; Kanzanjian, 1990; Naman and Slevin 1993; Daily et al. 2002; Berry, 1998; Brinckmann, 2008
u) Increase formalization of Financial Planning & Control to a high degree *Supporting Market Orientation and more sophisticated Strategic Management*	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Gibson, 2005; Berry, 1998
v) Increase formalization of HRM to a high degree *Formalizing cultural values in HR-policies, job descriptions and awareness programs*	Adizes, 1979; Kanzanjian; 1990
w) Increase spending on digitizing core processes *When cash reserves allowing*	Mitra, 2005; Weill et al. (2006)

Table 7: Organizational success factors for high firm growth

5.5. SUCCESS FACTORS FOR A SUSTAINABLE HIGH GROWTH FIRM: SUMMARY

The previous paragraphs summarized findings from literature on success factors for high firm growth firms from the viewpoint of different disciplines within the fields of Management Theory and Applied Economics through a number of sub questions in order to answer the first central research questions, as defined below;

What are success factors for sustainable high growth firms
that can be derived from earlier studies on the subject
from the perspective of Management Theory and Applied Economics?

Based on the findings in this literature study on success factors for high firm growth on a number of variables, particularly in the domain of resources and organizational capabilities, findings from Management Theory and Applied Economics show considerable overlap hereby enhancing the internal validity of these variables. For example, the introduction of a market-orientation to sustain a growth culture, including the need for specialization in Marketing & Sales, is seen as essential for a firm to continue on its growth path. This shift is both supported in firm stage growth models originating from Management theory on Entrepreneurship as cross-sectional Applied Economics studies. In a similar way the role of strategic management, including the conditions for increasing formality and comprehensiveness is confirmed by both Management Theory on Entrepreneurship and Applied Economics. Also the changing role of the entrepreneur, in order to prevent him or her becoming a bottleneck in information sharing, decision-making and goal setting, is confirmed by both Management Theory on Entrepreneurship and Applied Economics. Indirectly this finding is supported by Management Theory on Strategic Management proposing increased formalization and decentralization of decision-making implying a detachment from the personal influences an entrepreneur has in the early stages of growth on strategic planning and decision-making. Management theory on Entrepreneurship and Applied Economics tend to agree on the necessity of focusing on formalizing Financial Planning & Control, HRM and Strategic Management practices first in order to properly support the growth engine of a firm too.

Based on the findings in this literature study on success factors for sustainable high growth firms and the 'resource based view of the firm' as conceptual model, the following overview of success factors can be presented.

I. INDUSTRY SUCCESS FACTORS	SOURCES
a) Emerging or growing markets offer most favorable growth opportunities. ○ Emerging markets offer greatest potential for first movers *Getting it right and moving as fast as possible is essential to dominate respective market before shakeout of firms occurs and consolidation takes place.* ○ Growing markets less risky due to structure and standardization *Moving as fast as possible to gain sufficient market share before a shakeout of firms occurs and consolidation takes place.*	Brush & Chaganti, 1998; Covin, Slevin, & Covin, 1990; Eisenhardt & Schoonhoven, 1990; Chandler & Hanks, 1994; McDougall et al., 1994; Koberg et al., 1996; Park, Chen & Gallagher, 2002; Robinson & McDougall, 2001; Kakati, 2003; Eisenmann et al. 2006; Schilling 2002; Klepper & Grady, 1990; Garnsey, 2005; Johnson et al. 2005; Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999
b) Sizeable emerging or growth markets offer most favorable growth opportunities	Kutcher et al., 2014; Deloitte, 2015
c) B2B markets favored above B2C markets for offering most favorable growth opportunities *Early stable revenue streams easier to realize without considerable marketing costs*	Kutcher et al., 2014; Deloitte, 2015; Parker, 2010; Coutu, 2014
d) Locating in urban areas with right educational institutes close at hand preferable *Provides easier access to skilled resources to fuel growth.*	Romanelli & Schoonhoven, 2001; Coutu, 2014; Folta, Cooper, & Baik, 2006; Stuart and Sorenson, 2003
e) Locating in areas with access to follow-up capital is preferable	Bamford, Dean, & McDougall, 2000a; Cooper et al., 1994; Lee, Lee, & Pennings, 2001; Coutu, 2014
II. SUCCESSFUL STRATEGIES	**SOURCES**
a) Broad based product differentiation strategy when operating in emerging markets Focused product differentiation strategy when operating in growth markets. Shifting from broad based product differentiation strategy to focused product differentiation strategy when market matures	Roger, 1962; Levitt, 1965; Kotler, 2002; Kutcher et al., 2014; Deloitte, 2015; Sandberg & Hofer, 1987; Grant, 2005; Siegel et al., 1993; Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999; Baum, 2001; Kakati, 1999
b) Providing unique value and product superiority for customers	Banbury & Mitchell, 1995; Robinson, 1990; Gilbert, 2006; Barringer et al., 2005; Kakati, 2003; Deloitte, 2015.
c) Providing products and services 'designed to scale'	Kutcher et al., 2014; Deloitte, 2015.
d) Ability to protect products and services	Zahra & Bogner, 1999; Siegel et al, 1993.
e) Growing single product or service first before developing additional ones *More mature processes and transformation towards market-orientation pivotal*	Barringer et al., 2005; Kakati, 2003; Parker, 2010.
f) Expanding markets by transforming products or services into platforms.	Kutcher et al. 2014; Deloitte, 2016.
g) Expanding markets by acquisitions in complementary markets when home markets become saturated.	Penrose, 1995; Banbury & Mitchell, 1995; Harrison, Hitt, Hoskinsson, & Ireland, 2001; Gilbert, 2006; Kutcher et al., 2014; Carucci, 2016.

h)	Expanding markets through internationalization when facing small home markets or when home markets become saturated.	Coutu, 2014; Kutcher et al.; 2014; D'Souza and McDougall, 1989; Gilbert, 2006; Carucci, 2016; Shrader, 1996.
III.	**ORGANIZATIONAL SUCCESS FACTORS**	**SOURCES**
Entrepreneur or Entrepreneurial team		
a)	Strong general competencies	Boyatzis, 1982
b)	Ability to delegate	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Yehezkel, 2009; Gulati, 2016
c)	Previous industry experience	Boyatzis, 1982; Barringer et al., 2005; Baum et al., 2001; Box et al., 1993; Cooper, Gimeno-Gascon, & Woo, 1994; Eisenhardt & Schoonhoven, 1990; Siegel, Siegel, & MacMillan, 1993
d)	Technical skills	Boyatzis, 1982; Baum, 2001
e)	Prior entrepreneurial experience	Box et al., 1993; Baum, 2001
f)	Higher education	Sapienza & Grimm, 1997; Baum, 2001; Barringer et al., 2005
g)	Clear decision and vision to grow	Churchill, 1987; Chandler & Hanks, 1994; Bellu and Sherman 1995; Kolvereid and Bullvåg 1996; Cliff, 1998; Miner et al. 1994; Wiklund and Shepherd 2003; Sutton, 2014; Barringer et al., 2005
h)	Entrepreneurial team preferable above entrepreneur as individual	Eisenhardt & Schoonhoven, 1990; Kor, 2003; Timmons and Spinelli, 2004; Song, 2008; Reynolds 1993; Francis and Sandberg 2000; Buchholz and Roth, 1987
Childhood firm life cycle stage		
i)	Installing strong and experienced management team to plan for firm growth	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990
j)	Maintaining Entrepreneurial Orientation (EO) to support strong growth culture	Adizes, 1979; Churchill, 1984; Gulati, 2016; Barringer et al.,2005; Wiklund, 2009; Wiklund 1999; Zahra 1991; Zahra and Covin 1995; Madsen, 2007
k)	Introducing basic Strategic Management practices *Initial focus on main issues* *Start information search activities and experimentation to build platform for sense-making, learning and better informed decision-making*	Adizes, 1979; Churchill, 1987; Van Gelderen et al., 2000; Brinkmann, 2008; Andrews, 1971; Hambrick, 1982; Ottum and Moore, 1997; Janis and Mann, 1977; Cooper et al., 1995; Castrogiovanni, 1996; Shepherd et al., 2003
l)	Introducing basic Financial Planning & Control practices *Initial internal focus on budgeting to manage cash flows*	Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Churchill & Mullings, 2001; Gibson, 2005; Harnish, 2014
Adolescence firm life cycle stage		

m)	Increase functional specialization to a moderate degree; ○ particularly in Marketing & Sales ○ cross-functional teams responsible for an integrated project, product or service preferable over fully functional organization	Churchill, 1987; Kanzanjian, 1990; Child & Kieser, 1981; Whetten, 1986; Horowitz, 2010; Gulati, 2016; Kazanjian & Drazin, 1990; Olson & Bokor, 1995; Hambrick, 1995; Grant, 2005; Ellis, 2017; Peters and Waterman, 1982; George 1977, Kotter and Sathe 1978; Itami and Numagami, 1992; Stam & Wennberg 2009; Slater and Olson 2001; Matsuno et al. 2002; Kakati, 2003; Parker, 2010; Huselid 1995; Storey 2003; Naman and Slevin 1993; Daily et al. 2002
n)	Introducing an market orientation (MO) besides maintaining entrepreneurial orientation (EO)	Adizes, 1979; Churchill, 1984; Slater and Olson 2001; Matsuno et al. 2002; Kakati, 2003; Harnish, 2014; Ellis, 2017; Parker, 2010; Gulati, 2016; Barringer et al.,2005; Wiklund, 2009; Wiklund 1999; Zahra 1991; Zahra and Covin 1995; Madsen, 2007; Baker & Sinkula, 2009; Hult and Ketchen, 2001.
o)	Increase formalization of Strategic Management to a moderate degree *Focus on most important topics* *Information availability increasing through real-life experiences enabling learning and better informed decision-making.* *Support introduction of market-orientation by prioritize learning about customers*	Adizes, 1979; Churchill, 1987; Naman and Slevin 1993; Daily et al. 2002; Van Gelderen et al., 2000; Brinkmann, 2008; Berry, 1998; Castrogiovanni, 1996; Gibson, 2005; Slater and Narver 1995; Day 1994, 1991; Jaworski and Kohli 1993; Kohli and Jaworski 1990; Narver and Slater 1990.
p)	Increase formalization of Financial Planning & Control to a moderate degree *Introduction of forecast based and market oriented financial planning & control*	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Gibson, 2005; Berry, 1998
q)	Increase formalization HRM to a moderate degree *Focus on recruitment, development and compensation* *Support building strong growth culture*	Kanzanjian, 1990; Churchill, 1987; Hambrick, 1985; Barringer et al., 2005; Sullivan, 2016; Sutton, 2014, 2016; Gulati, 2016; Harnish, 2014; Parker, 2010.
r)	Digitize core processes in IT to leverage growth	Deloitte (2015), Caruzzi (2016), Mitra (2005); Weill et al. (2006); Harnish (2014); Huang & Henfridsson (2017) ,Brynjolfsson & McAfee (2014); Henfridsson & Bygstad (2013); Yoo et al. (2010); Henfridsson et al., (2014) Henfridsson et al. (2014)
Prime adulthood firm life cycle stage		
s)	Foster strong Market Orientation (MO) over Entrepreneurial Orientation (EO) to prevent overstretching of resources and capabilities	Churchill, 1987, Bhuian et al., 2005; Parker, 2010; Penrose, 1995; Hult and Ketchen, 2001.
t)	Increase formalization of Strategic Management to a high degree *Comprehensive and more formal approach enabled by reduced informational uncertainty* *Introduction of more sophisticated strategic management techniques*	Churchill, 1987; Kanzanjian, 1990; Naman and Slevin 1993; Daily et al. 2002; Berry, 1998; Brinckmann, 2008
u)	Increase formalization of Financial Planning & Control to a high degree *Supporting Market Orientation and more sophisticated Strategic Management*	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Gibson, 2005; Berry, 1998
v)	Increase formalization of HRM to a high degree *Formalizing cultural values in HR-policies, job descriptions and awareness programs*	Adizes, 1979; Kanzanjian; 1990
w)	Increase spending on digitizing core processes *When cash reserves allowing*	Mitra, 2005; Weill et al., 2006

Table 8: Overview of success factors for firm high firm growth

Above the findings from the literatures study with regards to the success factors for sustainable high growth firms were summarized in answer the second research question of this study. Especially in the area of organizational success factors, with regards to the supporting resources, routines and capabilities for high firm growth the findings from Organization Theory, Management Theory and Applied Economics showed considerable mutual support and as such support the internal validity of these success factors. In the next chapter this overview will be externally validated by assessing its fit with a number of high growth cases in order the answer the third central research question of this study:

What is the fit of success factors for sustainable high growth firms identified from literature against the selected case studies in this study?

---

6. CASE STUDIES ON SUSTAINABLE HIGH GROWTH FIRMS

While in the previous chapter a comprehensive literature study was conducted in order to provide an overview of relevant success factors for sustainable high growth firms, this chapter aims to externally validate the findings from literature by assessing their fit with a number of high growth cases in order the answer the third central research question of this study and increase external validity of findings through triangulation.

What is the fit of identified success factors for sustainable high growth firms from literature against the selected case studies in this study?

In the following paragraph the overall results are presented of the assessment of the high growth cases of Minihouse | Multihouse, Baan, Bol.com and Prospex on what success factors for sustainable high growth firms from literature are supported, and which are not. In addition, any notable success factors identifiable from the cases not covered by the success factors for sustainable high growth firms will be discussed. Through the above the first (a) and second (b) sub questions of the third central research question of this study will be addressed.

What success factors for sustainable high growth firms can be confirmed through analysis of the various cases?

What additional success factors for sustainable high growth firms, if any, can be derived through analysis of the various cases?

The four different high growth cases of Minihouse | Multihouse, Baan, Bol.com and Prospex are covered each individually in the Annexes N to Y. In these Annexes, for each case, an introduction is provided, followed by an assessment on what success factors for sustainable high growth firms from literature are supported (Yes), what success factors are not supported (No), what success factors are potentially supported, but no direct evidence is presented in the case (Maybe) and what success factors are unable to be classified for direct and indirect information is missing (Unknown). In addition, any notable success factors identifiable from each case not covered by the success factors for sustainable high growth firms from literature are covered in the Annexes as well. As was noted above, the combined results of the case analyses are presented below.

6.1. (DIS)CONFIRMED SUCCESS FACTORS FOR SUSTAINABLE HIGH GROWTH FIRMS

Below the results from all four cases are evaluated together. As was described as a guideline in the research design at least three out of the four cases needed to support a success factor for a high growth firm to make it the final list of success factors.

6.1.1. (DIS)CONFIRMED INDUSTRY SUCCESS FACTORS FOR SUSTAINABLE HIGH GROWTH FIRMS

From the viewpoint of industry success factors only locating in a specific area for staffing and funding purposes does not seem to be sufficiently supported. Other success factors were found to be supported and can be confirmed.

I. Industry success factors from literature	Confirmed? (Yes / No / Maybe / Unknown)				Final Conclusion
	Minihouse | Multihouse	Baan	Bol.com	Prospex	
a) Emerging or growing markets offer most favorable growth opportunities. ○ Emerging markets offer greatest potential for first movers ○ Growing markets less risky due to structure and standardization	Yes	Yes	Yes	Maybe	**Confirmed**
b) Sizeable emerging or growth markets offer most favorable growth opportunities	Yes	Yes	Yes	Yes	**Confirmed**
c) B2B markets favored above B2C markets for offering most favorable growth opportunities	Yes	Yes	No	Yes	**Confirmed**
d) Locating in urban areas with right educational institutes close at hand preferable	Unknown	Maybe	Unknown	Yes	Disconfirmed
e) Locating in areas with access to follow-up capital is preferable	Unknown	Maybe	Unknown	Maybe	Disconfirmed

Table 9: Overview case results - industry success factors

6.1.2. (DIS)CONFIRMED STRATEGIC SUCCESS FACTORS FOR SUSTAINABLE HIGH GROWTH FIRMS

From the viewpoint of strategic success factors mixed results were found, as is illustrated below.

Support was found for providing unique value and product superiority to customers as a superior strategy for high growth, including the ability of these products and services to scale and in some way being able to protect them. Also confirmed was a broad based product differentiation strategy when starting off in an emergent market and a more focused product differentiation strategy in growth markets as superior strategies for sustainable high growth firms.

However, the transition from a broad based product differentiation strategy towards a more focused product differentiation strategy when markets maturing could not be confirmed. While Minihouse | Multihouse and Baan, being part of an emerging market, started with a broad based differentiation strategy, Bol.com pursued a more focused strategy first and even broadened its strategy when it found it was running out of additional categories in its focus markets. An explanation for this observation could be the origins of Bol.com within Bertelsmann setting limitations on its original product scope or the B2C market in which a broad based product differentiation strategy is much harder to pursue than in the B2B market. Furthermore, as Bol.com eventually became market leader in e-commerce in The Netherlands, it might have enabled it to broaden its perspective instead of narrowing it down for the sole reason of being the market leader. Prospex showed that even in mature markets high growth can be achieved when providing product or services that provide unique value to the market. This confirms findings from answering the first research question of this study that showed that high growth is not necessarily limited to emerging and growth industries.

Also growing a single product or service first before developing additional ones proved difficult to confirm primarily due to the lack of information available. Furthermore, it proved difficult to define whether a firm is mature enough to be certain it can properly handle launching additional products.

Finally, the three different market expansion strategies received mixed results, primarily as every firm made its own assessment on how to pursue growth and different strategies can exist exclusively. It is therefore logical that every case assesses each strategy differently. In a similar way, all firm cases seem to positively assess the platform idea as success factor for growth, although Bol.com being the only case putting this into practice and Prospex currently evaluating an investment in a platform to support their growth. In the time of Minihouse | Multihouse and Baan the platform idea was hardly feasible due to the absence of the opportunities provided by the Internet nowadays. Therefore, the becoming a platform as a market expansion strategy is still included.

II.	Strategic success factors from literature	Confirmed? (Yes / No / Maybe / Unknown)				Final conclusion
		Minihouse | Multihouse	Baan	Bol.com	Prospex	
a)	Broad based product differentiation strategy when operating in emerging markets	Yes	Yes	No		**Confirmed**
	Focused product differentiation strategy when operating in growth markets.				Yes	
	Shifting from broad based product differentiation strategy to focused product differentiation strategy when market matures	Maybe	Maybe	No	N/A	Disconfirmed
b)	Providing unique value and product superiority for customers	Yes	Yes	Yes	Yes	**Confirmed**
c)	Providing products and services ‘designed to scale’	Yes	Yes	Yes	Yes	**Confirmed**
d)	Ability to protect products and services	Yes	Yes	Yes	Maybe	**Confirmed**
e)	Growing single product or service first before developing additional ones	Unknown	Maybe	Maybe	Yes	Disconfirmed
f)	Expanding markets by transforming products or services into platforms.	Maybe	Maybe	Yes	Yes	**Confirmed***
g)	Expanding markets by acquisitions in complementary markets when home markets become saturated.	Maybe	Yes	No	Yes	**Confirmed***
h)	Expanding markets through internationalization when facing small home markets or when home markets become saturated.	Maybe	Yes	Maybe	Maybe	**Confirmed***

Table 10: Overview case results - strategic success factors

6.1.3. (DIS)CONFIRMED ORGANIZATIONAL SUCCESS FACTORS FOR SUSTAINABLE HIGH GROWTH FIRMS

From the viewpoint of organizational success factors for sustainable high growth firms found from literature, the entrepreneurial characteristics were found to be largely supported by the various cases, except for technical skills and prior entrepreneurial experience. In none of the cases, except for the first CEO of Bol.com who stayed with the firm for just under two years, founders had entrepreneurial experience. Although prior entrepreneurial experience is therefore not a prerequisite for high firm growth, it could be argued that having prior entrepreneurial experience does not hamper high firm growth either. Furthermore, although in literature the preference for the entrepreneur as individual or entrepreneurial team is debated, all cases support the latter.

III. Organizational success factors from literature	Confirmed? (Yes / No / Maybe / Unknown)				Final conclusion
	Minihouse | Multihouse	Baan	Bol.com	Prospex	
Entrepreneur or Entrepreneurial team					
a) Strong general competencies	Yes	Yes	Yes	Maybe	**Confirmed**
b) Ability to delegate	Yes	Yes	Yes	Yes	**Confirmed**
c) Previous industry experience	Yes	Maybe	Yes	Yes	**Confirmed**
d) Technical skills	Yes	Maybe	Yes	Maybe	Disconfirmed
e) Prior entrepreneurial experience	No	No	Maybe	No	Disconfirmed
f) Higher education	Yes	Maybe	Yes	Yes	**Confirmed**
g) Clear decision and vision to grow	Yes	Yes	Yes	Yes	**Confirmed**
h) Entrepreneurial team preferable above entrepreneur as individual	Yes	Maybe	Yes	Yes	**Confirmed**

Table 11: Overview case results - organizational success factors (1/2)

Validating organizational success factors for sustainable high growth firms found from literature against the various cases across the different lifecycle stages proved not always to be straightforward, as the level of detail of each success factors across the different life cycle stages was found to be fairly limited. This made the distinction between the different life cycle stages sometimes difficult to make. This proved especially the case with the prime adulthood stage and, for this reason, success factors in the prime adulthood life cycle stage all had to be disconfirmed. Also some practices which are in literature reported as essential for sustainable high growth firms, such as formalization of HR-practices, needed to be disconfirmed in this study, as these practices could only be, at best, indirectly supported for receiving too little attention in the cases. This seem remarkable all cases added a large number of new employees every year. It goes without saying that such numbers put stress on the HR-function and would require developmental actions to further professionalize this function. In a similar way digitization of core processes receives fairly limited attention, although Minihouse | Multihouse, Baan and Bol.com are all technology firms. The reason for this could be that all publications are written from an external, founder or marketing perspective, each addressing their own specific fields of interest. To support this explanation more explicit information was found to be available in the relationship between introduction of a market orientation and formalization of strategic management and financial planning & control. However, in this triangle it proved sometimes hard to clearly distinguish items and allocate them to one or another success factor.

	III. Organizational success factors from literature (continued)	Confirmed? (Yes / No / Maybe / Unknown)				Final conclusion
		Minihouse | Multihouse	**Baan**	**Bol.com**	**Prospex**	
Childhood firm life cycle stage						
i)	Installing strong and experienced management team to plan for firm growth	Maybe	Yes	Yes	Yes	**Confirmed**
j)	Maintaining Entrepreneurial Orientation (EO) to support strong growth culture	Maybe	Yes	Yes	Yes	**Confirmed**
k)	Introducing basic Strategic Management practices	Maybe	Maybe	Yes	Yes	Disconfirmed
l)	Introducing basic Financial Planning & Control practices	Maybe	Yes	Yes	Yes	**Confirmed**
Adolescence firm life cycle stage						
m)	Increase functional specialization to a moderate degree	Maybe	Yes	Yes	Yes	**Confirmed**
n)	Introducing an market orientation (MO) besides maintaining entrepreneurial orientation (EO)	Yes	Yes	Yes	Yes	**Confirmed**
o)	Increase formalization of Strategic Management to a moderate degree	Maybe	Maybe	Yes	Yes	**Confirmed**
p)	Increase formalization of Financial Planning & Control to a moderate degree	Yes	Yes	Yes	Yes	**Confirmed**
q)	Increase formalization HRM to a moderate degree	Maybe	Maybe	Yes	Yes	Disconfirmed
r)	Digitize core processes in IT to leverage growth	Unknown	Maybe	Yes	Yes	Disconfirmed
Prime adulthood firm life cycle stage						
s)	Foster strong Market Orientation (MO) over Entrepreneurial Orientation (EO) to prevent overstretching of resources and capabilities	Maybe	Maybe	Maybe	Maybe	Disconfirmed
t)	Increase formalization of Strategic Management to a high degree	Maybe	Maybe	Maybe	Maybe	Disconfirmed
u)	Increase formalization of Financial Planning & Control to a high degree	Maybe	Yes	Unknown	Maybe	Disconfirmed
v)	Increase formalization of HRM to a high degree	Maybe	Unknown	Unknown	Maybe	Disconfirmed
w)	Increase spending on digitizing core processes	Unknown	Maybe	Yes	Maybe	Disconfirmed

Table 12: Overview case results - organizational success factors (2/2)

6.2. ADDITIONAL SUCCESS FACTORS FOR SUSTAINABLE HIGH GROWTH FIRMS AND OBSERVATIONS

In addition to the (dis)conformation of identified success factors for sustainable high growth firms from literature, any notable new success factors identifiable were discussed in order to answer the second sub question (b) of the third central research question.

What additional success factors for sustainable high growth firms (if any) can be derived through analysis of the various cases?

In answering this sub question one additional success factors was added, which is repeated below. Explicitly stated in the Prospex case, but attributable to all other cases, is the need for firms to, in time, organize to reinvent themselves, as lifecycles of products and services are shortening and firms run the risk of running out of gas now sooner than was the case in the past. This item does not explicitly show up in the organizational success factors for high firm growth found from literature, despite its importance for sustained high growth. For this reason this success factor was added.

<u>New organizational success factor</u>

A high growth firm should timely enough develop capabilities enabling it to reinvent itself in anticipation of decline of its product or services or its chosen markets.

Also a number of observations were made. It was found from the reflection on additional success factors that going public had an enormous impact on the external requirements put on the internal workings of these firms and the stress put on the firm due to external growth expectations. Therefore the following observation was made.

<u>Observation a.</u>

The choice of obtaining growth funding through an IPO sets extra requirements on organizational success factors for sustainable high growth firms, especially in the area of, but not restricted to, financial planning & control.

Furthermore, when reflecting on Minihouse | Multihouse, Baan and Prospex, all needed to address considerable time and effort in acquiring target firms, learning, in some cases, the hard way the merger & acquisition pitfalls. Therefore the following observation was made.

<u>Observation b.</u>

The choice to pursue an acquisition strategy for high growth firms to expand their markets and sustain high growth sets extra requirements on organizational success factors for sustainable high growth firms.

Finally, it was found that for Baan, Bol.com and Prospex internationalization of activities proved to have considerable impact on the internal operations requiring specialist knowledge and experience. Therefore the following observation was made.

> Observation c.
>
> The choice to pursue an internationalization strategy for high growth firms to expand their markets and sustain high growth sets extra requirements on organizational success factors for sustainable high growth firms.

Based on the above, it could be argued that follow-up up strategies for sustained high growth, as identified by the literature study, provide an extra layer of complexity that stretches an already stretched high growth firm to the max. The extra layer is, however, not addressed in current literature on high growth firms. Therefore, additional insights are required to steer high growth firms in the right direction regarding their organizational arrangements for market expansion.

6.3. CASE STUDIES ON SUSTAINABLE HIGH GROWTH FIRMS: SUMMARY

Above the results from the validation of the findings from literature by assessing their fit with a number of high growth cases in order the answer the third central research question of this study and increase external validity of findings through triangulation.

What is the fit of identified success factors for sustainable high growth firms from literature against the selected case studies in this study?

These results were derived from the individual assessment of the high growth cases of Minihouse | Multihouse, Baan, Bol.com and Prospex on what success factors for sustainable high growth firms from literature were found to be supported, and which were not. Those success factors supported were confirmed by at least three out of the four cases. In addition, any notable success factors identifiable from the cases not covered by the success factors for sustainable high growth firms were discussed.

in the following chapter the results of this study will be discussed, addressing conclusions, limitations, recommendations and contributions made by this study.

7. RESULTS

This study found its roots in the widespread observations that knowledge on the high growth firm, despite the long-standing interest in the subject, still is regarded as highly fragmented. This fragmentation of knowledge is found to be hampering progress in the development of theory on firm growth and high growth firms in particular. In this study is has been reaffirmed that this limited progress is troublesome as many studies have reported on the importance of the high growth firm from both a value creation as a job creation perspective. As at the same time the odds of becoming and remaining a high growth firm are very small, overcoming the reported knowledge fragmentation seems to be of highest importance in order to improve, through better insights on the subject, the probability of firms becoming and remaining high growth firms. For this reason the following research goal was defined for this study.

Contribute to overcoming the fragmented body of knowledge on success factors for sustainable high growth firms

---

Due to the reported fragmentation of knowledge, this study made an attempt to identify the various success factors for high growth firms identified by a large variety of studies from different fields of study, most notably, Management Theory and Applied Economics. Therefore the following problem statement was defined.

What are success factors for a sustainable high growth firm?

In total over 75 articles and 15 plus books were reviewed as part of this literature study. In order to help structure the various success factors for a high growth firm, the 'resource based view of the firm' was used as conceptual framework for this study, structuring the success factors found into three major clusters, namely industry success factors, strategic success factors and success factors from an organizational resources and capabilities point of view. In support of the above problem statement three central research questions were defined, as illustrated below. As the definition of a high growth firm was found to differ considerably across different studies, it was found necessary, besides discussing success factors, to discuss the definition of a high growth firm first. Although a comprehensive literature review on the subject high growth firms was the focus of this study, the various success factors identified were also validated against four different high growth cases in order to establish triangulation and as such increase the validity of the outcomes of this study.

What is the definition of a high growth firm?

What are success factors for sustainable high growth firms that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?

What is the fit of success factors for sustainable high growth firms identified from literature against the selected case studies in this study?

In this chapter the main conclusions, most notable limitations of this study, key recommendations and contributions made by this study will be discussed.

7.1. CONCLUSIONS & RECOMMENDATIONS: WHAT IS THE DEFINITION OF A HIGH GROWTH FIRM

The first central research question to be answered in this literature study was:

What is the definition of a high growth firm?

A number of conclusions were drawn and recommendations were made. These are summarized below.

7.1.1. CONCLUSIONS: WHAT IS THE DEFINITION OF A HIGH GROWTH FIRM

Although apparently a simple question, providing a clear answer proved not to be that simple, as definitions used for a high growth firm were found to vary considerably. As these definition provide the basis for the majority of findings in literature on success factors for high growth firms, considerable time and effort was spent in this study on covering the question what a high growth firm is.

It was found that the most dominant way to define a high growth firm is based on the selection of a growth outcome measure and the determination whether a firm performs better than a predefined threshold or not, with those firms exceeding the threshold being considered high growth firms. This way of defining a high growth firm, however, has been found to be highly troublesome as great variation in measures used, thresholds and additional restrictions was found to exist. As a result the majority of studies prove to be incomparable despite various efforts to integrate findings. Therefore, according to this study the knowledge gap observed by many on theory development of firm growth is far from surprising. Therefore the following conclusion was derived from the extensive coverage in this study on defining the high growth firm.

A. Conclusion on shortcomings of dominant method of defining a high growth firm

> The great variation in definitions of high growth firms, measures used and thresholds (and other restrictions) applied hampers the comparability of studies on firm growth, limiting progress in knowledge development on high firm growth.

It was found that the most used growth outcome measures were sales growth and employment growth, as these represent the most dominant perspectives of interest on high growth firms, being value creation potential and employment growth potential. As a result most studies were found to either use sales growth or employment growth in isolation from each other. An alternative approach to define a high growth firm was based on the relative relationship between sales growth and employment growth, translated into a productivity growth measure. Such productivity growth measure, it was found, tends to capture the leveraging of resources, thus scalability nature of growth, better, than definitions of a high growth either addressing sales growth or employment growth independently. Based on the above the following conclusions were drawn on the definition of a high growth firm based on how high growth firms are measured.

B. Conclusions on defining a high growth firms based on how it is measured

Based on how it is measured, a high growth firm is a firm that

…is a high performer measured by sales growth when taking the perspective of value creation success

…is a high performer measured by employment growth when taking the perspective of employment growth

…is a high performer measured by sales growth relative to employment growth when taking the perspective of productivity growth

… is able to scale by growing its sales at a much higher rate than it needs to add employees and does this in a way that it consistently outperforms it peers

As definitions of a high growth firm based on outcome measures of growth were found to troublesome due to their great variation and their limited informative ability on the characteristics of a high growth firm, the life cycle perspective of a firm was addressed to identify the relevant firm lifecycle stages of a high growth firm and deduct additional characteristics of a high growth firm. Based on the above the following conclusions were drawn on the definition of a high growth firm based on relevant life cycle stages.

C. Conclusions on defining a high growth firms based on relevant life cycle stages

Based on relevant lifecycle stages, a high growth firm is a firm that

… is rapidly maturing through the firm lifecycle stages of childhood, adolescence and prime adulthood

…has left the birth and infancy lifecycle stages behind by successfully finding a solution to a problem, translating it into a product or service and receiving strong support and uptake by customers

…is able to successfully navigate the challenges of the various firm growth stages in a (very) short timeframe

…is likely, but not necessarily, a younger and smaller firm

…can be found in any sector of the economy with a preference for high growth sectors or high growth niches

…has a growth rate independent from growth rates in its sector of the economy

7.1.2. RECOMMENDATIONS: WHAT IS THE DEFINITION OF A HIGH GROWTH FIRM

In order to address the current shortcomings in defining a high growth firm based on growth outcome measures, the following recommendations were identified to improve defining and identifying high growth firms. This will help to improve comparability of studies and thus enabling progress in the knowledge development on the high growth firm.

A. Recommendations for improving the defining and identifying a high growth firm

…When defining a high growth firm by its measures, sales growth, employment growth or productivity growth should not be used interchangeable

…When defining a high growth firm it is recommended to explicitly state the perspective(s) of interest one takes, being value creation, job creation or scaling productivity

…When defining a high growth firm relative measures are better suited to compare sector peers if corrected for size bias

…When defining a high growth firm the most sustainable high growth firms are most likely to be found amongst the 5% best performers

…When defining a high growth firm the most sustainable high growth firms are most likely to be found amongst firms that have not experienced plateauing or negative growth over time

7.2. CONCLUSIONS & RECOMMENDATIONS: WHAT ARE SUCCESS FACTORS FOR SUSTAINABLE HIGH GROWTH FIRMS

The second central research question to be answered in this literature study was:

What are success factors for sustainable high growth firms that can be derived from earlier studies on the subject from the perspective of Management Theory and Applied Economics?

Furthermore, in order to establish triangulation, the above findings from answering the second central research question were tested against four high growth cases consisting of Minihouse | Multihouse, Baan, Bol.com and Prospex, in order to answer the third central research question of this study:

What is the fit of success factors for sustainable high growth firms identified from literature against the selected case studies in this study?

Below the success factors for a sustainable high growth firm identified from the extensive literature review and found confirmation in at least three out of four cases are illustrated. Based on the fit analysis of success factors a number of additional conclusions were drawn and recommendations made. These are covered below as well.

7.2.1. CONCLUSIONS: WHAT ARE SUCCESS FACTORS FOR A SUSTAINABLE HIGH GROWTH FIRM?

Based on the confirmation of success factors for sustainable high growth identified from literature against the Minihouse | Multihouse, Baan, Bol.com and Prospex cases , the following final conclusions were drawn.

A. Confirmed success factors for sustainable high growth firms

I.	INDUSTRY SUCCESS FACTORS	SOURCES	CONCLUSION
a)	Emerging or growing markets offer most favorable growth opportunities. ○ Emerging markets offer greatest potential for first movers *Getting it right and moving as fast as possible is essential to dominate respective market before shakeout of firms occurs and consolidation takes place.* ○ Growing markets less risky due to structure and standardization *Moving as fast as possible to gain sufficient market share before a shakeout of firms occurs and consolidation takes place.*	Brush & Chaganti, 1998; Covin, Slevin, & Covin, 1990; Eisenhardt & Schoonhoven, 1990; Chandler & Hanks, 1994; McDougall et al., 1994; Koberg et al., 1996; Park, Chen & Gallagher, 2002; Robinson & McDougall, 2001; Kakati, 2003; Eisenmann et al. 2006; Schilling 2002; Klepper & Grady, 1990; Garnsey, 2005; Johnson et al. 2005; Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999	**Confirmed**
b)	Sizeable emerging or growth markets offer most favorable growth opportunities	Kutcher et al., 2014; Deloitte, 2015	**Confirmed**
c)	B2B markets favored above B2C markets for offering most favorable growth opportunities *Early stable revenue streams easier to realize without considerable marketing costs*	Kutcher et al., 2014; Deloitte, 2015; Parker, 2010; Coutu, 2014	**Confirmed**
d)	Locating in urban areas with right educational institutes close at hand preferable *Provides easier access to skilled resources to fuel growth.*	Romanelli & Schoonhoven, 2001; Coutu, 2014; Folta, Cooper, & Baik, 2006; Stuart and Sorenson, 2003	Disconfirmed
e)	Locating in areas with access to follow-up capital is preferable	Bamford, Dean, & McDougall, 2000a; Cooper et al., 1994; Lee, Lee, & Pennings, 2001; Coutu, 2014	Disconfirmed
II.	**SUCCESSFUL STRATEGIES**	**SOURCES**	**CONCLUSION**
a)	Broad based product differentiation strategy when operating in emerging markets Focused product differentiation strategy when operating in growth markets. Shifting from broad based product differentiation strategy to focused product differentiation strategy when market matures	Roger, 1962; Levitt, 1965; Kotler, 2002; Kutcher et al., 2014; Deloitte, 2015; Sandberg & Hofer, 1987; Grant, 2005; Siegel et al., 1993; Nicholls-Nixon, Cooper, & Woo, 2000; Zahra & Bogner, 1999; Baum, 2001; Kakati, 1999	**Confirmed** Disconfirmed
b)	Providing unique value and product superiority for customers	Banbury & Mitchell, 1995; Robinson, 1990; Gilbert, 2006; Barringer et al., 2005; Kakati, 2003; Deloitte, 2015.	**Confirmed**
c)	Providing products and services ‘designed to scale’	Kutcher et al., 2014; Deloitte, 2015.	**Confirmed**
d)	Ability to protect products and services	Zahra & Bogner, 1999; Siegel et al, 1993.	**Confirmed**
e)	Growing single product or service first before developing additional ones	Barringer et al., 2005; Kakati, 2003; Parker, 2010.	Disconfirmed

	More mature processes and transformation towards market-orientation pivotal		
f)	Expanding markets by transforming products or services into platforms.	Kutcher et al. 2014; Deloitte, 2016.	**Confirmed***
g)	Expanding markets by acquisitions in complementary markets when home markets become saturated.	Penrose, 1995; Banbury & Mitchell, 1995; Harrison, Hitt, Hoskinsson, & Ireland, 2001; Gilbert, 2006; Kutcher et al., 2014; Carucci, 2016.	**Confirmed***
h)	Expanding markets through internationalization when facing small home markets or when home markets become saturated.	Coutu, 2014; Kutcher et al.; 2014; D'Souza and McDougall, 1989; Gilbert, 2006; Carucci, 2016; Shrader, 1996.	**Confirmed***
III.	**ORGANIZATIONAL SUCCESS FACTORS**	**SOURCES**	**CONCLUSION**
Entrepreneur or Entrepreneurial team			
a)	Strong general competencies	Boyatzis, 1982	**Confirmed**
b)	Ability to delegate	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Yehezkel, 2009; Gulati, 2016	**Confirmed**
c)	Previous industry experience	Boyatzis, 1982; Barringer et al., 2005; Baum et al., 2001; Box et al., 1993; Cooper, Gimeno-Gascon, & Woo, 1994; Eisenhardt & Schoonhoven, 1990; Siegel, Siegel, & MacMillan, 1993	**Confirmed**
d)	Technical skills	Boyatzis, 1982; Baum, 2001	Disconfirmed
e)	Prior entrepreneurial experience	Box et al., 1993; Baum, 2001	Disconfirmed
f)	Higher education	Sapienza & Grimm, 1997; Baum, 2001; Barringer et al., 2005	**Confirmed**
g)	Clear decision and vision to grow	Churchill, 1987; Chandler & Hanks, 1994; Bellu and Sherman 1995; Kolvereid and Bullvåg 1996; Cliff, 1998; Miner et al. 1994; Wiklund and Shepherd 2003; Sutton, 2014; Barringer et al., 2005	**Confirmed**
h)	Entrepreneurial team preferable above entrepreneur as individual	Eisenhardt & Schoonhoven, 1990; Kor, 2003; Timmons and Spinelli, 2004; Song, 2008; Reynolds 1993; Francis and Sandberg 2000; Buchholz and Roth, 1987	**Confirmed**
Childhood firm life cycle stage			
i)	Installing strong and experienced management team to plan for firm growth	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990	**Confirmed**
j)	Maintaining Entrepreneurial Orientation (EO) to support strong growth culture	Adizes, 1979; Churchill, 1984; Gulati, 2016; Barringer et al.,2005; Wiklund, 2009; Wiklund 1999; Zahra 1991; Zahra and Covin 1995; Madsen, 2007	**Confirmed**
k)	Introducing basic Strategic Management practices *Initial focus on main issues* *Start information search activities and experimentation to build platform for sense-making, learning and better informed decision-making*	Adizes, 1979; Churchill, 1987; Van Gelderen et al., 2000; Brinkmann, 2008; Andrews, 1971; Hambrick, 1982; Ottum and Moore, 1997; Janis and Mann, 1977; Cooper et al., 1995; Castrogiovanni, 1996; Shepherd et al., 2003	Disconfirmed
l)	Introducing basic Financial Planning & Control practices *Initial internal focus on budgeting to manage cash flows*	Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Churchill & Mullings, 2001; Gibson, 2005; Harnish, 2014	**Confirmed**
Adolescence firm life cycle stage			

m)	Increase functional specialization to a moderate degree; ○ particularly in Marketing & Sales ○ cross-functional teams responsible for an integrated project, product or service preferable over fully functional organization	Churchill, 1987; Kanzanjian, 1990; Child & Kieser, 1981; Whetten, 1986; Horowitz, 2010; Gulati, 2016; Kazanjian & Drazin, 1990; Olson & Bokor, 1995; Hambrick, 1995; Grant, 2005; Ellis, 2017; Peters and Waterman, 1982; George 1977, Kotter and Sathe 1978; Itami and Numagami, 1992; Stam & Wennberg 2009; Slater and Olson 2001; Matsuno et al. 2002; Kakati, 2003; Parker, 2010; Huselid 1995; Storey 2003; Naman and Slevin 1993; Daily et al. 2002	**Confirmed**
n)	Introducing an market orientation (MO) besides maintaining entrepreneurial orientation (EO)	Adizes, 1979; Churchill, 1984; Slater and Olson 2001; Matsuno et al. 2002; Kakati, 2003; Harnish, 2014; Ellis, 2017; Parker, 2010; Gulati, 2016; Barringer et al.,2005; Wiklund, 2009; Wiklund 1999; Zahra 1991; Zahra and Covin 1995; Madsen, 2007; Baker & Sinkula, 2009; Hult and Ketchen, 2001.	**Confirmed**
o)	Increase formalization of Strategic Management to a moderate degree *Focus on most important topics* *Information availability increasing through real-life experiences enabling learning and better informed decision-making.* *Support introduction of market-orientation by prioritize learning about customers*	Adizes, 1979; Churchill, 1987; Naman and Slevin 1993; Daily et al. 2002; Van Gelderen et al., 2000; Brinkmann, 2008; Berry, 1998; Castrogiovanni, 1996; Gibson, 2005; Slater and Narver 1995; Day 1994, 1991; Jaworski and Kohli 1993; Kohli and Jaworski 1990; Narver and Slater 1990.	**Confirmed**
p)	Increase formalization of Financial Planning & Control to a moderate degree *Introduction of forecast based and market oriented financial planning & control*	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Gibson, 2005; Berry, 1998	**Confirmed**
q)	Increase formalization HRM to a moderate degree *Focus on recruitment, development and compensation* *Support building strong growth culture*	Kanzanjian, 1990; Churchill, 1987; Hambrick, 1985; Barringer et al., 2005; Sullivan, 2016; Sutton, 2014, 2016; Gulati, 2016; Harnish, 2014; Parker, 2010.	Disconfirmed
r)	Digitize core processes in IT to leverage growth	Deloitte (2015), Caruzzi (2016), Mitra (2005); Weill et al. (2006); Harnish (2014); Huang & Henfridsson (2017) ,Brynjolfsson & McAfee (2014); Henfridsson & Bygstad (2013); Yoo et al. (2010); Henfridsson et al., (2014) Henfridsson et al. (2014)	Disconfirmed
Prime adulthood firm life cycle stage			
s)	Foster strong Market Orientation (MO) over Entrepreneurial Orientation (EO) to prevent overstretching of resources and capabilities	Churchill, 1987, Bhuian et al., 2005; Parker, 2010; Penrose, 1995; Hult and Ketchen, 2001.	Disconfirmed
t)	Increase formalization of Strategic Management to a high degree *Comprehensive and more formal approach enabled by reduced informational uncertainty* *Introduction of more sophisticated strategic management techniques*	Churchill, 1987; Kanzanjian, 1990; Naman and Slevin 1993; Daily et al. 2002; Berry, 1998; Brinckmann, 2008	Disconfirmed
u)	Increase formalization of Financial Planning & Control to a high degree *Supporting Market Orientation and more sophisticated Strategic Management*	Adizes, 1979; Churchill, 1987; Kanzanjian, 1990; Bhide, 1996; Garnsey, 2005; Harrison and Taylor, 1996; Gibson, 2005; Berry, 1998	Disconfirmed
v)	Increase formalization of HRM to a high degree *Formalizing cultural values in HR-policies, job descriptions and awareness programs*	Adizes, 1979; Kanzanjian; 1990	Disconfirmed

w) Increase spending on digitizing core processes *When cash reserves allowing*	Mitra, 2005; Weill et al., 2006	Disconfirmed

Table 13: Results - confirmed success factors for sustainable high growth firms

Through the analyses of success factors for high growth firms, of which the conclusions were illustrated above, a number of additional conclusions were drawn. These are illustrated below.

B. Market expansion strategies as real options for realizing sustainable high growth

Although all three market expansion strategies identified from literature were recognized as relevant for sustaining growth, it was found from analyses of the different cases that pursuing any of these market expansion strategies puts considerable strain on organizational resources and capabilities, as it introduces additional complexity to the firm. Each firm makes its own assessment, as did the different cases covered, whether it has the resources and capabilities required to successfully pursue any of these strategies. As this was found not to be addressed in the reviewed body of knowledge, the following conclusion was added.

Market expansion strategies as real options for realizing sustainable high growth

For sustaining high growth, firms have the option to expand their markets by pursuing any of the following strategies separately or in combination, depending on their assessment on the availability of adequate resources and capabilities;

- *Expanding markets by transforming products or services into platforms.*
- *Expanding markets by acquisitions in complementary markets*
- *Expanding markets through internationalization*

C. IPO as event stretching organizational resources and capabilities of high growth firms

When evaluating the cases of Minihouse | Multihouse and Baan it showed that the source of growth funding and in particular public funding through the financial markets set extra requirements on the organizational success factors for firm high growth identified, especially in the area of, but definitely not restricted to, financial planning & control. As this was found not to be addressed in the reviewed body of knowledge, the following conclusion was added.

IPO as event stretching organizational resources and capabilities of high growth firms

The choice of obtaining growth funding through an IPO sets extra requirements on organizational success factors for firm high growth, especially in the area of, but definitely not restricted to, financial planning & control.

D. Continuous transformation as additional success factor for a sustainable high growth firm

Based on reviewing the body of literature on high growth firms a large number of success factors for high firm growth could be identified at the industry, strategic and organizational level of analysis. When evaluation the success factors on the organizational level of analysis against the selected high growth cases, the ability of any firm to reinvent itself as a critical capability for sustained high growth was explicitly addressed by Maxim Spek of Prospex, but in hindsight could also be attributed to the Minihouse | Multihouse, Bol.com and Baan case.

Remarkably findings from firm growth literature study do not explicitly address this organizational capability. Therefore, this organizational capability is included as success factor for a sustainable high growth firms as well.

Continuous transformation as additional success factor for a sustainable high growth firm

A high growth firm should reinvent itself timely enough in anticipation of decline of its product or services or its chosen markets.

7.2.2. RECOMMENDATIONS: WHAT ARE SUCCESS FACTORS FOR SUSTAINABLE HIGH GROWTH FIRMS

Based on the analyses of success factors for sustainable high growth firms the following recommendations were formulated, as a number of shortcomings in the current body of knowledge on success factors for a sustainable high growth firm were found to exist. These recommendations are illustrated below.

A. Organizational resources and capabilities requirements for supporting market expansion strategies

Although it was found that for sustaining high growth firms have the option to expand their markets by pursuing any of the following strategies separately or in combination, depending on their assessment on the availability of adequate resources and capabilities, the exact requirements for organizational resources and capabilities seem not to have been addressed yet. Therefore, the following recommendation was formulated.

Organizational resources and capabilities requirements for supporting market expansion strategies

In order to progress knowledge on the high growth firm it is recommended to study the requirements for successfully pursuing a market expansion strategy, i.e. growth through becoming a platform, growth through internationalization or growth through mergers & acquisition, from an organizational resources and capabilities point of view in more detail.

B. Organizational resources and capabilities requirements for supporting an IPO

Based on the finding that obtaining growth funding through an IPO sets extra requirements on organizational success factors for firm high growth, especially in the area of, but definitely not restricted to, financial planning & control, the exact requirements for organizational resources and capabilities seem not to have been addressed yet. Therefore, the following recommendation was formulated.

Organizational resources and capabilities requirements for supporting an IPO

In order to progress knowledge on the high growth firm it is recommended to study the organizational success factors for successfully preparing a firm for an IPO.

C. Organizational resources and capabilities supporting firm reinvention

Based on the finding that in order to sustain high growth over time, a high growth firm needs to be capable of reinventing itself timely enough in anticipation of decline of its product or services or its chosen markets, the following recommendation was made, as the exact requirements for organizational resources and capabilities seem not to have been addressed yet.

Organizational resources and capabilities supporting firm reinvention
In order to progress knowledge on the high growth firm it is recommended to study the organizational success factors for firm reinvention in more detail.

D. Organizational resources and capabilities for sustainable high growth firms in prime adulthood

Based on the finding that details of the last relevant life cycle stage for sustainable high growth firms, prime adulthood, provided too little discrimination power to positively assess a firm's organizational resources and capabilities the recommendation is made to study the organizational success factors in the prime adulthood life cycle stage in more detail.

Organizational resources and capabilities for sustainable high growth firms in prime adulthood
In order to progress knowledge on the high growth firm it is recommended to study the organizational resources and capabilities for successful high growth in the prime adulthood lifecycle stage in more detail.

7.3. LIMITATIONS OF THIS STUDY

The above conclusions should be observed with care as a number of limitations need to be considered when interpreting the results of this study. The principal limitations are discussed below.

A. Relationship between success factors for sustainable high growth firm at different levels of analysis not proven

Firstly, while this study provides a clear contribution to the fragmented knowledge on high growth firms by integrating and validating findings from different fields of study, being Management Theory and Applied Economics, and different levels of analysis, being the industry, strategic and organizational level, this broad scope also provides a limitation. By summarizing and validating findings at the noted different levels of analysis, one cannot simply assume a direct relationship between success factors identified at the different levels of analysis. For example, it could well be that organizational resources and capabilities for successfully managing growth in an emergent market differ from those required to successfully manage growth in a growth market. This distinction cannot be made based on the current state of knowledge on the high growth firm and therefore findings from this study with regards to the relationships between success factors of sustainable high growth firms at the different levels of analysis should be handled with care.

B. Success factors for sustainable high growth firms not guaranteed to fit all firms

Secondly, related to the first limitation, although this study provides an initial integrative overview of success factors for sustainable high growth firms, this overview does not do any justice to the wide diversity of firms, the markets they operate in and the choices these firms make individually. It seems highly likely there will be additional success criteria for sustainable high growth firms that apply to some firms, while other success factors do not. Therefore the overview provided of success factors for sustainable high growth firms should not be regarded as a definitive and conclusive checklist.

C. Small number of high growth firm cases limiting external validity of findings

Thirdly, a limitation that cannot be ignored is that findings from literature on success factors for firm high growth were only validated against a very small number of case studies. Although the review of the identified success factors for sustainable high growth firms enabled triangulation and as such helped improving external validity, validating the findings on a larger number of high growth cases would help to reduce this limitation. Unfortunately this proved not to be practically feasible in this study. Also, although validation of findings through a number of subject matter experts was planned for, this proved to practically not feasible either, as majority of SME's reported to be, not truly surprising, too busy with running their high growth firms. Therefore the external validity of findings from this study should be observed with care.

D. Variation of high growth firms selected as case studies limiting external validity

Fourthly, the different cases used to validate findings from literature on the success factors for high growth firm varied considerably on a number of dimensions, including actuality, Baan and Minihouse | Multihouse are cases from the eighties and nineties, on industry, Bol.com operates in the B2C market while other cases operated in B2B markets, and sectors of industry, as Minihouse | Multihouse and Baan operated in the ERP sector, Bol.com operates in the e-commerce sector and Prospex in professional services. However, it needs to be noted that the findings from literature on the success factors for high growth firm, are based on firm observations from a wide range of industries and observation periods as well. Therefore, the impact of this limitation could be downplayed, although most likely missing out on any industry or sector specific success factors.

E. Success factors for sustainable high growth firms identified based on studies with troublesome definitions

Fifthly, this study relies extensively on success factors reported by literature on sustainable high growth firms. However, as was illustrated in this study, the dominant way of defining a high growth firm is based on definition of high growth firms that vary considerably. The resulting comparison of apples with pears is noted as one of the principle reasons for the fragmented body of knowledge of the high growth firm. As a result most studies leave a large portion of variance unexplained. However, this study bases itself predominantly on findings on success factors for high firm growth from exactly these studies, thus capturing what has been identified as success factors, but not capturing what has not been captured yet. Therefore, it cannot be ignored that potentially highly important success factors for sustainable high growth firms have been missed, as these have been missed by the exact studies this study is based upon as well.

F. Initial attempt of mapping cross-sectional findings of success factors on growth life cycle stages

Sixthly, while addressing the organizational resources and capabilities, this study has adopted a number of insights from firm lifecycle stage models. Although these models have received considerable criticism for not being scientific and providing little explanatory power, this study found the firm life cycle approach being able to capture the dynamics of high growth firms much better than findings from the majority of studies on (high) growth firms applying a cross-sectional approach. Findings from cross-sectional studies on high growth firms do not explicitly state the specific life cycle stage they apply to, while this tentative mapping was included in this study. Therefore, there might have been errors introduced in the interpretation of success factors for high growth firms originating from cross-sectional studies and misallocation them to life cycles relevant for high growth firms.

G. Low inter-operator reliability introducing potential measurement bias and/or errors

Seventhly, the identification of relevant sources on success factors for sustainable high growth, the selection of relevant success factors for sustainable high growth firms, the selection of relevant firm stage growth models, the mapping of these success factors on the growth stages found relevant for high growth firms, the interpretation of cases, the interviews conducted and the fit analysis of success factors identified from literature on the cases were all performed by one single operator. Therefore, the possibility of an operator bias cannot be ignored, thus limiting the validity of findings reported.

H. Limited actuality of studies on high growth firms missing influences of technological advancements

Finally, a large portion of studies on success factors for high firm growth tend to be over five years old, while many of the more recent studies still build extensively on findings from these older studies, some of which originating from the nineties, eighties and even seventies of the last century, as can be seen in the bibliography of this study. Considering the increasing rate of change in the current business environment, it could be argued that this high rate of change, especially in the technological domain with it advancements in big data, advanced analytics, machine Learning, artificial Intelligence, block chains, virtual, augmented and mixed reality, etc., will eventually have a profound impact on high growth firms. Although such emerging technologies will be in the first place breeding grounds for numerous new high growth firms, these technologies might eventually alter or contain new success factors for sustainable high growth firms. The subject of high growth firms was found to be of high importance, however, the dynamics around such firms, could make it increasingly difficult to capture the true differentiating success factors in a timely manner.

Despite the considerable list of limitations reported above, this study still claims providing a valuable contribution to help overcome the reported knowledge gap on the success factors for sustainable high growth firms. The final paragraph of this study addresses this contribution.

7.4. CONTRIBUTION OF THIS STUDY

The following research goal of this study was defined for this study.

Contribute to overcoming the fragmented body of knowledge on high growth firms

---

Despite the considerable list of limitations addressed in the previous paragraph this study still boasts providing a relevant contribution to overcoming the fragmented body of knowledge on high growth firms. This contribution is covered below.

A. Guidelines provided to better define high growth firms

Firstly, although the focus of this study was on identifying success factors for sustainable high growth firms from literature and validating them across a number of cases in order to establish triangulation, a great amount of time and pages of this study were spent on discussing the troublesome definition of high growth firms and the resulting incomparability of results from studies on high growth studies each adopting their own definitions, thresholds and restrictions for identifying high growth firms. As the correct identification of a high growth firm forms the foundation for better understanding high growth firms, this study clearly illustrated that improving and, especially, harmonizing the different definition for high growth firms is of utmost importance to progress knowledge development on this important subject. The recommendations formulated provide valuable guidelines to come to a better and more widely accepted set of definition of high growth firms, helping to overcome the current obstacles hampering the clear interpretation of research outcomes on high growth firms.

B. Comprehensive overview provided of success factors for sustainable high growth firms across different levels of analysis

Secondly, the large majority of previous studies having studied high growth firms have focused on a single level of analysis, either addressing the industry level of analysis, the competitive strategy level of analysis or the organizational level of analysis. This study integrated these three levels of analysis in one single study which proved to be quite unique compared to previous studies on the high growth firm. Furthermore, this overview of success factors was tested against four different cases in order to establish triangulation. This research approach allows for increased external validity of success factors identified and confirmed for sustainable high growth firms.

C. Resource based view of the firm proven to be valuable model to structure success factors for sustainable high growth firms

Thirdly, related to the previous contribution made by this study, applying the 'resource based view of the firm' as model to structure the various success factors for sustainable high growth firms across the different levels of analysis, proved to be highly valuable. Although it was not part of this study to evaluate the applicability of the conceptual model, in practice, this turned out to be largely the case with regards to linking industry success factors, strategic success factors and success factors with regards to organizational resources and capabilities. Surprisingly none of the studies reviewed introduced an integrative and accepted model, such as the 'resource based view of the firm', as the majority of studies have focused on one of the three levels of analysis in isolation or preferred testing self-defined models of success factors for sustainable high growth firms.

D. Resource based view of the firm as valuable starting point to test relationships between confirmed success factors for sustainable high growth firms across different levels of analysis

Fourthly, the application of the 'resource based view of the firm' as integrative and accepted model allows for a solid theoretical foundation to further test the relationships between the different levels of analysis. A wider application of the model provided by the 'resource based view of the firm' in order to test the relationships between success factors of sustainable high growth firms could potentially support a considerable step forwards in progressing knowledge on the high growth firm.

E. Firm stage life cycle models allowing for capturing internal dynamics of high growth firms

Finally, when evaluation the success factors on the organizational level of analysis against the selected high growth cases, an attempt was made to integrate findings from various life cycle stage models on firm growth with cross-sectional findings on success factors for high growth. It was found that applying life cycle stages on high growth firms provides a highly useful instrument to capture the dynamics of a high growth firm from the perspective of organizational resources and capabilities. These dynamics are currently neglected in the majority of studies on high growth firms preferring a cross-sectional research method. Further detailing the specific organizational resources and capabilities across the different life cycle stages, as an initial attempt was made in this study, could potentially assist entrepreneurs and/or management teams of high growth firms in successfully manage the challenges of high growth and, eventually, potentially increase the currently small odds for a firm to make it big and secure sustainable high growth as a firm.

++++++++++++++++

TAKING THE HIGH GROWTH FIRM TO THE NEXT LEVEL

A literature study on the success factors for sustainable high growth firms

ANNEXES

A. GREINER'S FIRM STAGE GROWTH MODEL

Phase 1 Creativity	Phase 2 Direction	Phase 3 Delegation	Phase 4 Coordination	Phase 5 Collaboration
Founders are technically or entrepreneurially oriented Founders disdain management activities Founders absorbed by making and selling a new product Communication among employees frequent and informal Long hours of work rewarded by modest salaries and promise of ownership benefits Decisions and motivation highly sensitive to marketplace feedback: management acts as customers react.	Functional organizational structure introduced Job assignments increasingly specialized Accounting systems for inventory and purchasing introduced Incentives, budgets, and work standards adopted. Communication more formal and impersonal as hierarchy of titles and positions grows New manager and key supervisors assume most of responsibility for instituting direction	Greater responsibility given to managers Profit centers and bonuses used to motivate employees Top-level executives limit themselves to managing by exception Management concentrates on acquiring outside firms that can be lined up with decentralized units. Communication from top infrequent and occurs by correspondence	Use of formal systems for achieving greater coordination Top-level executives take responsibility for initiation and administration of new systems. New coordination systems prove useful for achieving growth through more efficient allocation of limited resources. Although local unit managers still have great deal of decision-making responsibility, systems prompt to look beyond needs of local units alone	Matrix structure introduced: heads of geographic areas, product lines, and functional disciplines collaborate to ensure decisions are coordinated across global markets. Staff experts reduced in number and combined into interdisciplinary teams with focus is on solving problems quickly Control systems simplified and combined into single multipurpose systems. Real-time information integrated into daily decision-making process
Crisis: Leadership <u>Solution</u>: locate and install strong business manager acceptable to founders and able to pull organization together.	**Crisis: Autonomy** <u>Solution</u>: move toward decentralization through more delegation	**Crisis: Control** <u>Solution</u>: regain control use of better coordination systems.	**Crisis: Red-tape** <u>Solution</u>: emphasize on social control and self-discipline replacing formal control.	**Crisis: Unknown** Solution: Unknown

Table 14: Greiner's firm stage growth model - phases (1972)

B. ADIZES FIRM STAGE GROWTH MODEL

Stage	Areas	Description	Risk	Premature mortality
Courtship	**paEi**	No organization. Focus on the entrepreneurial idea	Unviable product	Aborted idea
Infant	**Paei**	Bringing idea to prototype and production. Hardly any policies, systems, procedures, or budgets Highly centralized – one man show Shoestring organization Focus on short-term pressures	Too little resources to set up proper business or handle set-backs	Infant mortality
Go-Go	**PaEi**	Analogy with baby who can see and focus Strong entrepreneurial appetite Vision on bringing product to markets	Personification of management process preventing scaling	Founders trap
Adolescent	**pAEi**	Administrative role rises in importance More time spent on planning and coordination to set up for further growth Less focus on production in short run.	Inability to overcome tension between administrative and entrepreneurial needs	Divorce
Prime	**PAEi**	Strong results orientation Plans and procedures to achieve efficiency Strong outward focus Stable and predictable growth rates	Mismatch amongst management on aspirations (desires vs expectations)	Early maturity
Mature	**PAeI**	Results orientation Institutionalized systems Friendship climate: little eagerness to challenge Little sense of urgency Less time spent on innovation	Loss of entrepreneurship affecting results orientation	Early aristocracy

Table 15: Adizes firm stage growth model (1979)

C. CHURCHILL FIRM STAGE GROWTH MODEL

Stage	Characteristics
Existence	**G** - Focus on survival by obtaining customers for its product or service. **S** - Owner does everything and directly supervises subordinates **F** - Systems and formal planning are minimal to nonexistent **M** - Owner is the business, performs all the important tasks **O** - Owner is supplier of energy, direction, and, with relatives and friends, capital.
Survival	**G** - Focus on building customer base to move from survival to flotation **S** - Still simple organization, small number of employees supervised by manager **F**- Systems and formal planning still minimal and at best cash forecasting. **M** - Owner takes decisions, team executes **O** - Owner is supplier of energy, direction, and, with relatives and friends, capital.
Success	Key question is whether to exploit company's accomplishments and use it as a platform for growth or keep the company stable and profitable.
Success – Disengagement	Company has attained economic health: sufficient size and product market penetration to ensure economic success, earns average or above-average profits. Company can stay at this stage indefinitely, provided environmental change does not destroy its market niche or ineffective management reduce its competitive abilities. **G** - Focus on maintaining status quo **S** - Functional managers take over certain duties performed by the owner **F** - First professional staff members come on board, e.g. controller or planner. Basic financial, marketing, and production systems in place. Planning in the form of operational budgets to support functional delegation. **M** - Owner has time to focus on other activities. **O** - Owner still dominates stock control.
Success - Growth	**G** - Focus on setting firm up for growth, i.e. making sure basic business stays profitable so it will not outrun its source of cash and develop managers to meet needs of growing business. **S** - Hiring managers with an eye to firm's future rather than its current condition. **F** - Systems are installed with attention to forthcoming needs. Planning in the form of operational budgets to support functional delegation. Extensive strategic planning put in place **M** - Owner is deeply involved in all aspects concerned with setting company up for growth. **O** - Owner still dominates stock control.
Take Off	**G** - Focus on growing rapidly and how to finance growth **S** - Organization is at least in part decentralized and, usually in sales or production. Competent management required **F** - Systems are becoming more refined and extensive. Both operational and strategic planning are being done and involve specific managers. **M** - Owner increasingly delegates to improve the managerial effectiveness of a fast growing and increasingly complex enterprise. **O** - Owner still dominates stock control
Resource Maturity	**G** - Focus on consolidating and controlling gains brought by rapid growth **S** - Focus on retaining advantages of small size, flexibility and entrepreneurial spirit. Management is expanded to eliminate inefficiencies of rapid growth. Management is decentralized to maintain entrepreneurial spirit **F**- Systems are professionalized without stifling entrepreneurial qualities **M/O** - Owner and business are increasingly separated, both operationally and financially

Table 16: Churchill's firm stage growth model (1984)

D. KANZANJIAN FIRM STAGE GROWTH MODEL

Variables	Stage 1: Conception and Development	Stage 2: Commercialization	Stage 3: Growth	Stage 4: Stability
Decision-making:				
Centralization	H	H	M	L
Formalization	L	M	M	H
Functional specialization:				
Marketing/Sales	L	L	H	H
Manufacturing	L	H	H	H
Technology/Engineering	L	H	H	H

Table 17: Kanzanjian firm stage growth model (1984)

E. RESOURCES AND DISTINCTIVE CAPABILITIES

Resource	Characteristics
Tangible resources	
Financial resources	Borrowing capacity and internal funds generating capacity determine resilience and capacity for investment
Physical resources	Constrain the firm's production possibilities and varies by size, location, technical sophistication, and flexibility
Intangible resources	
Technological resources	Intellectual property (patents, copyrights) and advanced technologies
Reputational resources	Brand recognition, product and service reputation, reputation with suppliers, government and community
Cultural resources	Beliefs, values and attitudes, e.g. results orientation, customer orientation, risk orientation
Human resources	
Skills / know-how	Education, training and experiences of employees
Capacity for communication and collaboration	Adaptability of employees to communicate and collaborate effectively and efficiently
Motivation	Commitment and loyalty

Table 18: Resource characteristics (Grant, 2005)

Functional area	Capability
Corporate functions	Financial control Mergers & Acquisitions International management Human resource management
Research & Development	Research Innovative new product development Rapid new product development
Product Design	Design capability Customer centricity
Marketing	Brand management Promoting reputation of quality Responsiveness to market trends
Sales	Effective sales promotion and execution Efficiency and speed of order processing
Customer service	Quality and effectiveness of customer service
Operations	Efficiency in volume manufacturing Continuous improvements in operations Flexibility and adaptability of operations Speed of response
Logistics	Speed of distribution
Information technology	Comprehensive information systems supporting decision-making Seamless integration across functions Scalable infrastructure

Table 19: Examples of distinctive capabilities by business function (Grant, 2005)

F. SEMI-STRUCTURED INTERVIEW FORMAT

INTERVIEW INTRODUCTION	
First of all I would like to thank you for your time to have this interview. I truly appreciate your willingness to discuss the growth of your firm, your personal experience in managing this growth and the opportunity you provide to reflect on the success factors for high firm growth thatI have come up from literature. I would like to structure this interview in three different parts. First of all I'm very interested in the growth case of your firm, in particular the market conditions you experienced, the strategies you chose and the organizational arrangements you made during the growth of your firm. Secondly I would like to discuss enablers, inhibitors or pre-requisites for (high-)growth in a more general way, not per se directly linked to your specific case. Finally, I would like to present the 'integrative framework for firm high growth' to you and have you openly react on the framework. Before starting this interview, do you have any questions or do you have any remarks? Is there anything I should know, for example, anything that is off-limits to discuss? Or more practical, the time limit you have for this interview?	
Part I: Case introduction	
a)	When was your firm founded?
b)	What did the founding team look like, e.g. backgrounds, experiences?
c)	What was your position at that time?
d)	What were the products and services that you developed to serve what markets?
e)	Can you describe the growth path of your firm? Was it based on a decision to grow?
f)	When did your firm really take off? Was there a specific moment identifiable that triggered that growth?
g)	What growth figures did you experience with regards to employment growth?
h)	What growth figures did you experience with regards to revenue growth?
i)	What did your product or service offering look like at that time?
j)	What did your organization look like at that time?
k)	What were the major challenges you experienced during the growth period?
l)	How did you address these challenges during the growth period?
m)	What was the effect of your interventions? Were they successful?
n)	What were the critical moments in the growth path of your firm?
o)	In hindsight, what would you have done differently?
Part II: Growth variables: enablers, inhibitors and prerequisites	
p)	What are industry success factors from your point of view? What market conditions do you consider relevant, if any?
q)	What are strategies that, from your point of view, work for attaining high growth?
r)	What role, if any, do you see for internal changes to the organization in attaining high growth? Are there any priorities?
s)	What other aspects, if any, do you consider highly relevant for attaining high growth?
Part III: Success factors on high firm growth: a discussion	
t)	Walkthrough of success factors identified at the industry level of analysis
u)	Walkthrough of success factors identified at the strategic level of analysis
v)	Walkthrough of success factors identified at the organizational level of analysis

Table 20: Semi-structured interview format

G. INTERVIEW TRANSCRIPT – THEO MULDER (MINIHOUSE | MULTIHOUSE)

Interview date: 27th September 2017

- In 1974 was er nog geen bedrijf en waren er nog geen klanten. Vanuit advieswerk in automatisering kwam men in aanraking met minicomputers met software. Theo raakte onder de indruk van de mogelijke kansen.
- Theo ging toevallig in zee met DEC als leverancier van minicomputers. Er waren ook andere leveranciers zoals Bull, IBM en Burrows. Was een gok. Bleek een goede keuze. DEC bleek een solide partner. Andere partijen gokten minder gelukkig
- Timing van instappen in de markt van minicomputers was meer geluk dan wijsheid. Mainframes waren dominant tussen '63 en '74. Veel mensen waren sceptisch over nut en noodzaak van minicomputers.
- Keuze voor een product of dienst is nooit gebaseerd geweest op een marktanalyse, maar meer het logisch gevolg van de kennis en achtergrond van Klaas en Theo.
- In eerste instantie werd er geen software meegeleverd met minicomputers. Toen heette het bedrijf Infrahouse. Software was in alle gevallen maatwerk voor klant. Toen ontstond het idee om turn-key projecten te gaan leveren. Voor een vaste prijs hardware en software te leveren als geheel. Bedrijfsnaam werd toen Minihouse.
- Ahrend was eerste klant. Wilde in eerste instantie ook computers toevoegen aan hun assortiment kantoormeubelen, maar kwam hier op terug. Infrahouse zou hardware en software leveren. Infrahouse had hierdoor vanaf de start een goede basis en handen vrij om eigen software te gaan schrijven.
- Randvoorwaarde voor succes was dat klantwensen 100% duidelijk waren. Anders kon je gemakkelijk onderuit gaan door de vaste prijs. Multifunction bleek hier later teveel risico genomen te hebben.
- Begin periode gegrepen door enthousiasme bij een kleine groep vrienden. Allemaal wilden ze ondernemen, zelf dingen doen en zich niet geremd voelen door hiërarchie. Al vanaf 20 mensen wordt dit anders.
- Als je nog groter wordt, dan kom je verder af te staan van de operatie en ben je alleen nog maar problemen op aan het lossen van de organisatie, bijvoorbeeld kapitaal verwerven. Zeker niet onbelangrijk, maar heeft in verste verte niet meer te maken met de beginperiode.
- In jaren 80-90 werd veel geïnvesteerd in IT bedrijven. Soms bleken deze investeringen op sprookjes gebaseerd.
- Op gegeven moment wilden Klaas en Theo een deel van de waarde van het bedrijf veilig stellen en werd 20% van aandelen verkocht aan een nieuwe mede aandeelhouder. Deze kwam van een klant Aktie68. Deze aandeelhouder dacht echt aan groei en gaf grotere bekendheid aan Minihouse. Theo en Klaas dachten tot die tijd vooral een mooie dingen doen bij klanten.
- Snelle groei financieren met eigen middelen bleek heel lastig. Minihouse kon geen financiering bij banken los krijgen in NL en via collega ondernemer werd Theo getipt op de beurs in London. Beursgang kreeg veel aandacht en instroom van groot aantal nieuwe klanten waar voorheen vooral klanten via verwijzingen werden verkregen.
- In 1ste jaar na beursgang verdubbelde de omzet. Nieuwe medewerkers kwamen met 20 tot 30 tegelijk binnen en moesten allemaal opgeleid worden in programmatuur.
- Toen Minihouse heel snel groeide werd software gebruikt van Wouter Schoonman om software ontwikkelaars te testen op geschiktheid. Een pilot werd uitgevoerd en de ontwikkelaar waarvan de software had aangegeven dat deze niet zou voldoen, bleek ook zo te zijn. Daarna werd deze HR software continu gebruikt bij het aannemen van software ontwikkelaars.
- 2 keer per jaar moest gereorganiseerd worden doordat de oorspronkelijke structuren de groei niet meer aankonden.
- Internationalisering was in de dagen moeilijker dan nu, aangezien software niet meertaligheid ondersteunde. Software moest helemaal opnieuw geschreven worden in een andere taal.
- Na 10 succesvolle jaren begon markt te consolideren. Samengaan met MultiFunction was hier logisch gevolg van. Samen bestond het bedrijf uit 1000 man.
- Toen bleek dat MultiFunction een heel andere cultuur kende en veel meer risico nam in het aannemen van projecten. Dit liep fout.

H. INTERVIEW TRANSCRIPT – MAXIM SPEK (PROSPEX)

Interview dates: 7th and 13th of November 2017

- In 2006 plan gevat om met broer Leon bedrijf te starten.Augustus 2007 ging Prospex van start.
- Founding team bestond uit 2 man.
- Maxim kwam van Atos met marketing strategie als achtergrond. Leon van Graydon. Bij Graydon had Leon te maken gehad met klantdatabases en lead generatie vanuit MarktSelect. Leon was daarom bekend met telemarketing.
- Idee kwam van Leon. Na evaluatie van verschillende ideeën dachten Leon en Maxim slimmer dan de bestaande oplossingen in de markt lead generatie te kunnen doen in de B2B markt. Leon en Maxim wilden vooral probleem gestuurd met lead generatie omgaan in plaats van de kenmerkende product push a la 'ik verkoop energiekortingen'. Deze aanpak legde veel meer de nadruk op vragen stellen, een duidelijke boodschap opstellen en eventueel lead generatie door cold calling.
- Prospex had een duidelijke en simpele boodschap die aansloeg bij de markt. Bestaande spelers vroegen veel geld voor hun diensten, maar wisten over het algemeen niet de verwachtingen waar te maken. Klanten hadden dus nog steeds een probleem om te kunnen groeien.
- Prospex wilde nadruk leggen op kwaliteit en nam daarom ook oudere, hoogopgeleide mensenaan. En kon daarom ook hogere tarieven vragen.
- Bij start had Prospex financiering om 3 maanden te overbruggen. Financiële middelen kwamen van Maxim. Die bleef werken bij Atos en nam een hogere hypotheek op zijn huis en had leningen genomen bij de bank. Leon had zijn baan opgezegd en was volledig met Prospex bezig.
- Prospex was meteen een succes met klanten zoals KPN en Microsoft die als eerste pilot projecten wilden starten.
- B2B telemarketing was volwassen markt, maar Prospex wist met nieuwe propositie zeer snelle groei te realiseren. In 4 jaar werd van 0 naar 130 a 140 man gegaan.Prospex wist de FD Gazellen Award te winnen.
- In 2009 werd 'bel-me-niet-register' geintroduceerd waardoor allerlei telemarketing bedrijven in de B2C markt gedwongen werden verder te kijken en veel gingen er richting de B2B markt. Markt werd toen overspoeld met prijsvechters die voor bodemtarieven lead generatiediensten aanboden.
- Verschillende bestaande klanten vroegen ook om prijsverlagingen. Hierdoor kon Prospex geen kwaliteit meer leveren en moest afscheid nemen van verschillende klanten. Hierdoor moesten 45 a 50 mensen ontslagen worden.
- In 2011/2012 begon ook call volume af te nemen, aangezien ook B2B markt het internet had ontdekt om informatie in te winnen. Hierdoor veranderde de klant oriëntatie reis in de B2B markt.
- Deze ontwikkelingen zorgen ervoor dat Prospex zich ging richten op B2B content marketing. Om deze beweging kracht bij te zetten werden een markonderzoeksbureau en een online marketing bureau gekocht.
- Tegelijketijd werden de kantoren in Den haag en in Spanje gesloten.
- Het management team bestond initieel uit Maxim als CEO, Leon als commercieel directeur. Verschillende vestigingsmanagers en financieel directeur en een HR & Recruitment manager. Door de groei en kanteling bleken een aantal personen niet meer te passen en vooral te licht bevonden.
- Besloten werd deel van het management te vervangen. Twee nieuwe aandeelhouders kwamen aan boord met solide management en groei-ervaring.
- In feite is dit het 2^de^ leven van Prospex waarbij in de 1^ste^ fase hard gegroeid werd waarbij groei in de markt aanzienlijk werd outperformed. Nu groeit Prospex ongeveer 10 procent per jaar, maar verwacht binnenkort de vruchten te plukken van de omschakeling die Prospex heeft gemaakt en weer een groeiacceleratie door te maken.
- Groei is niet alleen weggelegd voor groeimarkten. Er zijn zat markten waar groeimogelijkheden liggen door iets veel beter te doen dan gangbaar is in die markt. Dan breng je ook al iets unieks dat snel opgepikt en omarmd wordt.
- Succes komt met focus. Het is gemakkelijk je te laten verleiden om andere diensten te gaan aanbieden. Prospex heeft geprobeerd sales mensen te detacheren of sales trainingen te geven, maar dit vertroebelde de propositie. Met dit soort

activiteiten is Prospex dus gestopt.

- Focus ligt nu op marketing communicatiestrategie als kern en content marketing en telemarketing als achterliggende diensten. De markt vraagt om duidelijkheid en met internet wordt alles veel transparanter. Zonder heldere focus en duidelijke propositie wordt je direct afgerekend door de markt.
- Prospex heeft zich altijd op de higher end markt gericht. Hier is meerwaarde te bieden door kwaliteit. Hier gelooft Prospex in. Prospex biedt een uniek verhaal.
- Producten en diensten zijn gebaseerd op hoge mate van customer intimacy. Dit maakt ze op dit moment nog te beperkt schaalbaar. Prospex is nu nog teveel een Ferarri, maar wil transformeren naar een Audi.
- Door karakteristieken van producten en diensten te standaardiseren kunnen deze breder ingezet worden dan iedere specifieke unieke klant. Hierin wil Prospex transformeren, zodat platform gedachte ook echt haalbaar wordt.
- Door in 1 keer een markt in kaart te brengen door middel van 1 benchmark en 1 groot evenement stijgt de waarde op alle vlakker, doordat hogere kwaliteit geboden kan worden. Een super benchmark heeft platform achtige karakteristieken. En worden ook daadwerkelijk leads toegevoegd aan de benchmark. Iets wat andere bedrijven die benchmarks uitvoeren en hiervoor events organiseren niet actief nastreven als dienst.
- Bescherming van producten en diensten niet echt aan de orde. Wel richtlijnen en maatregelen ten aanzien van informatie beveiliging en verschillende templates zijn redelijk uniek, maar uiteindelijk is alles kopieerbaar en wordt ook alles gekopieerd.
- Belangrijker is het netwerk dat je opbouwt, de cultuur die je creëert en hoe innovatief de mensen zijn. Om dit te benadrukken wordt het kantoor van Prospex in Amsterdam uitgebreid om meer ruimte te geven aan de unieke Prospex cultuur.
- Prospex heeft eerst de basis gelegd door middel van een unieke aanpak om marketing content strategieën te definiëren. Van daaruit heeft Prospex doorgepakt in B2B telemarketing en daarna in B2B content marketing.
- Om te groeien en met name de kanteling te maken heeft Prospex 2 acquisities gedaan in een marktonderzoeksbureau en een online marketing bureau.
- Hoewel Prospex internationaal gegaan is door een kantoor in Spanje te openen, was dit niet onderdeel van een internationaliseringsstrategie, maar een opportunistische stap om de grootste klant van Prospex tegemoet te komen. Deze klant zat ook niet in de B2B markt, maar in de B2C markt en voor deze klant zou Prospex klanten moeten nabellen in Spanje. Pilots werden goed ontvangen. Alleen ging na 14 maanden de stekker er uit toen de vestiging failliet moest worden verklaard. Hierdoor heeft het kantoor in Spanje veel gedoe opgeleverd. Hierdoor moest Prospex ongeveer 30 mensen ontslaan.
- Prospex ziet de NL markt als groot genoeg om te groeien. Bovendien is de high customer intimacy aanpak van Prospex moeilijk te internationaliseren gezien de vertaalproblematiek.
- Bewuste keuze van Prospex was altijd om de B2B markt te bedienen. In de B2B markt kan je waarde bieden waar klanten voor willen betalen. Dit is in de B2C markt moeilijker te realiseren.
- Qua vestigingslocatie heeft Prospex bewust gekozen voor Amsterdam en haar kantoor in Den Haag gesloten. Amsterdam Sloterdijk is goed bereikbaar vanuit andere delen van Nederland en bovendien zijn marketing talenten gemakkelijker te vinden in Amsterdam, aangezien het voor millenials gebeurd in Amsterdam.
- Qua financieringsbehoefte heeft Prospex altijd vanuit eigen middelen haar groei weten te financieren. Het kan zijn dat technologie-ontwikkelingen die Prospex voor ogen heeft om een kapitaalinjectie vragen en hiervoor extern zal worden gekeken. Prospex zal haar PoC zelf betalen en twijfelt er niet over of investeerders gevonden kunnen worden.
- Leon en Maxim hebben allebei een universitaire achtergrond. Maxim ziet dit echter niet als voorwaarde. Er zijn zit minder geschoolde ondernemers die heel succesvol zijn. Het gaat om visie en een plan. Voor het managen van bedrijven zijn zat mensen te vinden. Mensen met een visie en een plan zijn er veel minder. Nieuwsgierigheid vormt de basis en het beeld hoe iets slimmer of beter gedaan kan worden.
- Leon had industriekennis vanuit Graydon en MarkSelect en hierdoor ook het netwerk. Maxim had de marketingachtergrond.
- Maxim en Leon zijn allebei niet enorm technisch. Je hebt wel techies nodig in je team die inhoudelijk een idee tot wasdom kunnen brengen. Leon is gefocused op management en processen. Maxim pakt meer het podium vanuit de

visie en het achterliggende business model van Prospex.

- Maxim heeft eerst zelf het bedrijf met zijn broer geleid. Achteraf gezien had hij dit eerder moeten overlaten aan anderen. In het oorspronkelijke management team zaten veel vrienden van Leon en Maxim en deze bleken toch niet te voldoen toen Prospex begon te groeien. Een stevig management team is heel belangrijk. Nu heeft Prospex een nieuw management met 2 sterke personen die zichzelf ook hebben ingekocht in Prospex.
- Belang van strategie is altijd onderstreept binnen Prospex. Strategie brengt visie op wat je beter denkt te kunnen concreet te maken door er plannen tegenaan te zetten.
- Vanuit strategie is het ook gemakkelijker te delegeren, aangezien dit het meegeven van doelen een stuk eenvoudiger maakt.
- Financial planning en control moet helpen de strategie meetbaar te maken. Als je wilt groeien van Euro 5 naar Euro 10 miljoen dan moet je dit intern plannen en volgen. Anders kan je ook niet bijsturen wanneer het de verkeerde kant op gaat.
- Het Prospex management team houdt kwartaalmeetings om plannen te toetsen ten opzichte van het jaarplan. Bovendien heeft Prospex ook een Raad van Advies die het MT begeleidt in haar groei.
- Zelfs als een bedrijf net bezig is een grote groei doormaakt, kan het er heel snel een gezapigheid in sluipen. Je moet het ondernemerschap blijven stimuleren om het aanpassingsvermogen van het bedrijf te blijven vernieuwen. In de groei heb je processen nodig om zaken efficiënt, maar aan de andere kant zorgt teveel blauwdruk denken voor verstikking.
- De mensen en de cultuur maken het bedrijf. HR is daarom heel belangrijk. Ieder gaat hier op zijn eigen manier mee om en veel kleinere ondernemingen zullen formaliseren van HR processen niet direct in deze termen herkennen, maar het belang van goede mensen onderstrepen. Als je mensen vaak te laat zijn en vaker ziek zijn, dan is het zaak om dit signaal zo vroeg mogelijk op te pikken. De kunst is om zoveel mogelijk vanuit een gedeelde set van waarden te werken en het vuur aangewakkerd te houden. Hier kan je geen gedragsregels voor in stellen.
- In de lijst komt de kracht om jezelf opnieuw uit te vinden niet heel erg tot uitdrukking. Hoe organiseer je dit? Ieder product of iedere dienst zal uiteindelijk sterven. Hoe organiseer je het adaptief vermogen. Dit is essentieel om te kunnen blijven groeien en waarom zoveel bedrijven falen. Prospex heeft tot nu toe 1 keer de omschakeling moeten maken en zal dit over 4 tot 5 jaar weer moeten doen als online content marketing een volwassen markt is geworden.
- Voor Maxim staan strategie en HRM (mensen en cultuur) op nummer 1. Daarna komt planning & control en tenslotte pas de marketing oriëntatie.

I. OVERVIEW OF DIFFERENT DEFINITIONS OF HIGH GROWTH FIRMS

According to the US National Commission on Entrepreneurship (NOCD, 2001) a high growth firm is:

> *"…a firm that grows its employment by at least 15% per year…"*

According to CBS (2016) a high growth firm is:

> *"…A firm that experiences an average annual growth rate of at least 10 percent over period of three consecutive years based on the number of employees. This means that over a three year period a total growth in number of employees has to be achieved of at least 33,1%. As a prerequisite high growth firms needs to employ at least 10 persons at the start of the observation period. Companies that were established in the starting years of the observation period are excluded. High growth firms therefore need to be more than three years old…"*

According to the Organisation for Economic Co-operation and Development (OECD) a high growth firm is:

> *"…an enterprise with average annualized growth in employees or turnover greater than 20 per cent per annum over a three year period, and with more than 10 employees at the beginning of the observation period…"*

According to the 'FD Gazellen Awards' of 'Het Financieele Dagblad' (2017) a high growth firm is:

> *"…a firm that has experienced a revenue growth of at least 20% over a three-year period, revenue growth should have been uninterrupted, annual turnover in the first year should have been at least hundred thousand Euro and should be older than three years. It is further required that the company to is in financially healthy condition and the net results should be positive in the final year of the measurement period, while in the previous two years only one negative net result is allowed…"*

According to the 'Deloitte Technology Fast 50' (2017) a high growth (technology) firm is:

> *"…a firm in software, communications, media, life sciences or clean technology that cannot be older than four years, needs to have had an annual revenue of at least fifty thousand Euro at the start of the observation period and at least eight hundred thousand Euro in the final year of the observation period"*

According to the 'High Growth Awards' a high growth firms is:

> *"…a firm that exists at least three years, employ at least ten persons, have had an total annual revenue of at least one million Euro in the first year of the observation period and have experienced an average annual revenue growth of at least 10% over the last three years…"*

J. SEVEN DOMINANT FIRM GROWTH PATTERNS

Table 21: Seven dominant firm growth patterns (Delmar, 2003)

Cluster	Name	Growth pattern	Demographic characteristic
1	Super absolute growers	Exhibited high absolute growth both in sales and employment.	Dominated by small- and medium-sized firms. Found in knowledge intensive manufacturing industries.
2	Steady sales growers	Rapid growth in sales and negative development in employment.	Almost totally dominated by large firms. Found in traditional industries such as pulp, steel, and other manufacturing. Dominated by firms affiliated with company groups.
3	Acquisition growers	Resembles Cluster 1 but has negative organic employment growth. Growth is achieved by acquiring other firms.	Large firms are over represented. Dominated by older firms (i.e., firms created before 1987). Found in traditional industries such as pulp, steel, and manufacturing. Dominated by firms affiliated with company groups.
4	Super relative growers	Has a very strong but somewhat erratic development of both sales and employment.	Dominated by small- and medium-sized firms. Seventy-one percent of the firms created during the period of observation. Found in knowledge intensive service industries. A high representation of independent firms.
5	Erratic one-shot growers	Has on average negative size development, with exception of one single very strong growth year.	Dominated by small- and medium-sized firms. Found in low-technology service industries.
6	Employment growers	Growth is relatively stronger in employment than in growth.	Dominated by small- and medium-sized firms. Found in low-technology service industries.
7	Steady overall growers	Resembles Cluster 1, but has weaker development.	Larger firms are over represented. Found in manufacturing industries. Dominated by firms affiliated with company groups.

K. DOMINANT THEMES WITHIN START-UPS

ID	Theme	Description	Frequency
T1	Lack of resources	Economical, human, and physical resources are extremely limited.	18
T2	Highly Reactive	Startups are able to quickly react to changes of the underlying market, technologies, and product (compared to more established companies)	17
T3	Innovation	Given the highly competitive ecosystem, startups need to focus on highly innovative segments of the market.	15
T4	Uncertainty	Startups deal with a highly uncertain ecosystem under different perspectives: market, product features, competition, people and finance.	14
T5	Rapidly Evolving	Successful startups aim to grow and scale rapidly.	14
T6	Time-pressure	The environment often forces startups to release fast and to work under constant pressure (terms sheets, demo days, investors' requests)	13
T7	Third party dependency	Due to lack of resources, to build their product, startups heavily rely on external solutions: External APIs, Open Source Software, outsourcing, COTS, etc.	10
T8	Small Team	Startups start with a small numbers of individuals.	9
T9	One product	Company's activities gravitate around one product/service only.	9
T10	Low-experienced team	A good part of the development team is formed by people with less than 5 years of experience and often recently graduated students.	8
T11	New company	The company has been recently created.	7
T12	Flat organization	Startups are usually founders-centric and everyone in the company has big responsibilities, with no need of high-management.	5
T13	Higly Risky	The failure rate of startups is extremely high.	5
T14	Not self-sustained	Especially in the early stage, startups need external funding to sustain their activities (Venture Capitalist, Angel Investments, Personal Funds, etc.).	3
T15	Little working history	The basis of an organizational culture is not present initially.	3

Table 22: Recurring themes within start-ups (Giardino, 2014)

L. INDUSTRY DISTRIBUTION OF HIGH-IMPACT FIRMS IN USA

Table 23: Industry distribution of high impact firms, by period of analysis (Tracy, 2011)

SIC	Description	1994-1998	1998-2002	2002-2006	2004-2008
1	Agriculture-Crops	1.53	1.18	1.72	1.14
2	Agriculture-Animals	1.21	1.34	1.86	1.26
7	Agriculture Services	4.90	2.50	3.42	3.03
8	Forestry	4.34	2.60	2.79	2.19
9	Fishing, Hunting	3.40	1.98	2.69	1.84
10	Metal Mining	4.51	1.43	3.66	3.51
12	Coal, Lignite Mining	3.07	2.16	2.47	1.40
13	Oil, Gas Extraction	4.11	3.17	3.83	3.61
14	Non-Metallic Mining	4.98	3.93	2.94	2.70
15	General Contractors	4.01	2.27	2.12	1.81
16	Heavy Construction	6.13	4.52	4.60	4.19
17	Special Trade Contractors	4.94	3.08	2.93	2.70
20	Food, Kindred Products	4.96	3.40	3.36	3.03
21	Tobacco Products	1.45	2.35	2.80	1.47
22	Textile Mill Products	4.02	2.89	2.45	2.10
23	Apparel, Textiles	4.24	2.49	2.18	1.99
24	Lumber, Wood Products	4.99	2.69	2.63	2.44
25	Furniture, Fixtures	5.98	3.70	2.97	3.00
26	Paper Products	5.52	3.13	3.15	2.86
27	Printing, Publishing	3.79	2.13	2.21	1.85
28	Chemical Products	5.23	4.02	3.91	3.36
29	Petroleum, Coal Products	4.74	3.20	3.71	3.46
30	Rubber, Plastics	7.18	4.04	3.36	2.98
31	Leather Products	3.94	1.99	2.57	1.99
32	Stone, Clay, Glass	5.21	3.19	2.59	2.35
33	Primary Metal Industries	6.39	3.44	3.65	3.32
34	Fabricated Metals	6.39	3.84	3.25	3.30
35	Machinery not Electric	6.91	3.29	3.00	3.11
36	Electric, Electronic	7.03	4.39	3.51	3.32
37	Transportation Equipment	6.90	3.86	3.58	3.07
38	Instruments, Related	6.06	4.29	3.98	3.69
39	Miscellaneous Manufacturing	3.93	1.75	2.12	2.04
40	Railroad Transport	1.83	1.31	1.66	1.52
41	Transit	2.95	2.35	2.15	1.56
42	Trucking, Warehouse	4.11	2.52	2.56	2.19
44	Water Transportation	4.82	2.79	3.19	2.59
45	Air Transportation	3.91	3.60	3.46	2.81
46	Pipelines, not Gas	0.63	0.95	2.91	3.15
47	Transportation Services	4.04	1.91	1.79	1.68
48	Communications	1.97	1.70	1.67	1.48
49	Utility Services	4.79	3.45	3.68	3.00
50	Durable Wholesale	4.37	2.89	2.77	2.35
51	Non-Durable Wholesale	4.10	2.62	2.48	2.01
52	Building, Garden	3.73	2.49	2.67	2.15
53	General Merchandise Retail	2.06	1.38	1.40	1.08
54	Food Stores	3.63	2.41	2.46	1.81
55	Automotive Dealers	4.01	2.32	2.42	1.87
56	Apparel Stores	2.06	1.50	1.53	1.20
57	Home Furnishing Retail	2.99	2.03	2.19	1.74
58	Eating, Drinking	1.94	1.38	1.26	0.89
59	Miscellaneous Retail	2.97	1.81	2.06	1.59
60	Banking	3.16	2.76	3.12	2.44
61	Non-Bank Credit	2.30	2.57	3.07	2.41
62	Securities Brokers	3.41	2.52	2.22	2.13
63	Insurance Carriers	3.33	2.26	3.17	2.24
64	Insurance Agents	4.31	2.65	3.43	2.47
65	Real Estate	4.04	2.53	2.27	1.91
67	Holding Investments	4.17	0.98	0.88	0.85
70	Hotels and Lodging	3.14	2.29	2.16	1.54
72	Personal Services	4.33	1.78	2.18	1.69
73	Business Services	3.54	1.69	2.01	2.13
75	Auto Repair Services	3.97	2.03	2.27	1.79
76	Misc Repair Services	2.78	1.84	1.70	1.15
78	Motion Pictures	3.33	1.52	1.46	1.19
79	Recreation Services	3.82	2.09	2.59	2.19
80	Health Services	5.39	2.64	3.67	2.44
81	Legal Services	5.11	3.22	2.98	2.12
82	Educational Services	1.23	0.96	1.84	1.39
83	Social Services	6.30	3.69	4.35	4.66
84	Museums, Gardens	0.00	0.00	0.00	0.00
86	Member Organizations	0.33	0.15	0.20	0.19
87	Engineering, Management	4.46	2.45	2.98	2.69
89	Miscellaneous Services	1.38	0.34	0.92	1.59

Source: Corporate Research Board, LRDHIC Database (2008).

Note: The figures presented in this table are computed on the basis of all non-high impact companies contained in Corporate Research Board's database rather than on the basis of all firms contained in the SUSB Database presented in Table 3. Because the former contains several million records not contained in the latter, the share of high impact companies in relation to the former is less than in the latter.

M. INDUSTRY DISTRIBUTION OF HIGH GROWTH FIRMS IN NL

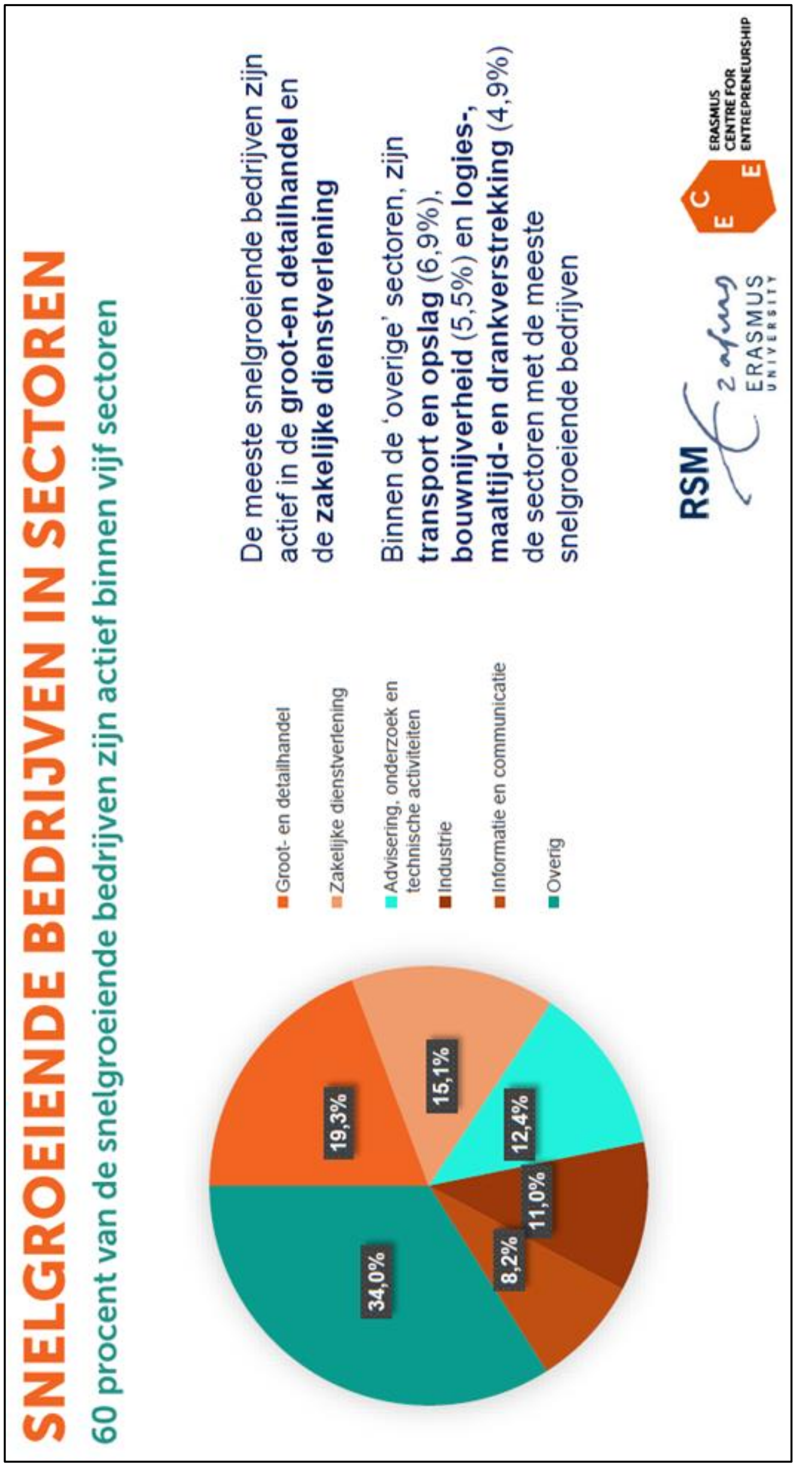


Figure 13: Scale Up Dashboard 2016 (ECE, 2016)

N. CASE INTRODUCTION MINIHOUSE | MULTIHOUSE

From:

MULDER. T. ET AL. (2010). Eenvoud in complexiteit: de passie van een ondernemersfamilie, pg. 117-124

Interview with Professor Theo Mulder on 27th September 2017

See Annex G for a transcript of this interview

"…De doelstelling van het in 1974 door Theo Mulder en Klaas van der Heide opgerichte Infohouse Nederland BV was het geven van automatiseringsadviezen zoals het opstellen van automatiseringsplannen en computerkeuzes.."

"…Bij Infohouse was de eerste opdracht het ontwikkelen van een informatiesysteem (in Cobol) voor een bedrijfsvereniging. De meest eervolle (en lucratieve) opdracht was het gedurende twee jaar voeren van het interim-management van de afdeling Organisatie en Automatisering voor het Sociaal Fonds Bouwnijverheid. In 1976 ging Infohouse een overeenkomst aan met een Amerikaanse fabrikant van minicomputers, het toen nog (en inmiddels weer) onbekende Digital Equipment Corporation (DEC) om naast adviezen ook computerapparatuur voorzien van applicatiesoftware te kunnen leveren aan klanten. Achteraf gezien was de keuze voor DEC's minicomputer uitstekend. Het bleek een goedkoper alternatief dan de mainframecomputers van onder meer International Business Machines (IBM), Burroughs of de Franse computerleverancier BULL. In de jaren tachtig was DEC enige tijd de tweede computerfabrikant ter wereld…"

"…Besloten werd om naast advies- en programmeerwerk ook standaardsoftware te ontwikkelen en te leveren voor de orderadministratie, facturering, artikel- en voorraadbeheer. Al deze informatiesystemen werden vervolgens geïntegreerd met een financieel informatiesysteem, dat ook managementinformatie leverde. Het concept van standaardapplicatiepakketten was een novum. Want tot die tijd was programmatuur per definitie maatwerk. Omdat in zee werd gegaan met één bepaalde computerfabrikant kon niet meer onafhankelijk advies worden gegeven over computerkeuze. Het oprichten van Minihouse Nederland BV was een logische stap. Het afbouwen van Infohouse ook, want binnen de kortste tijd werd alle capaciteit besteed aan het nieuwe Minihouse…"

"…1976 was een belangrijk jaar vanwege de verhuizing naar een 'echt' bedrijfspand in Alphen aan de Rijn. De strategie met betrekking tot standaardpakketten werd verder uitgebouwd tot het leveren van 'turnkey'-automatiseringsprojecten. Vanaf 1977 verschenen in vakbladen artikelen over deze nieuwe, nog onbekende benadering…"

"…Voor de automatiseringsbranche waren 'standaardsoftware' en 'turnkey' nieuwe begrippen. In de artikelen werd als toelichting gegeven: "Minihouse levert pakketten in de vorm van turnkeyprojecten, dat wil zeggen apparatuur, programmatuur en organisatieondersteuning in één hand onder verantwoordelijkheid (dit vertaalt zich in een vaste prijs voor de klant) van het systeemhuis.."

"….Er is veel gepubliceerd over het succes van Minihouse. Hoe kon het gebeuren dat in een economische recessie een bedrijf zo floreert? In tegenstelling tot de economische malaise van begin jaren tachtig en de pessimistische toekomstvoorspellingen, groeide de onderneming en het vertrouwen in de toekomst. Het vertrouwen is gebaseerd op de strategie van vaste en lagere prijzen door levering van standaardsoftware op basis van een turnkey-projectaanpak…"

"…in 1982 zijn ongeveer tachtig medewerkers in dienst. De omzet en winst stijgen tot op heden nog steeds. Voor dit jaar rekenen we op een groei van ruim dertig procent. (…) De huidige specialiteit van het (inmiddels) Goudse bedrijf is het maken van meervoudig toepasbare programma's. Dat betekent: een eenmalige productie, die geschikt is voor een groot aantal klanten die allemaal slechts een deel van de productiekosten betalen. Het was het bekende gat in de markt."

"…De groei van de onderneming vereiste echter een andere, meer marktgerichte manier van denken en werken. Ook werd een aanvang gemaakt met de export van de software van Minihouse naar de Nederlandse Antillen…"

"…Door de snelle groei was het noodzakelijk om elk jaar te reorganiseren, vaak met het gevolg dat hele afdelingen moesten verhuizen. De zomervakanties werden gebruikt om na te denken over nieuwe ontwikkelingen en een andere organisatiestructuur, maar vooral om een nieuwe communicatiestructuur te ontwerpen…"

"…In december 1983 wordt de Minihouse-groep een naamloze vennootschap. De aandelen zullen genoteerd worden aan de parallelbeurs (over-the-Counter-market) in Londen. Daar zijn een aantal redenen voor. De belangrijkste is het kunnen financieren van de groei. In tien jaar groeide de organisatie van 2 naar 118 medewerkers. De gemiddelde (organische) groei van de omzet in de laatste vijf jaar bedroeg 32,7 procent. De gemiddelde winstgroei was in die periode 54,4 procent…"

"…De beursgang van een bedrijf is een groot avontuur. Er gaan zich allerlei specialisten bemoeien met de onderneming: bankspecialisten, accountants, juristen, fiscalisten, communicatiespecialisten…"

"…Minihouse rapporteerde over 1983 goede cijfers: 89 procent meer winst en de omzet steeg met 45 procent tot 24,4 miljoen gulden. De groei van het personeelsbestand werd aangeduid als spectaculair. Van 113 mensen eind 1983 groeide het bedrijf in het eerste kwartaal tot 161.."

"…De enorme groei heeft achteraf voor grote problemen gezorgd. Eenmaal in de fuik van een enorme groeistrategie wordt van een beursgenoteerd bedrijf verwacht een blijvende groei te tonen. Bankfunctionarissen leren ondernemers hoe je kunt groeien door andere bedrijven te kopen. De ondernemer krijgt plotseling een ander vak, waar hij geen verstand van heeft en dat hij met vallen en (hopelijk weer) opstaan moet leren..." *"…Om verdere groei mogelijk te maken werd door Minihouse een overname van het Belgische computerservicebedrijf ASAC voorbereid. In 1985 werd een overname van het Rijkscomputercentrum in Heerlen door het kabinet niet aan Minihouse gegund, maar aan Philips…".* *"…Ook de concurrent van Minihouse, MultiFunction uit Culemborg maakte zich op voor een beursgang. MultiFunction was goed vergelijkbaar met Minihouse. Het bedrijf was wat kleiner en werkte ook met minicomputers van DEC. Gedreven door de groeistrategie, maar ook om een vuist te maken tegen DEC, kwamen de directies van Minihouse en MultiFunction in 1986 bij elkaar. Er werden plannen gesmeed om te komen tot een juridische fusie…"* *"…Door de resultaten van Minihouse in 1986 voldeden de cijfers van de nieuwe combinatie Multihouse nog net aan de hoge verwachtingen van de financiële analisten. In 1987 werd echter een verlies van 1,6 miljoen gulden en een omzetdaling van zes procent geboekt. Het was het eerste verlies sinds het bestaan van Minihouse/Multihouse. Het plotselinge verlies werd veroorzaakt door MultiFunction. Projecten waren te goedkoop aangenomen, of MultiFunction deed beloften die geen automatiseerder bij zijn volle verstand kon waarmaken. Door dit soort contracten steeg de omzet en winst van MultiFunction aanvankelijk aanzienlijk…"* *"…Na de fusie kreeg de nieuwe combinatie Multihouse de rekening gepresenteerd: klachten en schadevergoedingen…"* *"…een dramatische daling van de beurskoers van 50 naar 12 gulden…"* *"…Hoewel Theo Mulder de directe oorzaken van het verlies weet aan een verkeerde fusie, was hij de eerste om toe te geven dat uiteindelijk Multihouse onvoldoende was voorbereid op de complexiteit van een steeds sneller veranderende informatietechnologiemarkt. Hoewel Theo en zijn compagnon Klaas (de directie) inzagen in welke richting de oplossing moest worden gezocht, waren zij naar hun eigen mening niet in staat daar krachtig leiding aan te geven. Wat dertien jaar soepeltjes lukte, kostte ineens enorm veel moeite. Zij konden het emotioneel niet opbrengen mensen te laten vertrekken als gevolg van verkeerde inschattingen van de directie…"*

Table 24: Case description Minihouse | Multihouse

O. CASE ANALYSIS MINIHOUSE | MULTIHOUSE: FIT OF SUCCESS FACTORS FOR A SUSTAINABLE HIGH GROWTH FIRM

In order to answer the first and second sub questions of the third research question of this study, an assessment on what success factors for high firm growth from literature are supported (Yes), what success factors are not supported (No), what success factors are potentially supported, but no direct evidence is presented in the case (Maybe) and what success factors are unable to be classified for direct and indirect information is missing (Unknown).

Case analysis Minihouse|Multihouse: industry success factors

I. Industry success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
a) Emerging or growing markets offer most favorable growth opportunities. ○ Emerging markets offer greatest potential for first movers ○ Growing markets less risky due to structure and standardization	In 1976 Minihouse | Multihouse entered the market for delivering standard software as turnkey projects in its emergent stage. The company made an early bet on DEC as supplier of mini computers which turned out to be a successful choice where others made a bet on smaller hardware suppliers who were eventually left behind.	Yes
b) Sizeable emerging or growth markets offer most favorable growth opportunities	In The Netherlands the market of combining of software and mini computers was unchartered terrain in 1976. Only in the USA a small number of software suppliers were starting to deliver standard software on mini computers as turnkey projects	Yes
c) B2B markets favored above B2C markets for offering most favorable growth opportunities	Minihouse | Multihouse operated exclusively in the B2B market. Back then home computers were nonexistent thus the option did not present itself whether to serve the B2B or B2C market. Thus was not an explicit choice for Theo and Klaas, but a logical result if their work experience.	Yes
d) Locating in urban areas with right educational institutes close at hand preferable	The company case does not address the need to for locating close to education institutes for access to skilled resources. As The Netherlands are a small country and the company was already originally located in a densely populated area this might never have been an issue in the first place.	Unknown
e) Locating in areas with access to follow-up capital is preferable	Minihouse | Multihouse was not able to obtain financial resources to fuel growth in The Netherlands and therefore was forced to obtain a listing in London. As London is easily reachable from The Netherlands the company was not forced to move to the UK or any other financial center.	Unknown

Table 25: Minihouse | Multihouse case - analysis of industry success factors

Case analysis Minihouse|Multihouse: strategic success factors

II. Strategic success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
a) Broad based product differentiation strategy when operating in emerging markets Focused product differentiation	Minihouse | Multihouse applied a broad based product differentiation strategy in the emerging stage of the market, addressing potentially all B2B-customers in the Dutch market.	Yes

	strategy when operating in growth markets. Shifting from broad based product differentiation strategy to focused product differentiation strategy when market matures	Minihouse | Multihouse did not change its product offering when markets matured to attain a dominant position in a certain sector of industry. It could be argued that the market was still in its early growing stage by 1986/1987 and therefore a more focused product differentiation strategy was not yet a requirement.	Maybe
b)	Providing unique value and product superiority for customers	Minihouse | Multihouse was unique in its product (offering standardized software packages on minicomputers instead of mainframes) and approach (turnkey)	Yes
c)	Providing products and services 'designed to scale'	Minihouse | Multihouse products and services were scalable against the IT possibilities of that time. Furthermore, the business model was built around building software once and selling it to many.	Yes
d)	Ability to protect products and services	Minihouse | Multihouse products and services were not patented, but as a first mover technologies were initially advanced, providing the firm a head start over competition	Yes
e)	Growing single product or service first before developing additional ones	It is unknown whether Minihouse | Multihouse focused on a single software solution first and started extending it only after the firm had matured its internal operations sufficiently. It is unknown whether Minihouse | Multihouse made the transition from a product-oriented towards a market-oriented firm	Unknown
f)	Expanding markets by transforming products or services into platforms.	Minihouse | Multihouse software solution was a forerunner of the MRP- and ERP-solutions. As such it enabled to integration of previously unconnected business functions into the financial administration of a firm. Although not a platform as in the Internet world we currently live in, it can be argued that it provided a platform for a firm and potentially its suppliers and clients	Maybe
g)	Expanding markets by acquisitions in complementary markets when home markets become saturated.	Minihouse decided on not growing organically, but merges with Multifunction to fuel further growth and respond to increasing competition. Another acquisition was made in Belgium (ASAC) It is unknown whether Multifunction products and services were complementary or strictly identical.	Maybe
h)	Expanding markets through internationalization when facing small home markets or when home markets become saturated.	Although The Netherlands provided a small home market to Minihouse | Multihouse, the firm did not pursue an explicit international expansion strategy, but did acquire ASAC in Belgium and started exporting to The Netherlands Antilles. It is noted that in Europe multilingualism of software is a necessity for expansion, but this was not yet practically feasible without fully rewriting the software.	Maybe

Table 26: Minihouse | Multihouse case - analysis of strategic success factors

Case analysis Minihouse|Multihouse: organizational success factors

III.	Organizational success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
Entrepreneur or Entrepreneurial team			
a)	Strong general competencies	Although no direct reference is made towards availability of strong general competences it can hardly be denied that building a 'systeemhuis' from scratch, running it successfully for 10 years, including taking it public requires such competencies.	Maybe
b)	Ability to delegate	The entrepreneurial team introduced unit management in order to	Yes

	delegate responsibilities, recognizing the limitations of the entrepreneurial team to centrally control a high growth firm.	
c) Previous industry experience	Both entrepreneurs worked originally within the IT sector from both a business and software development perspective.	Yes
d) Technical skills	While Theo had a strong knowledge on financial administration, Klaas had strong knowledge and experience on IT development. Both entrepreneurs brought their own unique set of skills to the team. However, in the publication it is mentioned that when the firm went public the nature of the firm changed considerably and required a different set of skills.	Yes
e) Prior entrepreneurial experience	Theo comes from a family of entrepreneurs. Infohouse Nederland BV was his first firm, but quickly became Minihouse | Multhouse. Klaas did not have entrepreneurial experience either.	No
f) Higher education	Theo had an administrative background adding a broad higher education degree in IT. Theo later became professor at University of Maastricht. Klaas' educational background is unknown.	Yes
g) Clear decision and vision to grow	The entrepreneurial team made a clear decision to stop Infohouse activities in order to exploit opportunities provided by the Minihouse proposition. It does not become clear whether growth was a goal itself or seizing the opportunities provided by being first mover as a result of an entrepreneurial spirit. The decision to go public is however fully justified by the financial resources required for high growth, including the acquisition of ASAC and merger with MultiFunction.	Yes
h) Entrepreneurial team preferable above entrepreneur as individual	Theo and Klaas founded Infohouse and later Minihouse together, each bringing unique knowledge and skills to the organization. Both remained with the company until 1988 when the firm posted its first loss in 13 years after the merger with MultiFunction. In the interview Theo mentions mutual trust provided the basis for their long run relationship.	Yes
Childhood firm life cycle stage		
a) Installing strong and experienced management team to plan for firm growth	Both Theo and Klaas stayed with Minihouse until after the merger with Multifunction. Theo recognizes that after going public a different skill set was required to satisfy the needs of analysts and shareholders. In the meantime business unit had been introduced with their own management teams.	Maybe
b) Maintaining Entrepreneurial Orientation (EO) to support strong growth culture	There is no direct reference in the case in what way in the early growth period the entrepreneurial orientation was maintained. In the interview Theo mentions that initially Theo and Klaas did not specifically think about growth, but were primarily driven by doing great things for their clients. Only later, after Aktie68 became a client, a new shareholder introduced a growth orientation.	Maybe
c) Introducing basic Strategic Management practices	In the case there is no reference to the way strategic management practices were adopted in the early growth period, although a clear reference is made to the choice in 1976 to deliver turnkey-projects in addition to standard software solutions. Furthermore, Theo refers to planning for restructuring at every holiday.	Maybe
d) Introducing basic Financial Planning & Control practices	In the case there is no reference to the way financial planning & control practices were adopted in the early growth period, although a strategy of fixed and low pricing would have required good insights in project statuses.	Maybe
Adolescence firm life cycle stage		
a) Increase functional specialization to a	In the case it is noted that growth required a more market-oriented way	Maybe

	moderate degree	of thinking and working. However, it is not known what functions were specialized first and in what way.	
b)	Introducing an market orientation (MO) besides maintaining entrepreneurial orientation (EO)	In the case it is noted that growth required a more market-oriented way of thinking and working.	Yes
c)	Increase formalization of Strategic Management to a moderate degree	In the case there is no direct reference to the way strategic management practices were adopted in the period of adolescence, although the clear strategic decision was made to go public in 1983 and yearly restructuring was required to manage firm growth.	Maybe
d)	Increase formalization of Financial Planning & Control to a moderate degree	In the case it is clearly referenced that in preparation of and after the IPO extensive financial information was required on a regular basis to satisfy needs of analysts and shareholders.	Yes
e)	Increase formalization HRM to a moderate degree	The case references to high growth in number of employees, e.g. from 113 by end of 1983 to 161 in first quarter in 1984. At moments 20 to 30 new employees had to be trained per month. Therefore the need for increased formalization of HRM practices is clearly illustrated. Although the case does not specify the way the firm was able "handle" such a large number adequately in the interview it was mentioned that a piece of HR software provided by Wouter Schoonman was used to specifically support selection of IT developers.	Maybe
f)	Digitize core processes in IT to leverage growth	Minihouse was built on the concept of building standard software solution once and selling it manifold and as such provided a scalable product. How the firm internally used digitization of its core processes to leverage growth however is unknown.	Unknown
Prime adulthood firm life cycle stage			
a)	Foster strong Market Orientation (MO) over Entrepreneurial Orientation (EO) to prevent overstretching of resources and capabilities	Although in the case a specific reference is made to the need for a stronger market orientation, it is not stated in what way market orientation is related to entrepreneurial orientation.	Maybe
b)	Increase formalization of Strategic Management to a high degree	In this case a reflection is provided on why the first loss after 13 years of growth occurred. In this reflection one of reasons introduced is an overreliance on the self-managing and entrepreneurial capabilities of the lower echelons. The blueprint for introduction of unit management had not been adequately supported by explicit and formalized policies and guidelines and was found not be implemented strongly enough.	Maybe
c)	Increase formalization of Financial Planning & Control to a high degree	See above, in the case it is also stated that the financial situation of MultiFunction should have been known before the merger and many problems that had to be solved afterwards.	Maybe
d)	Increase formalization of HRM to a high degree	Although in the case formalization of HRM practices is not mentioned explicitly it could be argued that HRM should have supported the transition from a centrally managed organization towards unit management. In practice this turned out not to be the case.	Maybe
e)	Increase spending on digitizing core processes	Minihouse was built on the concept of building standard software solution once and selling it manifold and as such provided a scalable product. How the firm internally used digitization of its core processes to leverage growth however is unknown.	Unknown

Table 27: Minihouse | Multihouse case - analysis of organizational success factors

P. CASE ANALYSIS MINIHOUSE | MULTIHOUSE: ADDITIONAL SUCCESS FACTORS

From the analysis of the Minihouse | Multihouse case no new success factors were introduced, but a number of valuable observations can be made.

Firstly, a very essential moment in the history of Minihouse | Multihouse was its IPO. Going public requires a considerable professionalization in especially the area of Financial Reporting as part of Financial Planning & Control. The decision to go public to obtain sufficient funds for high growth, in the interview Theo mentioned that Minihouse | Multihouse would not have been able to sustain high growth through its free cash flows, defines a clear breaking point with the past for any high growth firm as suddenly a much higher degree of financial transparency is required on a much more frequent basis. Therefore the importance of the source of funding, and in particular raising capital through the public financial markets, cannot be underestimated with regards to the identified organizational success factor for high firm growth: formalization of financial planning & control, as it raises the bar considerably then would have been the case without financing a firm's growth through the financial markets. In the interview Theo also mentioned that the media attention created through the IPO of Minihouse | Multihouse right away generated a lot more business. Thus the solution for obtaining funds to fuel further growth, proved to be an accelerator for growth in itself. However, this kick-start for growth puts even more pressure on the internal workings of the firm, than was already the case. A firm should be aware of the impact of steepening the growth curve as it also accelerates the internal transition that are required from, in this case, the adolescent firm life cycle stage to the prima adulthood firm life cycle stage. Therefore, the following observation is noted.

<u>Observation a.</u>

The choice of obtaining growth funding through an IPO sets extra requirements on organizational success factors for sustainable high growth firms, especially in the area of, but not restricted to, financial planning & control.

Secondly, as Minihouse merged with Multifunction when the market was becoming more competitive the knowledge, expertise and skills to successfully execute such a merger were found to be in short supply. In the case of Minihouse | Multihouse this proved to have far reaching consequences, setting of a negative chain of events. One could thus argue that when pursuing an M&A a strategy to expand markets to sustain growth, this strategy needs to be properly supported by additional measures with regards to functional specialization and formalization of policies, guidelines and processes not explicitly identified from literature on the organizational success factors for firm high growth. Therefore, the following observation was noted.

<u>Observation b.</u>

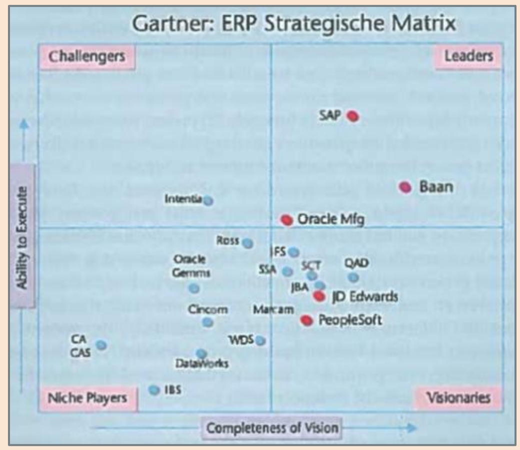
The choice to pursue an acquisition strategy for high growth firms to expand their markets and sustain high growth sets extra requirements on organizational success factors for sustainable high growth firms.

Q. CASE INTRODUCTION BAAN

From:
HOUDEN, M. & WESTER, J. (2001) ***Baan: opkomst en ondergang van een software bedrijf***
BAAN, J. (2005) ***De weg naar marktleiderschap***

"…Baan was created, financed by profits from selling his house seven times in a row, by Jan Baan in 1978 to provide financial and administrative consulting services. Jan's brother Paul joins the company in 1981. Together, with the development of Baan's first software package, they entered what was to become the ERP industry…"

"..During regular visits to the USA, Jan discovers Unix, an operating systems that runs on every hardware platform. Early 80's this is a revolutionary concept. With UNIX Baan's administrative software could run on any hardware. While Baan developed its first computer program on Durango F-85 computers, a shift is made to Unix…"



"…Through a client in 1982 Baan was able to extent its first software product from financial administration and billing into materials requirements management (MRP), further extending it to Baan Manufacturing Control System (BMCS) in 1984 enabling complete planning and production (MRP-II). BMCS was the frontrunner of Baan's ERP-software product named Triton, which was introduced in 1989. Triton was extended to Triton-3 in 1993 and Baan-IV in 1996…"

"…As most large clients having adopted UNIX are in the USA the first Baan office in the USA is opened in Grand Rapids, MI in 1989.

"…In 1992 a partnership is signed with ASK, one of the largest software firms in the world with an extensive dealer network across the USA and network across the business community. ASK does not have software running on UNIX yet. Although this creates a large dependency on ASK, it creates market visibility as Gartner now includes Baan into its periodic analyses…"

"…Parallel to the ASK contract Baan continues to build on its own sales network in the USA and Canada and as a result acquires Van Leeuwen in 1992, renaming the firm to Baan America…"

"…Gartner reports very positively on the ERP-capabilities of Baan enabling managing production from purchasing to final product delivery increasing operational efficiency by manifold. Gartner estimates the global ERP market to be US$2 billion and grow to US$5,5 billion by 1998, a growth of 25% annually… "

"…To support growth in the USA GAP invests US$21 million in Baan in 1993, acquiring 1/3 of Baan shares..."

"…With the investment Baan America quickly builds and professionalizes a marketing & sales unit. In six weeks' time 60 sales managers are hired. In 1993 Baan America employs 130 persons…"

"…Baan became a real threat to market leader SAP after winning a large Boeing deal in 1994, being called Baan's lighthouse account in the USA. After winning Boeing establishes itself by moving its HQ to Silicon Valley …"

"…In 1995 Baan goes public by obtaining a listing in Amsterdam and US Nasdaq.

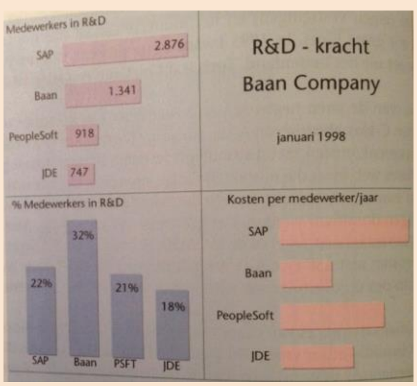
"…In 1996 Baan exists 18 years and is valued at around US$4 billion. Globally it has 50 offices, employing 2000. 1/3 of revenues are coming from the US market. By 1997 to global ERP-market is growing by 40% annually and to gain market share Baan has to grow faster. Mid-1997employs 3400 persons. To keep up with market growth Baan needs to add 1400 employees annually…"

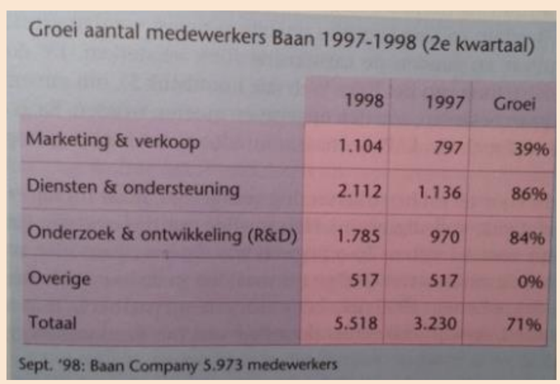
"... To fuel further growth Baan acquires Berclain, Antalys, Aurum, Beologic and Coda between 1996 and 1997 resulting in a global nr.4 position after SAP, Oracle and Peoplesoft in 1998..."

"...The Baan Web strategy is developed in 1997 to fuel further growth with Baan Midmarket Solution (BMS) being at the center of it with the mission to create a network of related companies in support of the core Baan ERP-product..."

"...The fall of the Baan Company begins in 1998 when management is found to exaggerate revenues by booking "sales" of software licenses at once instead of spreading it across the full contractual period, required by US GAAP. These practices led a Baan CFO to resign in 1995 and his successor is replaced in 1997 as well, as also "sales" were found to be inflated as they were actually transferred to BBS while BBS was not able to sell them. The discovery of this "creative" revenue manipulation led to a sharp decline of Baan's stock price at the end of 1998, including a 40% drop in share price in 1 day..."

"...In June 2000, facing worsening financial difficulties, lawsuits and reporting seven consecutive quarterly losses and bleak prospects, Baan was sold at a price of US$700 million to Invensys..."




Groei aantal medewerkers Baan 1997-1998 (2e kwartaal)

	1998	1997	Groei
Marketing & verkoop	1.104	797	39%
Diensten & ondersteuning	2.112	1.136	86%
Onderzoek & ontwikkeling (R&D)	1.785	970	84%
Overige	517	517	0%
Totaal	5.518	3.230	71%

Sept. '98: Baan Company 5.973 medewerkers

Table 28: Case description Baan

R. CASE ANALYSIS BAAN: FIT OF SUCCESS FACTORS IDENTIFIED FOR A SUSTAINABLE HIGH GROWTH FIRM

In order to answer the first and second sub questions of the third research question of this study, an assessment on what success factors for high firm growth from literature are supported (Yes), what success factors are not supported (No), what success factors are potentially supported, but no direct evidence is presented in the case (Maybe) and what success factors are unable to be classified for direct and indirect information is missing (Unknown).

Case analysis Baan: industry success factors

I. Industry success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
a) Emerging or growing markets offer most favorable growth opportunities. ○ Emerging markets offer greatest potential for first movers ○ Growing markets less risky due to structure and standardization	Early 80's the ERP market is its infancy. The development of UNIX in the late 70's enabled software to become hardware independent, opening up a global market for software developers, such as Baan.	Yes
b) Sizeable emerging or growth markets offer most favorable growth opportunities	ERP software could be delivered, made possible by the development of UNIX, on any hardware platform to any firm in the world.	Yes
c) B2B markets favored above B2C markets for offering most favorable growth opportunities	Baan's ERP software was targeted at the B2B market	Yes
d) Locating in urban areas with right educational institutes close at hand preferable	In The Netherlands Baan remained in Barneveld outside major urban areas. Considering the small size of The Netherlands this proved not an issue initially. However, after 1994 Baan did not succeed hiring enough software engineers from their own community and did have to look broader. Relocations to Barneveld raised housing prices disproportionately in the region. In the USA it was decided to relocate from Grand Rapids, MI to Silicon Valley, CA to get better access to talent.	Maybe
e) Locating in areas with access to follow-up capital is preferable	In The Netherlands this does not seem to have mattered to Baan, although funds were constantly in short supply due to large investments made in software development. Financing growth in the USA required US venture capitalists taking a stake in Baan	Maybe

Table 29: Baan case - analysis of industry success factors

Case analysis Baan: Strategic success factors

II. Strategic success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
a) Broad based product differentiation strategy when operating in emerging markets	Baan's ERP software was initially focused on any production firm in the world with a particular focus on large US firms. When the ERP market became a more crowded place Baan continued to	Yes

	Focused product differentiation strategy when operating in growth markets. Shifting from broad based product differentiation strategy to focused product differentiation strategy when market matures	compete head-on with much larger SAP, Oracle and PeopleSoft for a global top 3 position. While entering the middle market through Baan Business Systems this was not a replacement of the original broad based strategy, but an add-on to support Baan to become a global leader in both the corporate as middle market. In hindsight Jan recognizes this as a mistake admitting that focusing solely on middle market would possibly have been made it possible to become global leader in this market segment.	Maybe
b)	Providing unique value and product superiority for customers	Baan's ERP-solution was unique in the market and state-of-the-art and rated as such by research firms such as Gartner	Yes
c)	Providing products and services 'designed to scale'	Baan's ERP-solution was made scalable when it was built on the UNIX platform making it hardware independent. Furthermore, software development meant developing once and distributing manifold without additional costs. Baan made a special effort in developing its Baan-tools for software development tools, improving scalability where competitors focused on customized solutions for clients.	Yes
d)	Ability to protect products and services	Baan conducted R&D extensively and was partly able to protect its ERP-software through Intellectual Property, but being one of the first-movers the software contained innovations that made it outperform its competitors, this being confirmed by research firms such as Gartner	Yes
e)	Growing single product or service first before developing additional ones	Baan created initially a software solution for financial administration and billing. Through a client in 1982 Baan was able to extent this product to develop software for materials requirements management (MRP), taking another 2 years to extending it with project management solutions and another year to extend it with a solution for construction and manufacturing firms.	Maybe
f)	Expanding markets by transforming products or services into platforms.	While Baan's ERP-solution was made scalable when it was built on the UNIX platform, making it hardware independent, in those days without the Internet, Baan could not truly become a platform in itself beyond the boundaries of its software solution. However, with Internet, such a solution could have been transformed to platforms as competitors SAP and Oracle realized later.	Maybe
g)	Expanding markets by acquisitions in complementary markets when home markets become saturated.	Only in 1996 Baan starts with acquisitions when a shake-out is starting to take place and Baan is positioned as 5th global player and Baan wants to become a top 3 player. Recognizing the long software development lead times acquisitions are made in complementary markets (Berclain, Antalys, Aurum, Beologic, and Coda). Baan however fails to integrate their solutions into the core ERP- software product.	Yes
h)	Expanding markets through internationalization when facing small home markets or when home markets become saturated.	Firstly Baan wanted to establish a dominant position in its home market The Netherlands which it realized by 1988. Internationalization was first realized through OEM (Original Equipment Manufacturer) contracts with software vendors in Europe and beyond. However, Baan proved too immature to develop internationally leading to a financial crisis already in 1989 due to unforeseen circumstances abroad. As a result it had to reduce its international activities considerable. As Baan recognized early on that to become a global ERP-software leader a dominant position in the USA was required it still made the jump to the USA in 1989.	Yes

Table 30: Baan case - analysis of strategic success factors

Case analysis Baan: organizational success factors

III.	Organizational success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
Entrepreneur or Entrepreneurial team			
a)	Strong general competencies	Both Jan and Paul possessed strong interpersonal and charismatic skills being able to dominate meetings and put pressure on subordinates to agree with their wished and demands. In this sense one could argue that their competencies were too strong eliminating any opposing views.	Yes
b)	Ability to delegate	Jan stayed with Baan as CEO until crisis hit the firm. Also Paul remained initially active as Chairman & President and highly influential in the Baan informal network after stepping down. While both were very much able to delegate daily operations, they were not able to delegate responsibilities of decision-making, especially concerning the relationships between Baan, run by Jan, and Baan Investments and the Baan Web, run by Paul. It could be argued that this inability to let go of the financial engineering constructions blocked any corrective measures and contributed to Baan's downfall.	Yes
c)	Previous industry experience	Jan initially worked at an administrative department of a meat factory which he reorganized and commercialized on his acquired knowledge by starting his own financial consulting firm. After developing financial software for Durango computers, Baan delivers 'turn-key' projects against fixed price (see also Minihouse | Multihouse). Paul gains experience in a construction firm of which he becomes CEO thus understanding the functional relationships within a production firm. Although both gained relevant experiences, neither of them came from the software industry.	Maybe
d)	Technical skills	Neither Jan or Paul had any software development skills, although Paul was trained as a business economist and had management experience for having been CEO of a construction firm before Baan and Jan having worked at an financial administrative department of a meat factory before Baan obtaining a number of financial administrative degrees. Thus from a financial administrative point of view they did possess technical skills.	Maybe
e)	Prior entrepreneurial experience	Prior to Baan, Jan and Paul had no entrepreneurial experience	No
f)	Higher education	While Jan quits school at the age of 16, but obtains a number of financial administrative degrees while working. Paul finished HTS and Business Economics at university level	Maybe
g)	Clear decision and vision to grow	Jan always claimed Baan had to become world leader in the ERP market and conquering the US market was seen as a prerequisite to achieve this. Going public was required to increase visibility. The Beyond ERP strategy fueled further growth, followed by the Baan Web vision, finally bringing Baan to nr.4 position of the global ERP market.	Yes
h)	Entrepreneurial team preferable above entrepreneur as individual	Jan and Paul operated as duo. While Jan was the entrepreneur, Paul was the one building and maintaining the firm. As such both were highly complementary, but very much continued to operate as duo and not as a real team.	Maybe
Childhood firm life cycle stage			
i)	Installing strong and experienced management team to plan for firm growth	Jan Baan and Paul Baan remained highly-dominant figures until the crisis hit the firm in 1998. Jan Baan remained CEO until 1998 and Paul Baan became CEO of Baan Business Systems in 1995, operationally	Yes

		leaving Baan in 1996, but becoming chairperson of Baan Investments. While Jan initially wanted to take a step back before IPO, Jan only left Baan in 1998. Only after the IPO in 1994 Baan changed its governance structure to US standards. The Board of Directors installed, McKinsey dominated, played an active and dominant role in growth of Baan. As all had a large direct equity stake in Baan no strong counter balances were put in place or allowed resulting growth increasingly being manipulated. Also in the case it reported that the tight informal network Jan and Paul maintained within Baan prevented formally appointed managers to make their own decisions. It could therefore be argued that installing an experienced management team is essential, but in Baan's case should have been done earlier and should not be too strong as was the case at Baan.	
j)	Maintaining Entrepreneurial Orientation (EO) to support strong growth culture	Jan had a strong vision of growth and entrepreneurial drive. Jan also referred to the Baan DNA consisting of cultural elements of integrity, initiative and innovation. Innovation is a clear product-driven element within EO. Jan also mentions that it is better to ask for forgiveness afterwards than permission beforehand, stressing the risk-taking cultural values, also being part of an EO-orientation.	Yes
k)	Introducing basic Strategic Management practices	Jan mentions that he and Paul always made their own plans, initially in an informal and ad-hoc way by use of common-sense. This does not refer to any introduction of specific strategic management practices. Jan also addresses his skepticism on business planning for only being relevant for seeing 3-months in the future and confesses he has never been a supporter of such plans. Jan wrote himself a "strategienota" for the first time in 1986.	Maybe
l)	Introducing basic Financial Planning & Control practices	The first 10 years require extraordinary funding to support growth and software development in particular. Jan and Paul were the dominant persons in this growth stage, including its financial reporting, which proved to be troublesome from the onset. Due to the legal structure of Baan transparency of the financial position of Baan was found to be troublesome on a continuous basis. Therefore formalization of Financial Planning & Control seemed to be weakly executed within Baan, setting the stage for worse in the years to come.	Yes
Adolescence firm life cycle stage			
m)	Increase functional specialization to a moderate degree	While normally Technology and Engineering functions are generally already specialized from the onset in this stage increased specialization in Marketing & Sales is expected. However, it seems that Baan continued to invest heavily in its core products and relying heavily on international distributors for both marketing and sales. In 1989 this led to a financial crisis as a number of orders were unexpectedly not realized in its international network. Only then employees were retrained towards more client-facing functions such as sales agents or consultants.	Yes
n)	Introducing an market orientation (MO) besides maintaining entrepreneurial orientation (EO)	Although Jan mentions that Baan had always been market oriented, this is not confirmed by the publications, as it continued to invest heavily in R&D and software development without properly supporting and financing an internationalization strategy, resulting in a loss in 1989 as the international network, mainly consisting of distributors proved to be too weak. Although in 1990 a more business unit oriented approach was introduced to support of a stronger market orientation. At the same time Baan continued to invest heavily in R&D to support product innovation.	Yes
o)	Increase formalization of Strategic Management to a moderate degree	As reaction to the financial crisis of 1989 in 1990 the TOPASS program was designed to introduce better planning and control in Baan. As a result in 1990 for the second time a "Strategienota" was formulated (written by Paul). However, in this stage Strategic Management should	Yes

	support a stronger market orientation and understanding, but at Baan still seemed to be largely product-driven and inside-out. Thus strategic management practices were becoming more formalized, but leaving room for improvement.	
p) Increase formalization of Financial Planning & Control to a moderate degree	When GAP took a stake in Baan it was found that financial reporting practices needed to be professionalized quickly. In order to go public Baan needed to change from an annual reporting cycle to a quarterly cycle with monthly updates. Furthermore it needed to adopt the US GAAP. An experienced CFO was hired in 1994 that had to transform the Financial Planning & Control function before the IPO in a very short time period, receiving credit from Jan, but leaving Baan again in 1995, supposedly because of disagreements on financial reporting standards with the board of directors. Jan and Paul remained highly dominant in the financial planning & control cycle, largely supported by the Board of Directors who all had a major personal financial interest in Baan. As a result the Financial Planning & Control function remained weak.	Yes
q) Increase formalization HRM to a moderate degree	Based on experiences in the US, stock options became a standard remuneration item allowing for lower base salaries. This was accepted as everyone knew Baan would eventually go public. Also the Board of Directors installed after the IPO were rewarded with, for Dutch standards, sizeable stock options.	Maybe
r) Digitize core processes in IT to leverage growth	Although the case mentions Baan- tools as primary vehicle to support software development and innovation their development is not mentioned in detail.	Maybe
Prime adulthood firm life cycle stage		
s) Foster strong Market Orientation (MO) over Entrepreneurial Orientation (EO) to prevent overstretching of resources and capabilities	After the IPO, Baan continued to heavily invest in R&D and software development, still largely relying for marketing & sales on its distributors and network partners, thus entrepreneurial orientation pushing new innovations to the market still seemed to dominate. However, due to the high growth expectations of financial markets these pressures seemed to dominate. A stronger market orientation might have provided more and stronger signals as a reality check.	Maybe
t) Increase formalization of Strategic Management to a high degree	With the IPO in 1994 the Board of Directors of Baan became dominated by (ex) McKinsey & Company partners who all had extensive backgrounds in strategy consulting. The BeyondERP strategy was formulated followed by the Baan Web vision. However, the acquisitions made for BeyondERP and Baan Web were poorly integrated and seemed to have been acquired solely for fueling growth. Furthermore, Jan remained highly skeptical of business planning preferring to rely on appealing visions to motivate followers.	Maybe
u) Increase formalization of Financial Planning & Control to a high degree	The strong growth orientation resulted in a large number of legal entities under the Baan-umbrella limiting transparency of financial position of Baan. Mutual fund Putnam invested in early 1997, but sold its stake by the end of the year for this reason. Two CFO's and accountant were replaced in the period of 1995-97 indicating that especially the Control-side of Baan was not strongly enough positioned. The absence of formalization lead to an increasingly personal power struggle.	Yes
v) Increase formalization of HRM to a high degree	Development of HRM-practices are not mentioned in the case	Unknown
w) Increase spending on digitizing core processes	Although the case mentions Baan- tools as primary vehicle to support software development and innovation their development is not mentioned in detail.	Maybe

Table 31: Baan case - analysis of organizational success factors

S. CASE ANALYSIS BAAN: ADDITIONAL SUCCESS FACTORS

From the analysis of the Baan case no new success factors were introduced, but a number of valuable observations were made. These observations tend to be in line with the observations made in the Minihouse | Multihouse case. This is not surprising as Minihouse | Multihouse can be seen as one of Baan's early competitors in the emerging ERP industry in the early eighties of the last century.

Firstly, a very dominant moment in the history of Baan, similarly to Minihouse | Multihouse, was its IPO in 1994. As was noted in the reflection on the Minihouse | Multihouse case, going public requires a considerable professionalization in especially the area of Financial Reporting as part of Financial Planning & Control. The decision to go public to obtain sufficient funds for high growth defines a clear breaking point with the past, as suddenly a much higher degree of financial transparency is required on a much more frequent basis. Therefore the importance of the source of funding, and in particular raising capital through the public financial markets, cannot be underestimated with regards to the identified organizational success factor for high firm growth: formalization of financial planning & control, as it raises the bar considerably then would have been the case without financing a firm's growth through the financial markets. Not being able to satisfy the information needs of the financial markets can throw a high growth firm in turmoil as was illustrated through the Baan case study. Furthermore, going public also raises high expectations of sustained high growth in the markets. The pressure to continuously being able to show better performance puts pressure on the firm as a whole and might trigger doubtful behavior if not properly controlled through explicit policies, guidelines and processes. Therefore the importance of the source of funding, and in particular raising capital through the public financial markets, cannot be underestimated with regards to the knock-on effect it triggers on organizational success factors for high firm growth. Therefore, the Baan case reinforces the observation made earlier and repeated below.

> Observation a.
>
> The choice of obtaining growth funding through an IPO sets extra requirements on organizational success factors for sustainable high growth firms, especially in the area of, but not restricted to, financial planning & control.

Secondly, internationalization, especially when being confronted with a small home market, has been identified as a favorable strategy to expand markets and sustain (high-)growth. However, doing business internationally and managing a business internationally immediately introduces an extra layer of complexity in the firm that needs to be supported by specific knowledge, experience and capacity that might be in short supply. At the same time, if not managed properly and behavior funneled through explicit policies, guidelines and processes international units easily become disconnected from the firm as a whole and embark on journeys that might prove to be very costly, as was the case with Baan in 1989.

> Observation c.
>
> The choice to pursue an internationalization strategy for high growth firms to expand their markets and sustain high growth sets extra requirements on organizational success factors for sustainable high growth firms.

T. CASE INTRODUCTION BOL.COM

From: SCHAEFER, M. (2017). Het geheim van Bol.com

"…In 1998 Bertelsmann announces the ambition to create a global electronic bookstore titled Books Online: *it is the first time that you'll be able to buy a book in any language, anytime, anyplace and have it locally fulfilled…"*

"…Furthermore Bertelsmann announces: *our goal is not to be no.2 or no.3, we will try to be the best online…*".

"…Bertelsmann has tens of millions customers worldwide as members of its different book clubs, e.g. in The Netherlands ECI has 2 million members…"

"…In the USA Bertelsmann buys 50% of the online business of Barnes & Nobles in 1998. McKinsey, including later Bol.com Nederland CEO Daniel Roper, helps Bertelsmann to develop a pan-European roll-out strategy…"

"…As part of this pan-European roll-out Bol.com Nederland is founded from scratch in 1999. In the same year Bol.com Nederland goes live, initially with books, followed by music and movies. The original team, including later CEO Daniel Roper, consist of 8 persons. In 2000 already 250.000 Dutch customers are buying with Bol.com Nederland…"

"…In 2001 a Marketing Director Michel Schaefer, author of "Het Geheim van Bol.com" and an Operations Director Huub Vermeulen, successor of Daniel Roper as CEO in 2017, are appointed…"

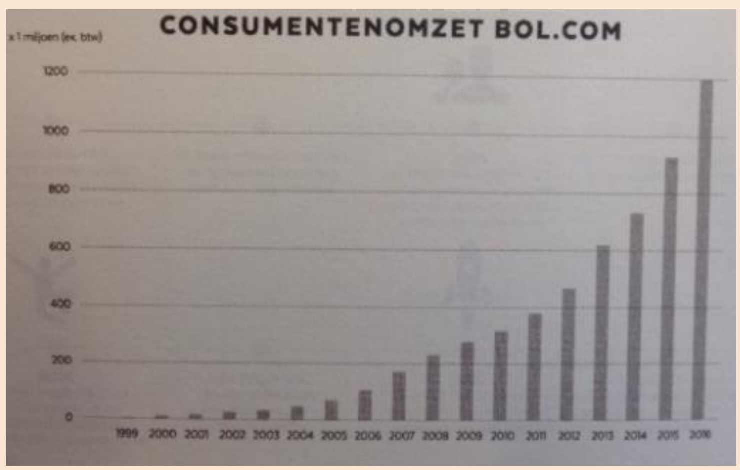
"….As in 2001 the Internet Bubble bursts Bertelsmann decides in 2002 to stop the roll-out of their ambition to create a global electronic bookstore. As a result Bol.com Nederland is put for sale and acquired by Networkx and T-Online Venture Fund in 2003, allowing Bol.com Nederland considerable freedom in carrying out their new autonomous plans to become the number 1 media store in The Netherlands…"

"…In 2003 software and games are added and 1 million Dutch customers shop with Bol.com. In 2004 small electronics are added. At this moment Bol.com has 57 employees…"

"….In 2006 over 100 employees work with Bol.com and turnover reaches €100 million…"

"…In 2007 second-hand books and computers are added and start is made to replace the complete IT backbone and is delayed for many months. As a learning of this unforeseen delay by the end of 2008 a new organizational structure is introduced emphasizing less central coordination and focusing on small autonomous teams. A new experienced director IT is hired in 2009 to further support the transition…"

"…In 2009 Networkx and T-Online Venture Fund sell Bol.com to Cyrte Investments and NPM Capital. Bol.com finds its running out of new media categories and outlook of its existing categories is gloomy. The strategic decision is made to In 2010 the goal to become an open platform is defined, toys and e-reading are introduced, followed by second-hand music, second-hand movies and second-hand games…"



"…Bol.com Belgium is established in 2010 and in 2011 the open platform for third-party retailers goes live. In 2011 Bol.com changes its strategy from e-commerce specialist to 'starting point for shopping'…"

"…In 2012 Bol.com is acquired by Ahold and all product categories are opened for third-party retailers. New categories Baby, Cooking, and Health are added…"

"…In 2013 new categories Animals, Living, Sports & Leisure and Gardening are introduced. At this point Bol.com has 500 employees…"

"…In 2014 Bol.com migrates its IT to its own datacenter. In 2014 also product categories Jewelry & Watches are added. Bol.com now has 5 million returning customers..."

"…In 2015 Logistics via Bol.com is added as a service, including Same day delivery. Also product category Handbags & Accessories is added…"

"…In 2016 Bol.com has an annual turnover of €1,2 billion with 7 million customers and over 1000 employees..."

Table 32: Case description Bol.com

U. CASE ANALYSIS BOL.COM: FIT OF SUCCESS FACTORS IDENTIFIED FOR A SUSTAINABLE HIGH GROWTH FIRM

In order to answer the first and second sub questions of the third research question of this study, an assessment on what success factors for high firm growth from literature are supported (Yes), what success factors are not supported (No), what success factors are potentially supported, but no direct evidence is presented in the case (Maybe) and what success factors are unable to be classified for direct and indirect information is missing (Unknown).

Case analysis Bol.com: industry success factors

I.	Industry success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
a)	Emerging or growing markets offer most favorable growth opportunities. ○ Emerging markets offer greatest potential for first movers ○ Growing markets less risky due to structure and standardization	The end of nineties see a frenzy of online activities being deployed. When Bol.com is launched in Europe there are several competing firms already present, such as Boxman, Proxis, Free Record Shop and CDNow, but these are still the early days of e-commerce.	Yes
b)	Sizeable emerging or growth markets offer most favorable growth opportunities	Bertelsmann aims at becoming a global leader in the online book market and is therefore originally not highly interested in The Netherlands for being such a small market despite its high internet penetration and well developed book market and prefers to focus on sizeable markets such as Germany, UK, Spain and Italy.	Yes
c)	B2B markets favored above B2C markets for offering most favorable growth opportunities	Bol.com operates in the B2C market. Only recently the B2B market has been added in order for competing retailers to sell via the Bol.com platform.	No
d)	Locating in urban areas with right educational institutes close at hand preferable	The Bol.com case does not address the need to for locating close to education institutes for access to skilled resources. As The Netherlands are a small country and the company was already originally located in a densely populated area this might never have been an issue in the first place.	Unknown
e)	Locating in areas with access to follow-up capital is preferable	Bol.com started off well-financed through Bertelsmann. When Bol.com was sold it had already positioned itself as a solid player on the Dutch market and follow-up investors were able to be secured in The Netherlands. In the case obtaining funding in The Netherlands did not seem to be a limitation.	Unknown

Table 33: Bol.com case - analysis of industry success factors

Case analysis Bol.com: strategic success factors

II.	Strategic success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
a)	Broad based product differentiation strategy when operating in emerging markets Focused product differentiation strategy when operating in growth markets. Shifting from broad based product differentiation strategy to focused product differentiation strategy when market matures	When Bol.com started it focused on books, movies and CDs. In 2003 Bol.com Nederland decided it wanted to become the best media store in The Netherlands adding fitting categories to this proposition. It could be argued that Bol.com started off relatively focused it became much broader based as part of the 2003 mission and its independence from Bertelsmann in 2002. Only in 2009 Bol.com realizes that its running out of new media categories and outlook of existing media categories is gloomy. It then realizes it needs to redevelop its strategy or focus on completely new markets. Three options are found to survive in the long run being specialists, vertically integrated shops and generic stores. Bol.com decides on becoming a generic store and become 'a starting point for shopping' thus following the opposite direction as proposed in literature when markets mature.	No No
b)	Providing unique value and product superiority for customers	Bol.com was able to become the preferred e-commerce player in The Netherlands due to its likeable image, ease of shopping, fast delivery and very broad range of products within each category, unmatched by competitors	Yes
c)	Providing products and services 'designed to scale'	From 2003 onwards, when becoming autonomous from Bertelsmann, Bol.com decides to invest heavily in its scalability through its so-called growth flywheel in which turnover growth is invested in improvements in economies of scale, enabling better service, new products or lower pricing, and by doing this improving customer preference for Bol.com, resulting in higher turnover.	Yes
d)	Ability to protect products and services	While an internet shop is a fairly straight forward business the size of Bol.com including its broad product offering within each category, ease of shopping, integration with its logistics partners and its dominant position in the Dutch market does provide protection for growth.	Yes
e)	Growing single product or service first before developing additional ones	Bol.com was able to create a solid foundation through Bertelsmann with an initial focus on books, CDs and movies in its first two years.	Maybe
f)	Expanding markets by transforming products or services into platforms.	Bol.com extended its original markets of books, CDs and movies to all media categories until 2009, until it decided to become a fully generic player based on the original platform	Yes
g)	Expanding markets by acquisitions in complementary markets when home markets become saturated.	Bol.com has grown fully organically through its market dominance allowing it to fuel growth through extending its business in adjacent categories.	No
h)	Expanding markets through internationalization when facing small home markets or when home markets become saturated.	Bol.com has grown fully organically through its market dominance allowing it to fuel growth through extending its business in adjacent categories. Only in 2010 Bol.com Belgium was established.	Maybe

Table 34: Bol.com case - analysis of strategic success factors

Case analysis Bol.com: organizational success factors

III.	Organizational success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
Entrepreneur or Entrepreneurial team			

a)	Strong general competencies	In the Bol.com case Daniel Roper is positioned as strategically and conceptually strong with a pragmatic approach, passionate, driven, with excellent interpersonal competencies and a talented communicator.	Yes
b)	Ability to delegate	When Daniel Roper succeeded Rick van Boekel he started building a stronger management team by appointing an experienced Marketing director and Operations director to support firm growth. In 2007 problems with replacing the core IT platform remind the board of directors that less entrepreneurial spirit is required of them in favor of improved governance of an increasingly complex organization.	Yes
c)	Previous industry experience	As part of McKinsey Daniel Roper was part of the team preparing the roll-out of Bol.com across Europe.	Yes
d)	Technical skills	As the original team consisted of 8 persons, each brought their own specialized skills, being Finance, Strategy and Business Development for Daniel Roper.	Yes
e)	Prior entrepreneurial experience	Although Daniel had no previous entrepreneurial experience, the original CEO of Bol.com Rick van Boekel previously founded Planet Internet, growing it in two years to 130 FTE.	Maybe
f)	Higher education	Most of the original team members consisted has a university degree with Daniel Roper coming from McKinsey.	Yes
g)	Clear decision and vision to grow	While Bertelsmann wanted to become global leader, Bol.com Nederland always aimed for an e-commerce leadership position in each category.	Yes
h)	Entrepreneurial team preferable above entrepreneur as individual	The original team consisted of eight persons each bringing different specialties to the table.	Yes
Childhood firm life cycle stage			
i)	Installing strong and experienced management team to plan for firm growth	When Daniel Roper succeeded Rick van Boekel he started building a stronger management team by appointing an experienced Marketing director and Operations director to support firm growth.	Yes
j)	Maintaining Entrepreneurial Orientation (EO) to support strong growth culture	Bol.com developed new concepts such a payment after 15 days to convince people to buy online to only solve fraud incidents afterwards and kept introducing new categories in high pace. Get big fast, is more important that thoroughness and efficiency. When Bol.com becomes independent in 2003 the new mission becomes The best media store in The Netherlands, setting an ambitious target to fuel a growth culture.	Yes
k)	Introducing basic Strategic Management practices	Daniel Roper initially made a plan for roll-out of Bol.com in The Netherlands arguing that an annual turnover of €10 million would be feasible within 10 years and break-even would be reached in 7 years with a maximum of 25 employees. As director Finance, Strategy and Business Development also opposes the first television campaign of Bol.com in The Netherlands as costs would not be justifiable. He turns out to be wrong, as television campaign kick-starts Bol.com on the Dutch market. These examples underwrite the use of basic strategic management tools when experiencing highly uncertain circumstances with reliable information lacking.	Yes
l)	Introducing basic Financial Planning & Control practices	In the first years of Bol.com spending is directed through Bertelsmann with the sole assignment to Get big fast in which money was not an issue. Until 2003 annual budgets were made and extrapolated to a 3 year horizon, only to be found obsolete after 6 months. Therefore a comprehensive planning process was deliberately not developed due to time consumption and false sense of security.	Yes
Adolescence firm life cycle stage			
m)	Increase functional specialization to a moderate degree	The original Bol.com team already had their functional specializations in Commerce, Operations and IT. Only in 2009, after problems with replacing the core IT platform, the strictly functional organization is replaced by small cross functional teams to bring back responsibility,	Yes

	ownership and results orientation.	
n) Introducing an market orientation (MO) besides maintaining entrepreneurial orientation (EO)	Only in 2009 a shift is made from a more inward looking technology oriented approach to a more outward looking business oriented approach. This after problems with replacing the core IT platform. This crisis initiated the move to cross functional teams to better involve the business domain in the IT domain.	Yes
o) Increase formalization of Strategic Management to a moderate degree	Until 2003 a strategic plan had not been made. In 2003 the annual Bol.com Global Strategic Alignment Meeting was introduced. With information of previous years available the leadership team was able to evaluate market developments, new entrants and viability of the Bol.com business model. Due to the number of opportunities Bol.com focuses on the most urgent issues first from 2004 onwards. Also regular “think sessions” are introduced with all Bol.com directors present in order to look further ahead. The so-called flywheel for growth and Bol.com’s strategic triangle on maximum freedom of choice, there where needed and personal become the main strategic instruments. In team meetings the status quo of Bol.com and most important issues are explained by the Bol.com management team with the whole organization on a bi-monthly basis.	Yes
p) Increase formalization of Financial Planning & Control to a moderate degree	As part of the annual Global Strategic Alignment Meeting in 2003 first attempts were made to set financial targets based on information of previous years with the outcome of setting a goal for 2015 of €250 million and 5% EBITDA. However, financial control processes were found to be neglected due to high growth, noted by the controlling accountant and therefore a separate financial director is appointed to improve financial control.	Yes
q) Increase formalization HRM to a moderate degree	In 2004 it was decided to grow from 33 to 50 employees in 6 months. In 2005 to 100. Since 2006 new employees receive the Bol.com passport providing new employees the history, values and ambition of Bol.com. New hire days are introduced to onboard 20 to 40 new employees every six weeks to further introduce the Bol.com values. Team meetings on Friday	Yes
r) Digitize core processes in IT to leverage growth	Being an e-commerce platform from the start core processes were all set in IT from the outset. However, only when becoming independent from Bertelsmann Bol.com Nederland was able to define its own priorities from IT development perspective. In 2014 first steps are set to improve scalability of processes including customer service, logistics and purchasing.	Yes
Prime adulthood firm life cycle stage		
s) Foster strong Market Orientation (MO) over Entrepreneurial Orientation (EO) to prevent overstretching of resources and capabilities	From 2004 onwards Bol.com adds new categories, but only when its enables the so-called flywheel principle. Several opportunities prove to be ill-fitting or are not able to live up to customer expectations and are therefore abandoned before too many resources are expended.	Maybe
t) Increase formalization of Strategic Management to a high degree	When in 2009 it is decided to become a ‘starting point for shopping’ in The Netherlands no further research is conducted after initial market research confirms that brand reputation is strong enough to add non-traditional categories. However, the process of business development is fully redesigned, standardized and formalized through first market research until ‘go-live’. In 2009, after introduction of multi-disciplinary teams the board of directors finds out more communication and guidance is required for the decentralized teams to focus on the right goals.	Maybe
u) Increase formalization of Financial Planning & Control to a high degree	The case does not describe in much detail further developments in the functional role of Financial Planning & Control, except for the institutionalization of distributing financial information to the whole of Bol.com on a daily basis	Unknown

v) Increase formalization of HRM to a high degree	The case does not describe in much detail further developments in the functional role of HRM.	Unknown
w) Increase spending on digitizing core processes	Bol.com invests in scalability from the outset when introducing new categories (and abandoning the ones that proved not scalable) to be able to grow quickly when needed and prevent high fixed costs when proving unsuccessful. Bol.com developed its so-called flywheel in which turnover growth is invested in improvements in economies of scale, enabling better service, new products or lower pricing, and by doing this improving customer preference for Bol.com, resulting in higher turnover. In 2007 Bol.com decides to replace it core IT platform from supplier Intershop to ATG to support its further growth and the original platform is outgrown.	Yes

Table 35: Bol.com case - analysis of organizational success factors

V. CASE ANALYSIS BOL.COM: ADDITIONAL SUCCESS FACTORS

From the analysis of the Bol.com case no new success factors were introduced, but a number of valuable observations could be made.

The Bol.com case is considerably different from both the Minihouse | Multihouse and Baan cases. First of all Bol.com operates in the B2C-market, instead of the B2B-market. Also, Bol.com was founded in the Internet age with technological opportunities available that Minihouse | Multihouse and Baan could not take advantage of. Also the way Bol.com was founded and financed is very different from the previous two cases with Bol.com having the luxury of having abundant start-up capital where both Minihouse | Multihouse and Baan were running a very tight business in their early growth years before going public. Deliberately or not, Bol.com never went public and were fortunate enough to find strategic investors in Networkx and T-Online Venture Fund, Cyrte investments and NPM Capital and eventually Ahold, allowing Bol.com to grow its business with considerable freedom. The Bol.com case therefore provides (indirect) support for the finding that the source of funding obtained to support growth, especially when relying on the financial markets by going public, creates a different set of dynamics and challenges on high growth firms, than when relying on other sources of funding. Therefore, the Bol.com case provides indirect supported for the observation made in the Minihouse |Multihouse and Baan case, which is repeated below.

<u>Observation a.</u>

The choice of obtaining growth funding through an IPO sets extra requirements on organizational success factors for sustainable high growth firms, especially in the area of, but not restricted to, financial planning & control.

In a somewhat similar way this case also supports findings from the Baan case as Bol.com eventually pursued, although modestly, an internationalization strategy to expand its home market by establishing Bol.com Belgium. Internationalization, especially when being confronted with a small home market, has been identified as a favorable strategy to expand markets and sustain (high-)growth. However, doing business internationally and managing a business internationally immediately introduces an extra layer of complexity in the firm that needs to be supported by specific knowledge, experience and capacity that might be in short supply. In the book a number of pages are addressed to the difficulties of doing business internationally. Bol.com made a special effort to acknowledge cultural differences between The Netherlands and Belgium and made the choice early to appoint a Belgium director for the Belgium market. However, despite these efforts, Bol.com had to made considerable changes to its core IT processes and platform functionalities to enable it to serve the Belgium market successfully. Therefore this case supports the earlier observation made as part of the Baan case, which is repeated below.

<u>Observation c.</u>

The choice to pursue an internationalization strategy for high growth firms to expand their markets and sustain high growth sets extra requirements on organizational success factors for sustainable high growth firms.

W. CASE INTRODUCTION PROSPEX

Source: interviews with Maxim Spek on 7th and 13th of November 2017 **See Annex H for transcript of these interviews**
"…Prospex was founded in August 2007 by brothers Maxim and Leon Spek, as both brothers agreed over Christmas 2006 they wanted to start their own business together. After brainstorming for ideas it was decided that the B2B lead generation business would provide ample opportunities for business success…"
"…Although the B2B lead generation business was not an emerging or growth market, Max and Leon believed that the telemarketing business was dominated by a large number of firms that overpromised and under delivered while earning high fees…"
"…Prospex introduced a new consultative selling approach for B2B lead generation promising a much higher value lead than leads generated by its competitors who still adopted a classic product push approach…"
"…With a clear and simple methodological approach Prospex hired older people with a higher education to conduct cold calling and generate leads for its clients after having created a clear communication strategy with their respective clients…"
"…While Leon quit his job to focus completely on Prospex, Max provided the start-up funds through raising the mortgage on his home, in such way being able to make it through 6 months without earning fees…"
"…Prospex proved to be a hit right away with gaining traction within 6 months through pilot projects with clients such as Microsoft and KPN…"
"…In 4 years Prospex grew from 2 to around 140 employees, with location managers in Amsterdam and The Hague and a separate financial director and HR & Recruitment director. In this period Prospex earned various awards including the prestigious FD Gazellen Award…"
"…Prospex ran into problems when in 2009 the Bel-me-niet-register was introduced in the B2C market. As a result a large number of firms originally operating in the B2C market turned to the B2B-market for new business flooding the market with telemarketers against fees half those of Prospex…"
"…A number of clients wanted Prospex to cut their prices by half as well. As Prospex found they would not be able to sustain the high value proposition they offered, Prospex had to let go of a number of clients and Prospex had to let go of 45 to 50 employees as a result…"
"…At the same time the Internet started to become an increasingly dominant channel in the B2B information search process and as a result it showed that the number of lead calls were dropping as well around 2011/2012…"
"…Supported by a consulting firm Prospex decided it had to change its strategy to seize the opportunities the Internet was providing for positioning Prospex as a player in the B2B online information search market. Prospex acquired a market research firm and an online marketing firm to get a foothold in this market right away. Prospex became a content marketing firm as a complementary business to its original telemarketing activities…"
"…As part of the new direction the offices in The Hague and Spain were closed. With this refocus Prospex also found out it needed to reinvest in strong management. Maxim decided to focus on commercial activities and leave the management of the content marketing and telemarketing activities to a new experienced general manager and manager of content management…" "…At the moment Prospex employs around 75 persons and has an annual turnover growth of approx. 10% per year, but this is expected to improve when integration of the two acquisitions with Prospex activities and introduction of the new management team is fully completed…"

Table 36: Case description Prospex

X. CASE ANALYSIS PROSPEX: FIT OF SUCCESS FACTORS IDENTIFIED FOR A SUSTAINABLE HIGH GROWTH FIRM

In order to answer the first and second sub questions of the third research question of this study, an assessment on what success factors for high firm growth from literature are supported (Yes), what success factors are not supported (No), what success factors are potentially supported, but no direct evidence is presented in the case (Maybe) and what success factors are unable to be classified for direct and indirect information is missing (Unknown).

Case analysis Prospex: industry success factors

I. Industry success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
a) Emerging or growing markets offer most favorable growth opportunities. ○ Emerging markets offer greatest potential for first movers ○ Growing markets less risky due to structure and standardization	When Max and Leon decided to enter the B2B lead generating business this was already a mature market. High growth was found to be possible as Prospex was able to do outperform competitors be a wide margin. The Internet as source of information search in the B2B market and the effects of the “bel-me-niet-register” in the B2C market meant Prospex had to pivot towards B2B content marketing. The market for content marketing is currently a fast growing market with a large number of new entrants. Prospex expects this market to mature within the next 4 to 5 years.	Maybe
b) Sizeable emerging or growth markets offer most favorable growth opportunities	Prospex product and services are focused on the entire B2B market in The Netherlands. However, Prospex product and services are built around customer intimacy making scaling to a global market are more complex endeavor than would otherwise be the case.	Yes
c) B2B markets favored above B2C markets for offering most favorable growth opportunities	Prospex made a conscious decision to pursue opportunities in the B2B market as Max and Leon found it much easier in the B2B market to provide value against reasonable pricing.	Yes
d) Locating in urban areas with right educational institutes close at hand preferable	Prospex deliberately choose to concentrate its activities in Amsterdam and close its office in The Hague for this reason. At the moment Amsterdam is the place to be in The Netherlands for Internet companies and being in Amsterdam Prospex is able to attract the right talent not found to be possible in, for example, The Hague.	Yes
e) Locating in areas with access to follow-up capital is preferable	So far Prospex has been able to finance growth internally. Although it considering external financing for platform development, Prospex does not see their location, being already Amsterdam, as essential for obtaining access to follow-up financing.	Maybe

Table 37: Prospex case - analysis of industry success factors

Case analysis Prospex: strategic success factors

II. Strategic success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
a) Broad based product differentiation strategy when operating in emerging	Prospex selected a niche when it entered the mature telemarketing	

	markets Focused product differentiation strategy when operating in growth markets. Shifting from broad based product differentiation strategy to focused product differentiation strategy when market matures	market focusing its original telemarketing explicitly on the higher end in the B2B-market in which it could sell its marketing communication strategy approach. When Prospex reoriented its core business towards content marketing when telemarketing market proved to be in decline, it again focused fully on the niche of higher end of B2B content marketing. Maxim believes focus is essential to be successful in markets that become even more transparent. An unclear or not solid enough position of a firm has direct results.	Yes N/A
b)	Providing unique value and product superiority for customers	Both in its telemarketing and content marketing activities Prospex is able to provide marketing communication services with a unique character in which high quality is key. This allows them to demand higher fees, enabling them improve the quality of their services further	Yes
c)	Providing products and services 'designed to scale'	Prospex's services are fairly labor intensive with a clear focus on customer intimacy. As a result its services are scalable to a limited extent. Maxim however recognizes the need to redesign the elements of their products and services that have the capacity to become scalable in order to fuel growth. This reorientation is currently underway in order to become, as Maxim states, an Audi manufacturer instead of a Ferrari manufacturer: still high quality, but with much better scaling capabilities. This is especially the case for its benchmarking services in which Prospex now works for individual clients, but would be able to leverage on its investments much better if it were to focus on an specific industry need first and then enrolling clients.	Yes
d)	Ability to protect products and services	Maxim does not believe the focus of a firm should be on protecting products and services as the pace and transparency of the market is such that it is just a matter time before product or services are copied or are outdated. In these times Maxim believes much more in the ability to innovate. For Maxim a unique culture with a clear focus on innovation is much more important as it is so much harder to be copied.	Maybe
e)	Growing single product or service first before developing additional ones	Prospex core product are its marketing communication strategy services. From these services it was able to extend into telemarketing and more recently into content marketing. Prospex tried to introduce a number of additional services simultaneously such as recruitment and staffing of sales personnel, but this proved to absorb too much time and clouded the clarity of the Prospex proposition towards clients.	Yes
f)	Expanding markets by transforming products or services into platforms.	As an extension of Prospex reorientation to increase the scalability of its products and services, the possibility to become a platform in its selected niche is seen as a real possibility. Benchmarking services could become industry platforms or "super benchmarks" such as e.g. Gartner, IDC and Forrester benchmarks.	Yes
g)	Expanding markets by acquisitions in complementary markets when home markets become saturated.	As part of its strategic reorientation Prospex deliberately choose to acquire an online media firm and a market research firm in order to get a serious foothold in this market without having to delay by building new competences and capabilities from scratch.	Yes
h)	Expanding markets through internationalization when facing small home markets or when home markets become saturated.	For its largest client Prospex established an office in Spain. However, within a year this office had to be closed again as this client withdrew from the Spanish market. During this year the Spanish office caused Prospex a lot a headaches and absorbed a lot of time of its management. Prospex now sees internationalization as the least attractive option to grow and focuses on growth within the Dutch market as its products and services are not easily translatable and transferable to other European markets.	Maybe

Table 38: Prospex case - analysis of strategic success factors

Case analysis Prospex: organizational success factors

III.	Organizational success factors from literature	Analysis	Confirmed? (Yes / No / Maybe / Unknown)
Entrepreneur or Entrepreneurial team			
a)	Strong general competencies	Maxim believes that a sincere curiosity on how things could be improved or done better should be part of this set.	Maybe
b)	Ability to delegate	Maxim recognizes the need for an entrepreneur to delegate. In the early days Maxim and Leon still managed the daily business a lot themselves, finding out sometimes it is better to let someone else do the job. Maxim and Leon therefore installed a management team for running the daily operations.	Yes
c)	Previous industry experience	Leon was the one with previous experience in telemarketing and market research having worked for Marktselect (now Graydon) on customer databases and lead generation. Through his background Leon also had a considerable relevant relationship network.	Yes
d)	Technical skills	Maxim worked in customer facing marketing consulting projects at Atos Consulting and as such knew how to deliver marketing communication strategies. Leon knew how to structure databases, conduct database searches and set up telemarketing operations. However, Maxim is reluctant to call these real technical skills as neither of them were real “techies”.	Maybe
e)	Prior entrepreneurial experience	Neither Maxim nor Leon had prior entrepreneurial experience	No
f)	Higher education	Although both Maxim and Leon have a university degree, Maxim is hesitant to note Higher Education as a differentiator as he meets plenty of entrepreneurs with lower degrees being highly successful. He believes that the combination of visionary thinking and concrete planning is much more important that education.	Yes
g)	Clear decision and vision to grow	Maxim believes the most crucial competencies are having a strong vision on what could be improved in such a way it becomes a business model and at the same time has the ability to plan for making this vision a reality.	Yes
h)	Entrepreneurial team preferable above entrepreneur as individual	Maxim and Leon decided beforehand they wanted to make Prospex a team effort in order to provide the required competencies to get the business off the ground. Maxim believes that three set of competencies are essential which are a visionary person who is able to envision a business model and can act as spokesperson, a person who can manage a business and is capable of introducing processes were needed and a technical person who focuses on the details to make the business model work.	Yes
Childhood firm life cycle stage			
i)	Installing strong and experienced management team to plan for firm growth	Although in the early days of Prospex when it started its B2B telemarketing business a management team was installed, these persons were often introduced through Maxim and Leon’s own personal networks. Although sufficient to get a business of the ground, it proved not sufficient for fueling growth. Some of the early management team were forced to leave and were replaced by stronger and more experienced management. This proved to be an essential step, as after this move growth increased considerably.	Yes

j)	Maintaining Entrepreneurial Orientation (EO) to support strong growth culture	Maxim recognizes the ease with which the early entrepreneurial spirit can be destroyed. Although formalization of processes and procedures is required if pushed too hard it can kill entrepreneurship.	Yes
k)	Introducing basic Strategic Management practices	Maxim believes strongly in the importance of strategic management. Without strategic management it becomes almost impossible to steer, for example, doubling firm revenue.	Yes
l)	Introducing basic Financial Planning & Control practices	Maxim argues that strategic management and financial planning go hand in hand, by setting targets, controlling attaining this targets and evaluate progress.	Yes
Adolescence firm life cycle stage			
m)	Increase functional specialization to a moderate degree	Although Leon and Maxim managed Prospex by themselves initially, functions were separated with delegation of responsibilities into Marketing & Sales, Operations, HR and Finance. Also for each office a separate manager was appointed.	Yes
n)	Introducing an market orientation (MO) besides maintaining entrepreneurial orientation (EO)	Maxim recognizes that many successful firms are a one trick pony. Maxim agrees that outside-in should supplement inside-out in order to receive sufficient signals from the market to adapt and renew.	Yes
o)	Increase formalization of Strategic Management to a moderate degree	Prospex introduced quarterly strategic meetings in which progress against yearly planning are reviewed. It also installed an external Board of Advisors to challenge the perceptions of the Prospex management team.	Yes
p)	Increase formalization of Financial Planning & Control to a moderate degree	Increased formalization of Financial Planning & Control goes hand in hand with the increased formalization of Strategic Management practices.	Yes
q)	Increase formalization HRM to a moderate degree	Maxim recognizes the importance of HR for recruiting the right staff and maintenance of the right culture, but also notes that every firm deals with recruitment and staffing challenges in its own way. Formalization of HR processes and procedures has never been a topic on the management agenda by itself.	Yes
r)	Digitize core processes in IT to leverage growth	As was illustrated earlier Prospex is currently structured around high-touch processes emphasizing customer intimacy. To improve scalability and potentially grow products and services into a platform digitization is currently a priority topic on the management agenda.	Yes
Prime adulthood firm life cycle stage			
s)	Foster strong Market Orientation (MO) over Entrepreneurial Orientation (EO) to prevent overstretching of resources and capabilities	Although Maxim recognizes this item, he believes the dominant firm characteristics are firstly Strategic Management and HRM, supported by Planning & Control and Marketing.	Maybe
t)	Increase formalization of Strategic Management to a high degree	It is difficult to establish what high formalization of strategic management embodies. However, according to Maxim, strategic management is key in order keep reinventing the business. While telemarketing turned to run out of sufficient opportunities to sustain the business, Prospex reinvented its business by entering the content marketing business and made two acquisitions to support this reorientation. Maxim believes in four to five years' time content marketing will prove to be commoditized and Prospex will need to reinvent itself again. Strategic management is pivotal in enabling such transition.	Maybe
u)	Increase formalization of Financial Planning & Control to a high degree	Although Maxim recognizes this item, he believes the dominant firm characteristics are firstly Strategic Management and HRM, supported by Planning & Control and Marketing.	Maybe

v)	Increase formalization of HRM to a high degree	It is difficult to establish what high formalization of strategic management embodies. However, Maxim strongly believes the true differentiator of the Prospex business is not its product and services, but the culture it entails. Maxim addresses Ken Blanchard's "Gung-Ho" as an example. Currently Prospex is doubling its office space in order to create a better work environment for its staff in support of a positive culture.	Maybe
w)	Increase spending on digitizing core processes	It was not covered in the interview whether Prospex is spending surplus cash flow in digitization. As was illustrated it is currently reassessing the scalability characteristics of its products and services in order to invest in further digitization.	Maybe

Table 39: Prospex case - analysis of organizational success factors

Y. CASE ANALYSIS PROSPEX: ADDITIONAL SUCCESS FACTORS

From the analysis of the Prospex case one new success factors was introduced. Although Maxim agrees with a large number of the success factors for high firm growth identified from literature, what seems to receive too little attention is the need for every firm, including high growth firms, to reinvent themselves in time before a (high) growth firms finds itself in a difficult position. With lifecycles of products and services shortening and product and services easily becoming commoditized due to the information transparency provided by the Internet, this topic becomes ever more important for firms to remain relevant beyond the scope of their original products and services. Every wave will eventually run out when it hits the beach and redirecting towards a new wave before the first one runs out of energy is what a lot of successful firms fail to accomplish. Prospex has experienced this challenge first hand when it found that the classic B2B lead generation business was being flooded by low price, low quality players after introduction of the “bel-me-niet-register” in the B2C market and the Internet was taking a much more dominant position in the information search activities of B2B clients, replacing the sweet spot telemarketing firms were occupying. Prospex successfully transformed to a B2B content marketing firm, but expects this business to become commoditized in a number of years as well, stressing the argument made by Maxim. In a similar way, Bol.com noticed in time that it was running out of categories in its selected market and outlook of its existing categories looked bleak. Bol.com then decided to become a generalist to become “the starting point for shopping in The Netherlands”. In a similar way Baan made the transition towards Unix, dropping its original proposition of providing software for one specific hardware platform, something that Minihouse | Multihouse failed to do in a timely manner. Although it could be argued that the reinventing dynamics are included in “foster strong Market Orientation (MO) over Entrepreneurial Orientation (EO) to prevent overstretching of resources and capabilities”, it firstly would be too implicit for such an important aspect of firm growth and secondly, this items seems to address the risk of overstretching resources and capabilities and not the reinvention challenge a firm faces. Therefore, the following additional organizational success factor for sustainable high growth firms was introduced.

<u>New organizational success factor</u>

A high growth firm should timely enough develop capabilities enabling it to reinvent itself in anticipation of decline of its product or services or its chosen markets.

BIBLIOGRAPHY

ACS, Z.J. & MUELLER, P. (2008). Employment effects of business dynamics: Mice, Gazelles and Elephants. *Small business economics*. 30, 85-100

ADIZES, I. (1979). Organizational passages. Diagnosing and treating lifecycle problems of organizations. *Readings in the Management of Innovation.*

ALMUS, M. (2002). What characterizes a fast-growing firm? *Applied Economics.* 34, 1497-1508.

BAAN, J. (2005). *De weg naar marktleiderschap.* Amsterdam: Pearson Benelux

BAARDA, D.B. & DE GOEDE, (1995). *Basisboek Methoden en Technieken*. Houten: Educatieve Partners Nederland.

BAARDA, D.B., DE GOEDE, M.P.M. & TEUNISSEN, J. (1995). *Basisboek Kwalitatief Onderzoek*. Houten: Educatieve Partners Nederland.

BAKER, W. E. & SINKULA, J. M. (2009). The Complementary Effects of Market Orientation and Entrepreneurial Orientation on Profitability in Small Businesses. *Journal of Small Business Management*, 47: 443–464.

BAKER, S., SPIRO, M. & HAMM, S. (2000). The Fall of Baan (int'l edition) [online] BusinessWeek Online. Available at: htt

ps://web.archive.org/web/20070323130514/http://www.businessweek.com/2000/00_33/b3694015.htm

BARRINGER, B. R., JONES, F. F., & NEUBAUM, D. O. (2005). A quantitative content analysis of the characteristics of rapid-growth firms and their founders. *Journal of Business Venturing.* 20, 663.

BERRY, M. (1998). Strategic planning in small high tech companies. *Long Range Planning*, 31(3), pp.455-466.

BHUIAN, S.N., MENGUC, B., & BELL, S.J. (2005) Just entrepreneurial enough: the moderating effect of entrepreneurship on the relationship between market orientation and performance, *Journal of Business Research*, 58, 1

BIRLEY, S., & WESTHEAD, P. (1990). *Growth and performance contrasts between 'types' of small firms*. Cranfield, Cranfield School of Management.

BHIDE, A. (1996). The questions every entrepreneur must answer. *Harvard Business Review*. November-December Issue.

BLANK, S., & DORF, B. (2012). *The step-by-step guide for building a great company*. Pescadero, Calif, K&S Ranch, Inc.

BRINCKMANN, J., GRICHNIK, D., & KAPSA, D. (2010). Should entrepreneurs plan or just storm the castle? A meta-analysis on contextual factors impacting the business planning–performance relationship in small firms. *Journal of Business Venturing.* 25, 24-40.

BRUNO, A. V., & COOPER, A. C. (1982). Patterns of development and acquisitions for silicon valley startups. *Technovation.* 1, 275-290.

CARUCCI, R. (2016). Midsize companies shouldn't confuse growth with scaling. *Harvard Business Review*. July Issue.

CBS (2016). 6 duizend snelle groeiers. [online] Cbs.nl. Available at: https://www.cbs.nl/nl-nl/nieuws/2016/04/6-duizend-snelle-groeiers

CHOREV, S., & ANDERSON, A. R. (2006). Success in Israeli high-tech start-ups; Critical factors and process. *Technovation.* 26, 162-174.

CLERCQ, D., & ARENIUS, P. (2006). The Role of Knowledge in Business Start-up Activity. *International Small Business Journal.* 24, 339-358.

COLEMAN, A. (2015). "The Scale Up Challenges Every Audacious Startup Must Face." Forbes, Forbes Magazine, 14 Sept. 2015, www.forbes.com/sites/alisoncoleman/2015/09/13/the-scale-up-challenges-every-audacious-startup-must-face/

COOPER, A. C., & BRUNO, A. V. (1977). Success among high-technology firms. *Business Horizons.* 20, 16-22.

COOPER, A. C. (1981). Strategic management: New ventures and small business. *Long Range Planning.* 14, 39-45.

CHURCHILL, N. C. (1983). Five stages of small business growth. *Harvard Business Review.* 61.

CHURCHILL, N.C. & MULLINS, J.W. (2001). How fast can your company afford to grow. *Harvard Business Review.* May issue

COUTU, S. (2014). The scale-up report on uk economic growth. [online] Available at: http://www.scaleupreport.org

DAFT, R.L. (1998). *Organization theory and design.* Cincinnati: South-Western College Publishing.

DEL GIUDICE M., & STRAUB D. (2011). IT and entrepreneurism: An on-again, off-again love affair or a marriage? *MIS Quarterly: Management Information Systems.* 35

DELMAR, F., DAVIDSSON, P., & GARTNER, W. B. (2003). Arriving at the high growth firm. *Journal of Business Venturing.* 18, 189-216..

DELOITTE NEDERLAND. (2015). Succesvolle start-up wordt geleid door ervaren ondernemer. [online] Available at: https://www2.deloitte.com/nl/nl/pages/about-deloitte/articles/succesvolle-start-up-geleid-door-ervaren-ondernemer.html

DELOITTE NEDERLAND. (2017). Data-onderzoek naar succesfactoren snelgroeiende start-ups. [online] Available at: https://www2.deloitte.com/nl/nl/pages/data-analytics/articles/data-onderzoek-naar-succesfactoren-snelgroeiende-start-ups.html

DOOREWAARD, H. (2015). *Het ontwerpen van een onderzoek.* Den Haag, Boom Lemma Uitgevers

ELLIS, S. & BROWN, M. (2017). *Hacking growth.* London, Virgin Books.

ENSLEY, M. D., HMIELESKI, K. M., & PEARCE, C. L. (2006). The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups. *The Leadership Quarterly.* 17, 217.

ERASMUS CENTRE FOR ENTREPRENEURSHIP (2016). Scale up dashboard 2016. [online] Available at: http://research.economicboardutrecht.nl/sites/nl.economicboardutrecht.research/files/ScaleUp_Dashboard_2016_NL.pdf

FREEMAN, J., & ENGEL, J. S. (2007). Models of Innovation: Startups and Mature Corporations. *California Management Review.* 50, 94-119.

FOMBRUN, C. J., & WALLY, S. (1989). Structuring small firms for rapid growth. *Journal of Business Venturing.* 4, 107-122.

GABRIELSSON P., & GABRIELSSON M. (2013). A dynamic model of growth phases and survival in international business-to-business new ventures: The moderating effect of decision-making logic. *Industrial Marketing Management.* 42, 1357-1373.

GANCO, M., & AGARWAL, R. (2009). Performance Differentials Between Diversifying Entrants and Entrepreneurial Start-ups: A Complexity Approach. *Academy of Management Review.* 34, 228-252.

GARNSEY, E., & HEFFERNAN, P. (2005). Growth setbacks in new firms. *Futures.* 37, 675-697.

GARNSEY, E., STAM, E., & HEFFERNAN, P. (2006). New Firm Growth: Exploring Processes and Paths. *Industry & Innovation.* 13, 1-20.

GATEWOOD, E. J., SHAVER, K. G., & GARTNER, W. B. (1995). A longitudinal study of cognitive factors influencing start-up behaviors and success at venture creation. *Journal of Business Venturing.* 10, 371-391.

GENK, B.P.C.A. (1987). Snelle groeiers laten steken vallen: groei bedekt kwalen met de mantel van succes. *Holland Management Review.* 11, 7-12

GIARDINO, C., UNTERKALMSTEINER, M., PATERNOSTER, N., GORSCHEK, T., & ABRAHAMSSON, P. (2014). What Do We Know about Software Development in Startups? *IEEE Software.* 31, 28-32.

GIARRATANA, M. S. (2004). The birth of a new industry: entry by start-ups and the drivers of firm growth: The case of encryption software. *Research Policy.* 33, 787-806.

GILBERT, B. A. M., PATRICIA P, & AUDRETSCH, D. B. (2006). New Venture Growth: A Review and Extension. *Journal of Management.* 32, 926.

GRANT, R. (2005). *Contemporary strategy analysis*. Chichester: Wiley.

GREINER, L. E. (1998). Evolution and revolution as organizations grow. *Harvard Business Review.* 76.

GULATI, R. & DESANTOLA, A. (2016). Start-ups that last. *Harvard Business Review*. March issue

HAMBRICK, D. C., & CROZIER, L. M. (1985). Stumblers and stars in the management of rapid growth. *Journal of Business Venturing.* 1, 31-45.

HARNISH, V. (2014). *Scaling up: how a few companies make it…and why the rest don't.* Unknown location: Gazelles

HOROWITZ, B. (2010). Taking the Mystery out of Scaling a Company. [online] A16z.com. Available at: https://a16z.com/2010/08/02/taking-the-mystery-out-of-scaling-a-company/

HOUBEN, M. & WESTER, J. (2003). *Baan: opkomst en ondergang van een uniek softwarebedrijf*. Amsterdam: Business Contact

HUANG, J. & HENFRIDSSON, O. (2017). Growing on steroids: rapidly scaling the user base of digital ventures through digital innovation. *MIS Quarterly.* Vol. 41 No. 1.

HUGHES, M. & MORGEN, R.E. (2007). Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth, *Industrial Marketing Management,* Volume 36, Issue 5, 651-661

HUANG, J., HENFRIDSSON, O., LIU, M. J., & NEWELL, S. (2017). Growing on Steroids: Rapidly Scaling the User Base of Digital Ventures Through Digital Innovation. *MIS Quarterly.* 41, 301-314.

IACOBUCCI, D., & ROSA, P. (2005). Growth, Diversification, and Business Group Formation in Entrepreneurial Firms. *Small Business Economics.* 25, 65-82.

ISENBERG, D. & BROWN, R. (2014). For a booming economy, bet on high growth firms, not small businesses. *Harvard Business Review.* February Issue

ISMAIL, S., MALONE, M. S., & VAN GEEST, Y. (2014). *Exponential Organizations: Why new organizations are ten times better, faster, and cheaper than yours (and what to do about it)*. Newburyport, Diversion Books.

JOHNSON, G., SCHOLES, K. & WHITTINGTON, R. (2005). *Exploring corporate strategy*. Harlow: Pearson Education Ltd.

JORGENSON, E. (2015). How to Manage Scale, and Operate in Scaling Organizations. [online] Medium. Available at: https://medium.com/evergreen-business-weekly/how-to-manage-scale-and-operate-in-scaling-organizations-55cd26e382f7

KAKATI, M. (2003). Success criteria in high-tech new ventures. *Technovation.* 23, 447-457.

KAWASAKI, G. (2004). *The art of the start: the time-tested, battle-hardened guide for anyone starting anything*. New York, Portofolio.

KAZANJIAN, R. K. (1988). Relation of dominant problems to stages growth in technology-based new ventures. *Academy of Management Journal.* 31, 257-279.

KAZANJIAN, R. K., & DRAZIN, R. (1989). An Empirical Test of a Stage of Growth Progression Model. *Management Science.* 35, 1489-1503.

KAZANJIAN, R. K., & DRAZIN, R. (1990). A stage-contingent model of design and growth for technology based new ventures. *Journal of Business Venturing.* 5, 137-150.

KIDDER, D. (2012). *The startup playbook: secrets of the fastest growing startups from 42 founders*. San Francisco: Chronicle Books

KIM, W.C. & MAUBORGNE R. (1997). *Value innovation: the strategic logic of high growth*. July-August Issue

KROONENBURG, M. (2017). Why Startups Fail Scaling (Startup Failure). [online] Blog.bw.ventures. Available at: http://blog.bw.ventures/startups-fail-scaling-startup-failure

KUTCHER, E., NOTTEBOHM, O. & SPRAGUE, K. (2017). Grow fast or die slow. [online] McKinsey & Company. Available at: http://www.mckinsey.com/industries/high-tech/our-insights/grow-fast-or-die-slow

LAURENCE G. WEINZIMMER, PAUL C. NYSTROM, & SARAH J. FREEMAN. (1998). Measuring Organizational Growth: Issues, Consequences and Guidelines. *Journal of Management.* 24, 235-262.

LEITCH, C., HILL, F., & NEERGAARD, H. (2010). Entrepreneurial and Business Growth and the Quest for a “Comprehensive Theory”: Tilting at Windmills? *Entrepreneurship Theory and Practice.* 34, 249-260.

MACPHERSON, A. (2005). Learning how to grow: resolving the crisis of knowing. *Technovation.* 25, 1129-1140.

MAURYA, A. (2012), Running lean. Sebastopol: O’Reilly Media

MCDOUGALL, P. P., ROBINSON, R. B., & DENISI, A. S. (1992). Modeling new venture performance: An analysis of new venture strategy, industry structure, and venture origin. *Journal of Business Venturing.* 7, 267-289.

MCKELVIE, A., & WIKLUND, J. (2010). Advancing Firm Growth Research: A Focus on Growth Mode Instead of Growth Rate. *ENTREPRENEURSHIP THEORY AND PRACTICE.* 34, 261-288.

MIDLER, C., & SILBERZAHN, P. (2008). Managing robust development process for high-tech startups through multi-project learning: The case of two European start-ups. *International Journal of Project Management.* 26, 479-486.

MITRA, S. (2005). Information Technology as an Enabler of Growth in Firms: An Empirical Assessment. *Journal of management information systems.* 22, 279-300.

MORENO, A. M., & CASILLAS, J. C. (2007). High growth SMEs versus non high growth SMEs: a discriminant analysis. *Entrepreneurship & Regional Development.* 19, 69-88.

MOUNT, J., ZINGER, J. T., & FORSYTH, G. R. (1993). Organizing for development in the small business. *Long Range Planning*. 26, 111-120

MULDER, A., MULDER, H. & MULDER T. (2010). Eenvoud in complexiteit: de passie van een ondernemersfamilie. Dordrecht: Schefferdrukkerij

OE, A., & MITSUHASHI, H. (2013). Founders' experiences for startups' fast break-even. *Journal of Business Research.* 66, 2193-2201.

ONETTI, A. (2014) http://startupeuropepartnership.eu/scaleups-when-does-a-startup-turn-into-a-scaleup/

OVERALL, J., & WISE, S. (2015). An S-Curve Model of the Start-Up Life Cycle Through the Lens of Customer Development. *The Journal of Private Equity.* 150213200538007.

PARKER, S. C., STOREY, D. J., & VAN WITTELOOSTUIJN, A. (2010). What happens to gazelles? The importance of dynamic management strategy. *Small Business Economics.* 35, 203-226.

PATERNOSTER, N., GIARDINO, C., UNTERKALMSTEINER, M., GORSCHEK, T., & ABRAHAMSSON, P. (2014). Software development in startup companies: A systematic mapping study. *Information and Software Technology.* 56, 1200-1218.

PATEL, S. (2017). 7 Scaling Challenges That Can Sink Even Successful Companies. [online] Entrepreneur. Available at: https://www.entrepreneur.com/article/240887

RAUCH, A., WIKLUND, J., LUMPKIN, G.T. and FRESE, M. (2009), Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future. *Entrepreneurship Theory and Practice*, 33: 761–787

RIES, E. (2011). *The lean startup: how constant innovation creates radically successful businesses*. London, Portfolio Penguin.

RECKER, J. (2014). *Scientific Research in Information Systems A Beginner's Guide*. Scientific Research in Information Systems. Berlin, Springer Berlin.

ROSS, J. W., WEILL, P., & ROBERTSON, D. (2006). *Enterprise architecture as strategy: creating a foundation for business execution*. Boston, Mass, Harvard Business School Press.

ROURE, J. B., & KEELEY, R. H. (1990). Predictors of success in new technology based ventures. *Journal of Business Venturing.* 5, 201-220.

RUE, L.W. & IBRAHIM, N.A. (1998). The Relationship between Planning Sophistication and Performance in Small Businesses. *Journal of small business management*. October, 24-32

SANDBERG, W. R., & HOFER, C. W. (1987). Improving new venture performance: The role of strategy, industry structure, and the entrepreneur. *Journal of Business Venturing.* 2, 5-28.

SCHAEFFER, M. (2017). *Het geheim van Bol.com.* Amsterdam: Atlas Contact

SCOTT, M., & BRUCE, R. (1987). Five stages of growth in small business. *Long Range Planning.* 20, 45-52.

SHANE, S. (2009). Why encouraging more people to become entrepreneurs is bad public policy. *Small Business Economics*, 33(2), pp.141-149.

SHEPERD, D. & WIKLUND, J. (2009). Are We Comparing Apples With Apples or Apples With Oranges? Appropriateness of Knowledge Accumulation Across Growth Studies. *Entrepreneurship Theory and Practice.* 33, 105-123

SIEGEL, R., SIEGEL, E., & MACMILLAN, I. C. (1993). Characteristics distinguishing high growth ventures. *Journal of Business Venturing.* 8, 169-180.

SMITH, K. G., BAUM, J. R., & LOCKE, E. A. (2001). A multidimensional model of venture growth. *Academy of Management Journal.* 44, 292-303.

SONG, M., PODOYNITSYNA, K., BIJL, V. D., HANS, & HALMAN, J. I. (2008). Success Factors in New Ventures: A Meta-analysis. *Journal of Product Innovation Management.* 25, 7-27.

STAM, E. (2010). Growth beyond Gibrat: firm growth processes and strategies. *Small Business Economics.* 35, 129-135

STEINMETZ, L. L. (1969). Critical stages of small business growth: when they occur and how to survive them. *Business Horizons.* 12, 29-36.

STREET, C.T. & MEISTER, D.B. (2004). Small Business Growth and Internal Transparency: The Role of Information Systems. *MIS Quarterly*, Vol. 28, No. 3, 473-506.

SULLIVAN, T. & HOFFMAN, R. (2016). Blitzscaling: the chaotic, sometimes grueling path to high growth, high-impact entrepreneurship. *Harvard Business Review*. April Issue.

SUTTON, R. I. (2014). Eight Essentials for Scaling Up Without Screwing Up. *Harvard Business Review*. February Issue

SUTTON, R. I. (2014). Scaling Up is a Problem of Both More and Less. *Harvard Business Review*. February Issue

SUTTON, R. I. (2014). The Scaling Lesson from Facebook's Miraculous 10-Year Rise. *Harvard Business Review*. February Issue

SUTTON, R. I., & RAO, H. (2016). Scaling up excellence: getting to more without settling for less. London, Random House.

SYRETT, M., & DEVINE, M. (2013). *Managing uncertainty: strategies for surviving and thriving in turbulent times*. Hoboken NJ: John Wiley and Sons

TRACY, S.L. (2011). Accelerating Job Creation in America: The Promise of High-Impact Companies.[online] Available at: http://Accelerating Job Creation in America: The Promise of High-Impact Companies.

WEINZIMMER, L. G., NYSTROM, P.C. & FREEMAN, S.J. (1998). Measuring Organizational Growth: Issues, Consequences and Guidelines. *Journal of Management*. 24, 2, 235-262

WEINZIMMER, L. G. (2000). A Replication and Extension of Organizational Growth Determinants. *Journal of business research*. 48, 35-41.

WHETTEN, D. A. (1987). Organizational Growth and Decline Processes. *Annual Review of Sociology.* 13, 335-358.

WIKIPEDIA (2017). Organizational culture. [online] Available at: https://en.wikipedia.org/wiki/Organizational_culture

WIKIPEDIA (2017). Baan (bedrijf). [online] Available at: https://nl.wikipedia.org/wiki/Baan_(bedrijf)

WIKIPEDIA (2017). Baan Corporation. [online] Available at: https://en.wikipedia.org/wiki/Baan_Corporation

WIKLUND, J., PATZELT, H., & SHEPHERD, D. A. (2009). Building an integrative model of small business growth. *Small Business Economics.* 32, 351-374.

YEHESKEL, O., & LERNER, M. (2009). Born to Be Wild? On Managerial Capabilities and Business Performance in Technology Start-Ups. *International studies of management and organization.* 39, 6-31.

ZOOK, C. (2016). The Greatest Barriers to Growth, According to Executives, *Harvard Business Review.* May Issue