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Insights and Paradoxes of Scaling-up dynamics: evidence from high-growth firms across Europe

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Insights and Paradoxes of Scaling-up dynamics: evidence from high-growth firms across Europe

Doctoral Thesis

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ABSTRACT

Scholars have increasingly called attention to the dynamism of High-Growth Firms (HGF), however limited work has systematically explored their evolution over time. Moreover, although scaling is often framed as a complex endeavour, there is a lack of research examining the *how* behind the processes that contribute to scaling and persistent high-growth. This dissertation seeks to enhance our understanding of scaling-up and HGF, exploring various lenses such as institutional factors, learning processes, scaling mindset, and serendipity.

Across six chapters, this dissertation aims to bridge these gaps. Following the introduction, the second chapter reviews and bridges gaps from fragmented research perspectives on HGF, providing a foundational understanding of how HGF have been studied and proposes a future research agenda. Building on this review, chapter 3 explores learning processes while scaling, thus contributing to our theoretical understanding of entrepreneurial resources. This examination features the diverse learning processes, their evolution, and their importance for successful scaling. Fourth chapter assesses the scaling mindset, focusing on how the attitudes and approaches of entrepreneurial teams influence the growth trajectory of HGF, elucidating the psychological and strategic factors that underpin a successful scaling mindset. The fifth chapter explores the relationship between serendipity, improvisation, and scaling, providing insights into how unexpected opportunities and adaptive strategies play a critical role in the scaling process. Chapter 6 presents findings from a comprehensive survey of European HGF, assessing the role of institutional factors on high-growth intention and paradoxically in HGF Boards. This dissertation not only contributes to our theoretical understanding of entrepreneurial scaling but also provides practical insights for high-growth ventures navigating the complexities of scaling, scaleup entrepreneurs and policy makers.

KEYWORDS: Entrepreneurship, Scaling, Institutional Economics, Entrepreneurial Learning, Serendipity, Scaling Mindset, High Growth Firms

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On a personal level, I’m thankful to my family, to my wife and to my 2 sons – Tomás and Pedro. It has been a tremendous journey and full of dedication.

It is to these extraordinary people that I dedicate this dissertation.

CHAPTER 1. GENERAL INTRODUCTION

Scholarly interest in high-growth firms (HGF) and scaling has increased significantly in recent years (Coviello et al. 2024; Autio et al. 2021; Bohan et al. 2024; Jansen et al. 2023), yet there remains a limited understanding of how these firms evolve. Existing research seldom delves into the processes that drive sustained high-growth. The dynamism inherent in high-growth firms—their ability to adapt, pivot, and scale—requires a more systematic exploration. Additionally, Scaling is frequently framed as a complex endeavour, involving numerous intertwined factors such as resource management, organizational structure, market conditions, and entrepreneurial capabilities. Despite this complexity, there is a notable lack of research that examines the specific processes and actions that contribute to effective scaling (Tippmann et al. 2023a). Understanding what we mean by scaling and how scaling occurs is crucial for both scholars and practitioners seeking to foster high-growth ventures. This dissertation addresses this gap by investigating the insights and paradoxes of scaling-up dynamics, offering evidence from high-growth firms across Europe at the macro, meso, and micro levels.

In the realm of high-growth firms (HGFs) and scaling, leaders and organizations frequently encounter paradoxical demands that require careful navigation to achieve sustained success. These paradoxes manifest as competing, interdependent challenges that can simultaneously drive and hinder growth. For instance, HGFs must balance the tension between scaling quickly to capture market opportunities and maintaining operational stability to avoid overstretching their resources (Autio et al. 2021). Similarly, the paradox of innovation versus standardization arises as firms strive to innovate continuously while also establishing reliable, scalable processes (Giustiziero et al. 2021). These inherent contradictions are further intensified by the dynamic and often unpredictable nature of high-growth environments, where the pressure to expand rapidly can exacerbate the risks associated with scaling. Across five core chapters, this dissertation bridges the aforementioned gaps in the study of scaling and high-growth firms while enriching our theoretical understanding. Each chapter focuses on a specific aspect of scaling, providing both empirical evidence and theoretical insights.

Following this first introductory chapter, the second chapter provides a comprehensive review and synthesis of fragmented research perspectives on high-growth firms and scaling. By identifying and addressing gaps in the existing literature, this chapter lays the groundwork for a cohesive understanding of high-growth firms bridging gaps in theory and proposes a future research agenda to guide subsequent studies in this field. From the research gaps various research questions emerged.

High growth firms (HGFs) play a pivotal role in economic development and job creation, significantly impacting industries and economies globally (Henrekson & Johansson, 2010; Coad et al., 2014). These firms, characterized by their rapid expansion in revenue and employment, are often seen as the engines of innovation and competitiveness (Mason & Brown, 2013; Autio & Rannikko, 2016). However, scaling a business goes beyond output growth (DeSantola and Gulati 2017; Piaskowska, Tippmann, and Monaghan 2021a; Tippmann et al. 2023a; S. (Ronnie) Lee and Kim 2024); it requires firms to not only expand their market reach but also transform their internal structures, processes, and resources to sustain such accelerated development. Coviello et al. (2024) define scaling as an organizational process whereby managers transform the internal organization.

The importance of understanding the factors that contribute to the scaling and sustained growth of HGFs cannot be overstated. This knowledge is vital for policymakers, investors, and entrepreneurs who seek to foster environments conducive to the emergence and development of these firms. Recently European Scaleup Institute Monitor 2024 (Faems et al. 2024) - a study to which I had the privilege of contributing – highlighted that only 4.34% of companies in Europe evidence a 20% average growth rate over the period 2019-2022, and only 0.84%

consistent hyper growth, that is above 40%. By further examining these classifications and the underlying factors that drive their success, this research aims to contribute to the broader understanding of how high-growth firms scale and sustain their growth, offering insights that can inform both policy and practice.

The ability to scale successfully is not just about increasing size but involves navigating complex challenges, including managing increased operational demands, maintaining organizational culture, and securing sufficient resources (Lee et al., 2020; Sutton & Rao, 2014). Despite the recognized importance of HGFs, there remains a significant gap in understanding the processes and strategies that underpin successful scaling (Brown et al., 2017). The interplay between scaling and growth introduces several paradoxes that further complicate the understanding of high-growth firms. One such paradox is the balance between scale-free versus scale-dependent growth. While digital platforms and scalable technologies allow for growth without proportional increases in input, traditional physical infrastructures often require significant additional resources as a firm expands. This tension highlights the need for strategic decisions that prioritize which aspects of the business can grow more flexibly versus those that demand careful scaling management (Autio et al. 2021; Giustiziero et al. 2023). Additionally, the paradox of internal versus external staffing poses a critical challenge: should firms rely on existing internal teams to preserve organizational culture, or should they hire externally to bring in new skills and perspectives, despite the potential risk of cultural dilution? These paradoxes underscore the complexity of scaling, necessitating a deeper exploration of how firms navigate these challenges.

Building on the review, the third chapter of this thesis explores a key process that undergoes multiple transitions: learning during scaling. Through empirical examination, this chapter highlights the importance of diverse knowledge resources and social learning processes in ventures' successful scaling. It contributes to our theoretical understanding of how learning capabilities are harnessed and leveraged within high-growth firms.

The fourth chapter delves into the scaling mindset, focusing on how the attitudes and approaches of entrepreneurial teams influence the growth trajectory of high-growth firms. By elucidating the psychological and strategic factors that underpin a successful scaling mindset, this chapter offers valuable insights into the human element of scaling.

In the fifth chapter, the relationship between serendipity, improvisation, and scaling is examined through a multiple case-study built from in-depth interviews with scale-up founders. This qualitative study provides a rich understanding of how unexpected opportunities and adaptive strategies play critical roles in the scaling process, highlighting the importance of flexibility and responsiveness in high-growth ventures. Both planned strategies and serendipitous opportunities play vital roles in unlocking scaling episodes. Aligned with the findings of Sivadasan et al. (2024) the study reinforces the need for firms to remain adaptable, as organic growth modes driven by unexpected opportunities can be crucial for sustained expansion.

The sixth chapter presents findings from a comprehensive survey of European high-growth firms, assessing the impact of institutional factors on governance and ecosystem dynamics. By exploring the paradox of high growth and realization of entrepreneurial potential at the leadership level, this chapter sheds light on the external factors that influence scaling.

The examination of these paradoxes and the underlying process of scaling not only enriches our theoretical understanding, but also holds significant implications for future research and practice. By identifying the key challenges and strategies associated with scaling up high-growth firms, this dissertation aims to provide a framework that can guide both scholarly inquiry and managerial practice. The insights gained from this research will be instrumental in informing the development of more robust theories of scaling, as well as offering practical guidance for entrepreneurs and policymakers seeking to support high-growth ventures in their efforts to scale effectively.

Research Contribution

This dissertation not only contributes to expanding our theoretical understanding of entrepreneurial scaling but also provides practical insights for high-growth ventures, scale-up entrepreneurs, and policymakers. Despite the growing interest in scaling as an organizational process, there remains a dearth of studies that rigorously explore the mechanisms of "how" scaling is operationalized within organizations (Coviello et al., 2024; Justin et al., 2023). In response to this gap, this thesis offers insights into the nurturing of learning processes and their consequential effects on organizational scaling. We introduce two grounded models that can serve as catalysts for sustaining high growth. Furthermore, while the extant literature on scaling is still in its nascent stage, with much of it focusing on definitions and typologies, our study advances the field by providing inductively derived process models. By doing so, we contribute to the scaling literature by offering a nuanced understanding of how learning, institutions and serendipity underpins successful scaling, thus addressing various crucial theoretical gaps. By offering a detailed analysis of the processes and factors that drive successful scaling, this chapter aims to support the development of effective strategies for managing growth and navigating the complexities of expansion.

Structure of the research

Given the dynamic nature of scaling in high growth firms, this research seeks to explore the mechanisms and strategies that enable firms to achieve and sustain high growth. Together, the five core chapters of this dissertation offer a nuanced view of the complexities underlying the relationships among high-growth founders, organizational processes, and institutions. These insights are intended to stimulate future research and expand our understanding of high-growth and scaling phenomena. This study aims to provide insights into the practical and theoretical dimensions of scaling, address the gaps identified in the literature, and offer guidance for practitioners.

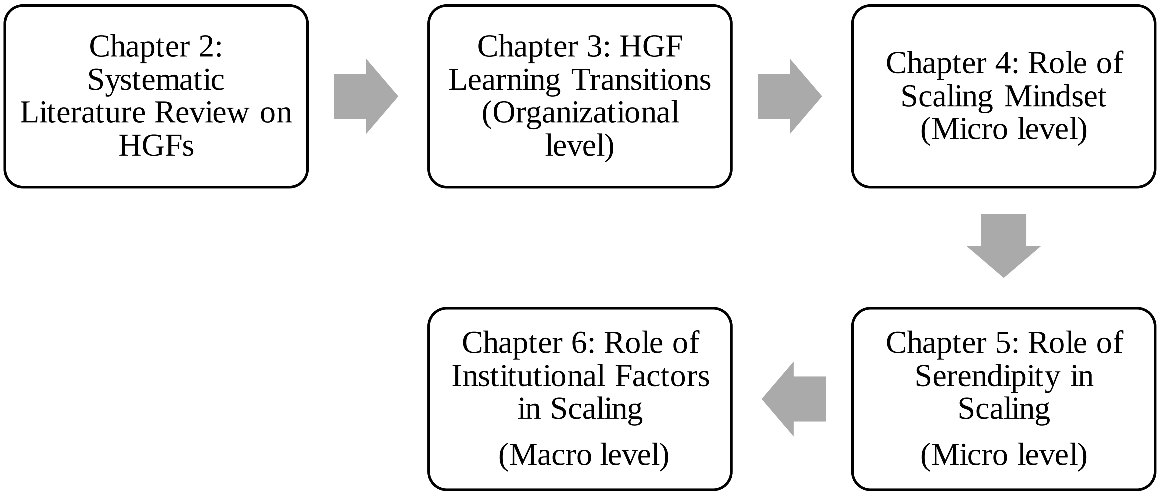


Figure 1.1. Dissertation Main Perspectives explored to further understand Scaling and High Growth Firms

Each chapter of this dissertation tackles a distinct yet interconnected aspect of the scaling process in high-growth firms (HGFs), building on the systematic literature review in Chapter 2 and its avenues for further research. Chapter 3 explores how organizational learning transitions evolve, drawing from the knowledge gaps identified in the literature review. Chapter 4 delves into the cognitive frames and scaling mindset necessary for high-growth firms, examining how mindset influences decision-making in the scaling process. Chapter 5 expands on this by analysing the role of serendipity and unforeseen opportunities in the scaling journey, while Chapter 6 examines the impact of institutional forces, both formal and informal, on scaling dynamics. Together, these chapters form a cohesive framework that addresses the multidimensional nature of scaling HGFs, each contributing to a broader understanding of the organizational, cognitive, and environmental factors that drive growth. The following table (Table 1.1) provides an overview of the key research questions, theoretical frameworks, and research designs in each chapter. By systematically exploring these dimensions, this study aims to bridge existing gaps in the literature, contribute to the theoretical understanding of HGFs, and offer actionable insights for both scholars and practitioners. The table serves as a roadmap, guiding readers through the dissertation's comprehensive examination of the multifaceted processes that underlie firm growth and scaling.

TABLE 1.1. Dissertation Overview

Chapter	Research Focus	Research Questions	Theoretical Framework	Research Design
Two	SLR of High-Growth Firms and Scaling	What do we know about HGF?	Systematic Literature Review	Bibliometrics Analysis of fragmented research perspectives on HGFs (267 papers)
Three	Learning Processes during Scaling	How do HGF evolve their learning processes while scaling up?	Entrepreneurial Learning Theory Social Learning Theory Institutional Theory	Qualitative Study (Gioia method) examining learning processes in HGF
Four	Differences between Scaling Mindset and Entrepreneurial Mindset	What are the key components that constitute a scaling mindset?	Paradox Theory Psychological Theory Strategic Management Theory	Conceptual Study Exploration of the attitudes and approaches of entrepreneurial teams
Five	Serendipity, Improvisation, and Scaling	How HGF firms capitalize on chance events for exponential growth?	Paradox Theory Dynamic Capabilities Theory Opportunity Theory	Multiple Case-Study with in-depth interviews with scale-up founders examining the role of unexpected opportunities and adaptive strategies
Six	Institutional Factors, Governance, and Ecosystem Dynamics in High-Growth Firms	To what extent institutional factors affect HGF and their scaling-up process?	Institutional Theory Governance Theory	Quantitative using PLS – SEM (Structural Equation Model) Data from comprehensive Survey to HGF (169 complete answers)

Source: self-elaborated

This dissertation offers a rigorous and in-depth exploration of the complex dynamics that drive the growth and scaling of high-growth firms. Through a combination of a systematic literature review, empirical studies, and qualitative case analyses, this research contributes to a nuanced understanding of how firms navigate the challenges and opportunities associated with rapid expansion. The insights derived from this chapter not only advance the academic discourse on HGFs, but also provide valuable guidance for policymakers, entrepreneurs, and business leaders striving to foster and sustain high-growth ventures. As such, this dissertation lays a strong foundation for future research and practical applications in the field of entrepreneurship and strategic management.

CHAPTER 2.

A SYSTEMATIC LITERATURE REVIEW:

Exploring High Growth Firms and Research Agenda[1]

2.1. INTRODUCTION

Recently, entrepreneurship scholars have increasingly focused on exploring issues relating to High-Growth Firms and Scaling (Autio et al. 2021; Piaskowska, Tippmann, and Monaghan 2021a; Bohan et al. 2024). HGFs have garnered significant scholarly interest due to their critical role in stimulating job creation and fostering economic prosperity (Henrekson and Johansson 2010; Tippmann et al. 2023b). A multitude of studies from complementary disciplines such as entrepreneurship, strategy and organizations have contributed to a deeper understanding of the intricate and vibrant nature of these rapidly expanding organizations.

However, despite the surge in research over recent years, certain aspects of HGF remain unclear. Owing to the interdisciplinary nature of HGF studies, various definitions and approaches have emerged, resulting in a fragmented understanding of the phenomenon. Demir et al. (2017) posit ‘the study of HGFs has contributed a body of research that remains relatively fragmented based on differences in definitions’. This fragmentation is further compounded by the interchangeable use of terms such as scale-ups, rapid-growth, and gazelles to describe HGFs. The inconsistent terminology, coupled with the lack of connection between some studies, hinders the evaluation and comparison of findings across research. Consequently, this impedes the progression of knowledge in the field. Shepherd and Patzelt (2022) further suggest that a ‘major reason for the lack of development in firm growth research is the impatience of researchers to prematurely address the question of “how much?” before adequately providing

[1] A similar version of this chapter has been published in the Journal of the International Council for Small Business, and it was presented at the Geneva Entrepreneurship Forum in June 2024. The author is thankful for the observations and comments from both anonymous reviewers as well as conference attendees.

answers to the question "how?"' affirming despite a large number of studies on 'new venture growth, the "how" is still poorly understood to date'. Considering the few literature reviews focusing specifically on HGF, there is a pressing need for an updated review that encompasses the knowledge and developments made. Systematic literature reviews serve as a particularly suitable approach for this purpose, as they allow for the structured presentation of key findings from existing literature (Mourao and Martinho 2020). Addressing this gap is crucial for offering a meaningful evaluation of the HGF literature's evolution since earlier reviews and for identifying new research directions. As such, this chapter aims to answer the question: How has the HGF research landscape transformed, as evidenced by articles published in leading management and entrepreneurship journals? In pursuit of this goal, we conduct a systematic literature review and propose a conceptual framework and research agenda for future endeavours as well as a bibliometric analysis that as highlighted by Rauch (2020) can be "valuable particularly if a field is fragmented, involving different and competing conceptualizations, methodologies, and frameworks and when there is a lack of agreement on many key issues".

This study offers various valuable contributions to the existing literature. Firstly, we conduct a literature review of 267 papers published in management and entrepreneurship journals, examining and discussing crucial aspects of HGF research (such as the most cited articles, authors, and analytical topics). Additionally, by employing citation and co-citation analysis, we present a map elucidating the intellectual structure of the HGF phenomenon (Ramos-Rodriguez & Ruiz-Navarro, 2004). In doing so, we summarize and synthesize the main findings from prior literature, developing a conceptual framework that outlines and evaluates the primary antecedents, dimensions, and consequences of HGF activity (Kolev et al., 2019). Notably, while a significant portion (54%) of HGF research has been published in the past decade, most literature reviews predate this period. A handful of special issue introductions have appeared in recent years (Jansen et al. 2023; Coviello et al. 2024), which typically expound upon the relevance of HGF and scaling, summarize the field's evolution, and propose future research directions. However, these articles do not delve into an extensive literature review analysis neither offer a thorough overview and analysis of the research, as their primary focus is to underscore the key findings of the papers included in the special issue. We also contribute by pinpointing notable inconsistencies, ambiguities, and gaps in previous literature that have impeded a more nuanced understanding of specific areas within the HGF field. Building upon these insights, we propose a research agenda for future investigations.

2.2.METHODOLOGY

Carefully conducted systematic literature reviews 'have provided valuable contributions to the field and such reviews will continue to do so' (Rauch 2020). Recent advancements in bibliometric analytical processes have enhanced the capability to assess literature comprehensively (Chen, 2014). We use *bibliometrix* R-tool developed by Aria and Cuccurullo (2017), who argue that it is especially well-suited for science mapping in an era where the focus on empirical contributions has led to extensive, fragmented, and often contentious research streams. Additionally, there is an increasing emphasis on cross-disciplinary "bridging" analyses, which serve as a crucial method for conceptual development (Janiszewski et al., 2016). Such interdisciplinary approaches not only facilitate the integration and comparison of knowledge across various fields but also uncover significant new research opportunities by allowing for a thorough evaluation of theoretical developments from multiple domains and disciplines (Janiszewski et al., 2016).

To conduct the review, we established the research protocol, the SPAR-4-SLR protocol (Paul et al. 2021) and next, we defined several inclusion and exclusion criteria. Data collection and curation are further detailed in Table 1. We limited to peer reviewed papers published at least on level "C" on the VHB rating & ABS higher than 1. We included studies published in

Management, Business, Economics and excluded areas of Regional Urban Planning and Applied Psychology. Our initial search retrieved 341 results, which were subsequently refined to 267 articles after applying exclusion criteria. The primary reason for exclusion was that many articles did not specifically address the themes of scaling or high-growth firms (HGFs). By focusing on research that directly contributed to these core topics, we ensured the literature review remained relevant to the objectives of this dissertation. We performed the search using the terms most found in the literature: "High-growth firms”, “scale-up*”, “scaling”, “rapid-growth”, “Gazelles”, “scale up”, “EHGF*”, "fast-grow*". We searched for these words in the title, abstract, keywords, and text of the articles and limit our search to the last 25 years, only in the English language. Therefore, the oldest article is from 1998 and the most recent were published in 2024 (the search terminated in July 2024).

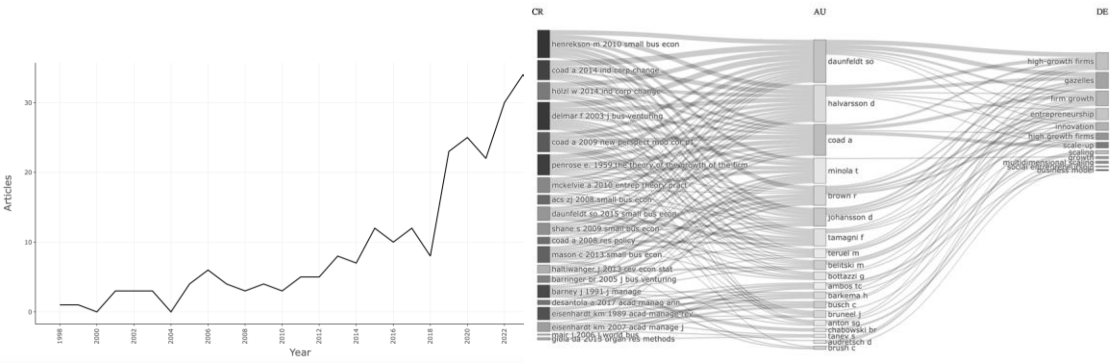
Table 2.1: Research Process

Data Collection	Database: Web of Science Search Date: Last 25 years (1998 to July 2024) Level of Research: Abstract, Title, Keywords Search String: "high growth firms" OR “high-growth firms” OR "scaleups" OR "scaling*" OR "rapid-growth firms" OR "gazelle" OR "EHGF" OR "fast-grow*" OR "scale-up" OR "scalability" only in the English language Number of articles from ABS Journals	Doctoral theses, books or conference proceedings were not considered in this review. We limited to peer reviewed papers published at least on level “C” on the VHB rating & ABS higher than 1.
Data Curation	Included studies published in Management, Business, Economics and excluded areas of Regional Urban Planning, and Applied Psychology. Selected after abstract reading.	341 results >> 267 articles after exclusion
Final Sample	267 articles Average citations per document = 49	
Journals	Small Business Economics, Journal of Business Research, Journal of Social Entrepreneurship, Journal of Small Business Management, Strategic Management Journal, Journal of Business Venturing, International Journal of Entrepreneurial Behavior, California Management Review, Journal of Management Studies, and Technology Innovation Management Review	

2.3. FINDINGS

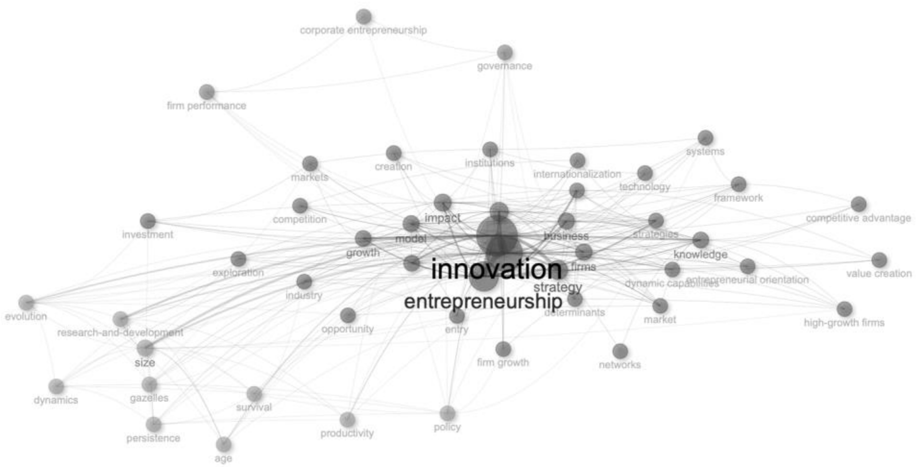
Starting with a descriptive analysis (Braun and Clarke 2006), we observed a significant 14% annual increase in the number of articles on high-growth firms (HGFs) and scaling published across 30 journals (Figure 2.1.). This notable upward trend underscores a broadening research landscape, characterized by an increasingly diverse array of themes now being explored.

Figure 2.1: HGF Articles published over the last 25 years - Annual Growth Rate: 14%



Next, analysing the intellectual structure of HGF we performed a co-occurrence analysis to capture the representative themes (Figure 2.2). Following a content analysis, we focused on the primary themes and trends within the HGF literature, enabling the examination of how key concepts and ideas have transformed and evolved over time (Volery and Mazzarol 2015).

Figure 2.2: Intellectual structure of HGF – Co-occurrence Network and Terms



The combined analysis of the trend topics and word cloud visualization (Figure 2.3) provides a comprehensive overview of the evolving research landscape in entrepreneurship and firm performance. The trend topics chart elucidates the temporal progression of key themes, revealing a sustained focus on foundational concepts such as "dynamic capabilities," "firm growth," and "value creation," while also highlighting the recent attention directed towards the various forms and dimensions of HGF, with an ascendance of terms like "innovation," "performance," and "size," which have gained increasing prominence in the literature over the last decade. This trajectory indicates a shift towards more nuanced explorations of firm-level outcomes and the factors driving innovation and growth. Concurrently, the word cloud visualization reinforces the centrality of these themes, with "performance," "innovation," and "entrepreneurship" emerging as the most frequently discussed topics, thereby underscoring their pivotal role in the field.

Figure 2.3.: Trend Topics and Wordcloud

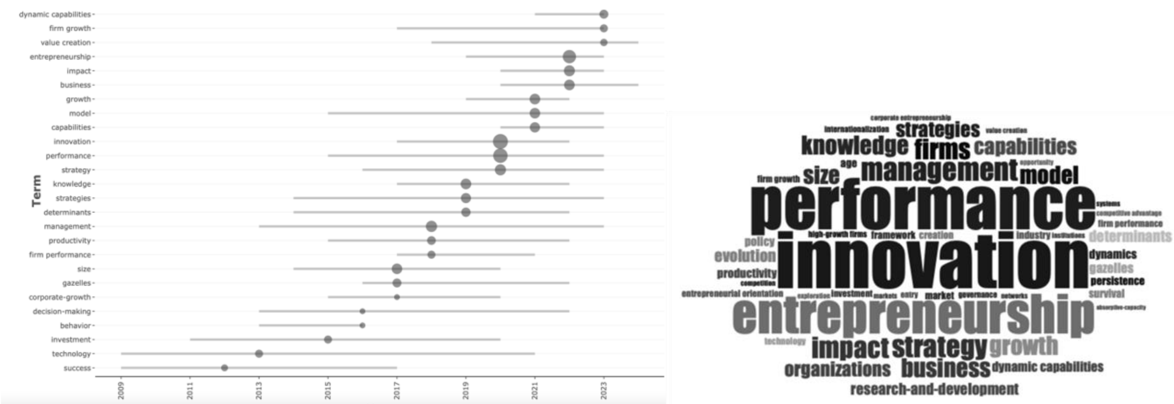
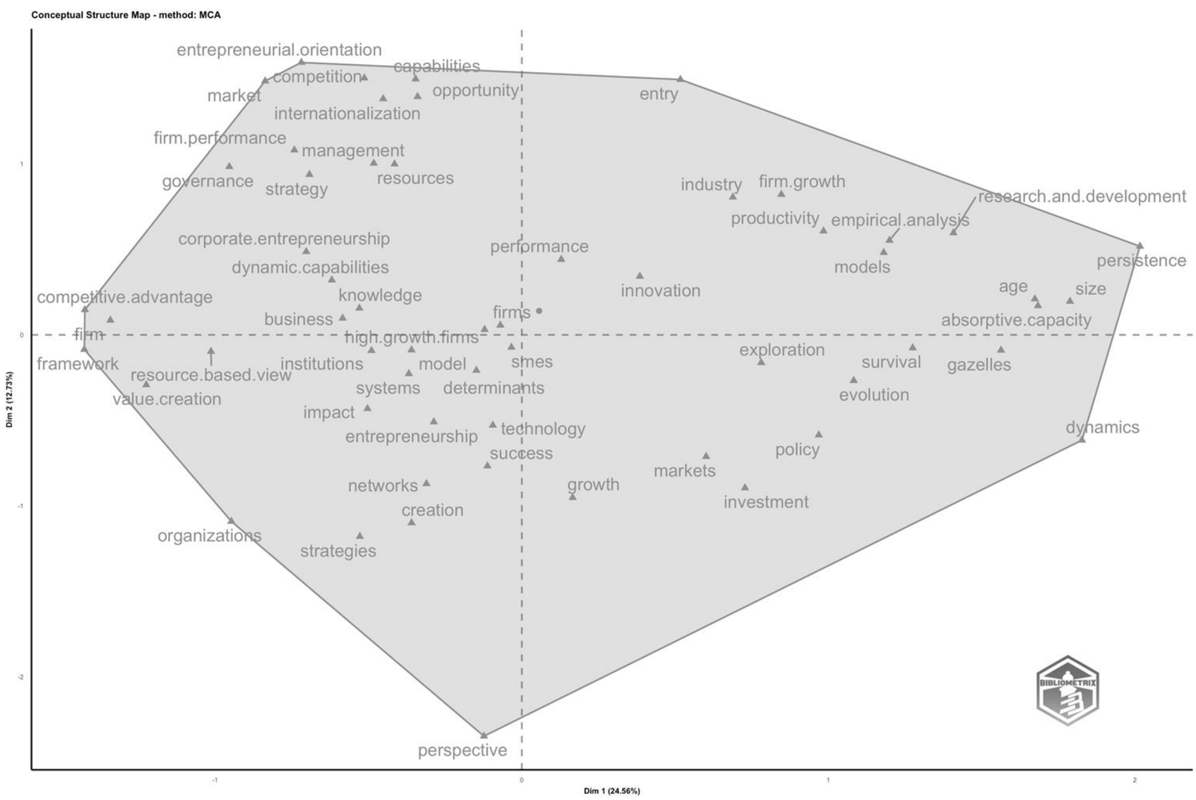


Figure 2.4 presents the Conceptual Structure Map generated through Multiple Correspondence Analysis (MCA) offering a visual representation of the key themes and their interrelationships within the field of entrepreneurship and firm performance (Aria and Cuccurullo 2017). The map reveals several distinct clusters, with central concepts such as "entrepreneurship," "performance," and "innovation" anchoring the discourse across the literature. The upper left

quadrant emphasizes strategic and competitive aspects, including terms like "entrepreneurial orientation" and "internationalization," while the upper right quadrant highlights themes related to growth and sustainability, such as "firm growth" and "research and development." Meanwhile, the lower quadrants reflect theoretical frameworks and broader contextual factors, like "resource based view" and "policy." This map not only underscores the multifaceted nature of research in this area but also identifies emerging topics like "dynamics" and "networks," suggesting areas for future exploration.

Figure 2.4.: Factorial Analysis using *bibliometrix*



2.4. DISCUSSION

Inspired by Urbano et al. (2022), we devise a model (Table 2.2) that encapsulates the existing literature by distinguishing between three primary areas: HGF antecedents, HGF dimensions, and HGF consequences. This approach aligns with previous literature (Antoncic & Hisrich, 2001; Ireland et al., 2009; Kuratko et al., 2015; Zahra, 1991) and facilitates a systematic content analysis while providing an organizing framework to assess the current state of HGF literature (Keupp and Gassmann 2009). Specifically, examining the research objectives, findings, and levels of analysis proved instrumental in constructing and refining this model.

Table 2.2: HGF Antecedents, Dimensions, and Consequences.

ANTECEDENTS

INDIVIDUAL LEVEL
- Skills development: Detail specific training programs or initiatives that enhance skills relevant to scaling up.
- Adaptability and learning: Explore how the ability to adapt to market changes and learn from experiences contributes to growth.
- Decision-making styles: Analyze how different leadership styles (e.g., autocratic vs. democratic) impact growth trajectories.

ORGANIZATIONAL LEVEL
- Change management: Investigate how firms manage transitional phases during rapid scaling.
- Culture of agility: Look at the role of an agile organizational culture in enabling rapid scaling and adaptation to market demands.
- Change management: Investigate how firms manage transitional phases during rapid scaling.
- Culture of agility: Look at the role of an agile organizational culture in enabling rapid scaling and adaptation to market demands.

ENVIRONMENTAL LEVEL
- Institutional factors: including formal and informal factors
- Innovation ecosystems: Discuss how the presence of an innovation ecosystem within the firm or in its external environment supports scaling.

DIMENSIONS

- Human Capital: explore how HGFs leverage advanced talent management strategies to enhance productivity and drive growth.
- Human Resource Management: adaptive HR Practices. Analyze the role of flexible HR practices in supporting scaling.
- Strategy: investigate how strategic alignment with market demands and technological advancements facilitates scaling.
- Capabilities & Operational Excellence: examine how the development of superior operational capabilities contributes to high-growth.
- Innovation: discuss the impact of fostering robust innovation ecosystems.

CONSEQUENCES

FINANCIAL
- Profitability and growth.

STRATEGIC
- Market positioning: Evaluate how scaling affects a firm's position within the industry.
- Capability development: Look at how capabilities evolve through scaling and what this means for long-term strategic positioning.

SOCIETAL
- Community and Economic Impact: assess how HGFs contribute to economic development, job creation, and community well-being as they scale.

The information in Table 2.2 is supplemented with insights from other literature reviews and theoretical articles as well as the use of interdisciplinary approaches (Amit, Glosten, and Muller 1993). We will now interpret each of these dimensions.

Antecedents

At the individual level, the acceleration of firm growth is influenced by key personal and professional attributes of team members. Skills development is critical, with firms investing in specific training programs that enhance capabilities relevant to scaling up. Additionally, the adaptability and ability to learn from both successes and failures facilitate swift responses to market dynamics. Leadership styles also play a significant role, where decision-making can range from autocratic to democratic, each impacting the firm's growth trajectory differently. The organizational context significantly impacts growth acceleration. Effective change management is essential as firms navigate the challenges of rapid scaling, ensuring transitions are smooth and sustainable. An agile organizational culture further supports this by fostering an environment that can quickly adapt to new opportunities and market demands. This agility is facilitated by a culture that prioritizes flexibility and rapid decision-making. (Belitski et al. 2023) illustrate that firm acceleration occurs at the intersection of firm- and market-level conditions in explaining how firms accelerate. Moreover, no single factor can fully explain growth acceleration by itself, and that compound factors need to be examined.

Environmental factors also dictate the pace and success of firm growth. Institutional factors, both formal and informal, like regulatory frameworks and cultural norms, can either enable or hinder scaling efforts. Innovation ecosystems within and around the firm provide a supportive backdrop that encourages continuous improvement and growth. These ecosystems are composed of collaborations with other firms, academic institutions, and research bodies that collectively drive the firm’s innovation capabilities.

Dimensions

Building on the core dimensions that underpin high growth identified by Demir et al. (2017) these dimensions are crucial for understanding how firms manage to scale successfully and sustainably. They include human capital, human resource management, strategy, capabilities, and innovation. Each dimension represents a different aspect of the firm’s resources and approach to scaling.

Human capital emphasizes the importance of individuals' skills, knowledge, and abilities within the firm. Effective scaling relies on a firm's ability to attract, develop, and retain talented individuals who can drive growth and adapt to changing market conditions. This dimension focuses on leveraging the potential of human resources to create a competitive edge. Human Resource Management (HRM) involves the strategies, practices, and systems that influence employees' behavior, attitudes, and performance. HRM practices are tailored to support rapid growth and scaling by ensuring alignment between the firm's goals and the workforce's capabilities and motivations. The strategic dimension involves the planning and execution of growth trajectories. It includes the selection of markets, positioning of products or services, and the competitive actions of the firm. Effective strategies are not static but evolve as firms scale, requiring continuous reassessment and adaptation to new insights and external conditions. Capabilities refer to the firm's ability to effectively utilize its resources to achieve competitive advantages. This includes operational excellence, innovation capabilities, and the ability to respond rapidly to market demands. Building and enhancing these capabilities are critical for sustaining long-term growth during scaling. Innovation is essential for differentiation and competitive advantage, especially in scaling ventures. This dimension encompasses the development of new products, processes, or services and the improvement of existing ones. Innovation drives market expansion and helps firms to adapt and thrive in competitive environments. Aligning with Palmié et al. (2023), who categorize scaling into four strategic areas, demonstrating how these dimensions are applied in practical growth strategies for high-growth firms.

Consequences

The consequences of scaling in high-growth firms extend beyond financial gains, encompassing strategic and societal impacts. Financially, firms experience enhanced profitability and diversification of revenue streams, which stabilize and support sustained growth. Strategically, scaling affects a firm's market positioning, often enhancing its competitive stance and enabling further market penetration. It also facilitates the development and refinement of operational capabilities, which are crucial for maintaining competitive advantage in dynamic markets. On a societal level, the impact of high-growth firms is profound (DeSantola and Gulati 2017) as they contribute significantly to economic development, job creation, and community well-being. These firms often drive innovation and progress within their industries, setting benchmarks and stimulating further economic activity. This holistic view underscores the multifaceted impact of scaling, illustrating that the implications extend far beyond the immediate financial benefits, affecting broader economic and social landscapes.

2. 5. FUTURE RESEARCH AVENUES

Future research should continue refining the understanding of scaling and high growth firms, that is ‘still far from being saturated’ (Palmié et al. 2023). Subsequently we explore a few future theoretical and empirical research directions as well as some promising trends for future exploration including uncertainty, leadership and negative consequences (synthetised in Table 2.3).

Table 2.3. Overview of future research directions

Research Directions	**Current limitations and/or arising opportunities**	**Example Research questions**

Theoretical Advancements Conceptualization *Empirical Advancements* Empirical research designs and methods	Some existing studies either have not provided a precise definition of High Growth firms or use terms such as scale-ups, rapid-growing, gazelles and scaling interchangeably. Extant research has largely used cross-sectional designs and investigated scaling practices at only one point in time. Thus, current research misses the opportunity to study the dynamic nature of Scaling practices, for instance understanding how learning processes evolve using qualitative methods or exploring how a scaling mindset contributes to firms adjustment and refinement of their strategies.	What is the definition of High Growth Firms? What are the differences to Scale-ups? How do learning practices evolve while scaling-up? What is Scaling Mindset? How that influences firms scaling strategies?
Role of Uncertainty and luck in Scaling-up	Uncertainty, especially in the context of scaling, remains underexplored despite its growing relevance. The correlation between high growth and	How can organizations effectively manage the amplified levels of uncertainty engendered by scaling? How does uncertainty influence a

	uncertainty presents an intriguing avenue for scholarly investigation. On one side of the argument, it could be posited that certain forms of scaling result in an escalation of uncertainty for firms. For instance, expansion into international markets can lead to increased uncertainty due to exposure to diverse economic and legal environments, cultural differences, and augmented supply chain complexities. Conversely, the impact of uncertainty on high growth could be examined.	firm's capacity to scale and the manner in which it does so? How do strategies aimed at mitigating or coping with uncertainty affect a firm's ability to scale and the method of scaling? How do various forms of uncertainty differentially impact different types of high-growth firms?
Institutional Factors	The role of both formal and informal institutional factors in scaling remains underexplored. Formal and Informal Factors may restrain or enable high growth. There is a lack of quantitative studies to explore such effects.	How the various institutional factors influence scaling up?

Leadership & Governance	A perennial topic in management science - could be effectively integrated with the study of high-growth firms. Researchers could examine the impact of individual leadership styles as well as strategic leadership methodologies on the diverse aspects of high-growth firms. As organizations transition from startup to scale-up, investors frequently scrutinize the founder's capacity to adeptly navigate both phases. Leadership is expected to shift from a focus on creativity and exploration to exploitation, from centralized decision-making to a team-based approach with delegation, from passionate commitment to dispassionate objectivity, and from an entrepreneurial to a professional management style (Churchill and Lewis 1983). Paradoxically, Wasserman (2003) revealed that	Does paradoxical leadership (Shao et al., 2019; Zhang et al., 2015) facilitate the growth of high-growth firms? How institutional factors affect the governance of HGF?

	successful CEO-founders are more likely to be replaced by professional managers, as success often involves securing funds from external investors who may advocate for this transition.	

Uncertainty

Academics may wish to explore a topic that, while not instigated by the Covid-19 pandemic, has certainly seen a surge in interest due to it - uncertainty. The correlation between high growth and uncertainty presents an intriguing avenue for scholarly investigation. On one side of the argument, it could be posited that certain forms of scaling result in an escalation of uncertainty for firms. For instance, expansion into international markets can lead to increased uncertainty due to exposure to diverse economic and legal environments, cultural differences, and augmented supply chain complexities. This raises the question: How can organizations effectively manage the amplified levels of uncertainty engendered by scaling?

Conversely, the impact of uncertainty on high growth could be examined. Potential research inquiries could include: (1) How does uncertainty influence a firm's capacity to scale and the manner in which it does so? (2) How do strategies aimed at mitigating or coping with uncertainty affect a firm's ability to scale and the method of scaling? (3) How do various forms of uncertainty differentially impact different types of high-growth firms?

Leadership & Paradoxes

The concept of "Leadership" - a perennial topic in management science - could be effectively integrated with the study of high-growth firms. Researchers could examine the impact of individual leadership styles as well as strategic leadership methodologies on the diverse aspects of high-growth firms. Potential research questions could include: (1) Does paradoxical leadership (Shao et al., 2019; Zhang et al., 2015) facilitate the growth of high-growth firms? The inception of a venture and its subsequent evolution into a high-growth entity represent distinct challenges, each demanding a unique amalgamation of skills, experiences, and knowledge. As organizations transition from startup to high-growth status, investors frequently scrutinize the founder's capacity to adeptly navigate both phases. Leadership is expected to shift from a focus on creativity and exploration to exploitation, from centralized decision-making to a team-based approach with delegation, from passionate commitment to dispassionate objectivity, and from an entrepreneurial to a professional management style (Churchill and Lewis 1983). Paradoxically, Wasserman (2003) revealed that successful CEO-founders are more likely to be replaced by professional managers, as success often involves securing funds from external investors who typically advocate for this transition. . Integrating paradox theory (Smith and Lewis 2011; Solomon and Huse 2019; Waldman et al. 2019) into the study of scaling and HGF is essential for navigating inherent tensions, such as balancing growth and profitability, innovation and resilience, short and long term focus, and avoiding the pitfalls of mismanaged competing demands in complex and rapidly evolving markets.

Negative consequences

High-growth firms and the related performance enhancements are generally beneficial for the organization and at least a portion of its stakeholders. However, the process of becoming a high-growth firm is not without its challenges and potential pitfalls. Firstly, it's not unusual for firms to excel in certain performance metrics while underperforming in others. This discrepancy often manifests across the triple-bottom line pillars, where a firm might demonstrate robust economic performance but lackluster environmental performance. A firm may successfully transition into a high-growth firm when evaluated against certain performance indicators, yet fall short when assessed by other metrics.

Policy discussion

This study underscores the critical role of supporting high-growth firms as a catalyst for economic growth and job creation. Our findings resonate with the insights presented by Shane et al. (2009), who argue against the traditional emphasis on fostering a high quantity of startups. Instead, they advocate for a targeted approach, emphasizing that economic development and job creation are not merely a numbers game. The focus should shift towards nurturing a subset of businesses that demonstrate true growth potential. This approach suggests that by prioritizing quality and scalability, policies can more effectively stimulate significant economic advancements and generate substantial employment opportunities.

Limitations

The scope of the literature search was restricted to the Web of Science (WOS) database, which may have limited the breadth of sources reviewed. In future iterations, inclusion of additional databases such as Scopus would be beneficial to capture a wider spectrum of relevant studies. Furthermore, the keywords included may necessitate further refinement. Lastly, the content analysis conducted could benefit from a deeper and more nuanced examination to better understand the complex dynamics discussed. Addressing these limitations in subsequent studies will enhance the robustness and comprehensiveness of the findings.

2.6. Conclusion

This research highlights the critical importance of deepening our understanding on the process of scaling and the drivers of high-growth firms (HGFs). Building upon a bibliometric analysis on 267 papers published over the past 25 years, we propose a structured framework that clearly delineates the antecedents, dimensions, and consequences of high growth. This review not only integrates diverse strands of literature but also identifies key gaps in current research, particularly in the areas of scaling and scalability. Our findings underscore the complexity inherent in scaling and high-growth firms and the paradoxes that such organizations must navigate. These paradoxes highlight the need for strategic coherence and the development of dynamic capabilities that enable firms to scale effectively while maintaining their core competencies.

Moreover, this review emphasizes the importance of addressing the strategic and operational challenges associated with scaling, which remain underexplored in existing literature. By bringing these issues to the forefront, this research calls for a more nuanced examination of the processes that underpin successful scaling, advocating for the development of both theoretical and empirical frameworks that can guide future inquiry.

In conclusion, this review aims to strengthen academic interest in high-growth firms by providing a comprehensive foundation for future research. Additionally, it identifies key gaps in understanding high-growth firms (HGFs) and scaling processes, which are then explored empirically in the subsequent chapters. Specifically, the theoretical gaps presented here—such as the role of uncertainty, institutional factors, governance, and dynamic learning scaling practices - directly inform the research questions in Chapters 3 to 6, ensuring that each chapter builds on the foundational issues identified and contributes to a holistic exploration of scaling dynamics in HGFs. By addressing these gaps, we hope to contribute to a more robust understanding of how HGF can pursue persistent sustainable growth in increasingly complex and dynamic environments. In the next chapter we will explore one of the questions highlighted in this chapter, the evolution of learning processes of these High growth companies.

CHAPTER 3 (*)

LEARNING AND UNLEARNING TRANSITIONS WHILE BUILDING A HIGH-GROWTH FIRM[2]

3.1. INTRODUCTION

As highlighted in the previous chapter, recent research has established the significance of learning in the scaling-up process (Jansen et al. 2023), as it can greatly impact the success of ventures. HGF face complexities in scaling, and in such dynamic context (Henrekson and Johansson 2010), understanding the *how* is crucial (Zahra and Wright 2011).

Findings from the recent work of McDonald and Eisenhardt (2020) confirm the importance of learning, and the necessity of examining the relationship between learning and scaling. Indeed, Eisenhardt and Bingham (2017) posit that superior strategists engage in a variety of processes to learn. However, an attentive reading of the literature shows that, despite the growing research on high-growth firms, there is still a dearth of research examining how learning accompanies the scaling processes. As Tippmann et al (2023b) affirm 'insights on how knowledge gained from scaling can be integrated and managed in an organization at a fast pace is scarce'.

Our study addresses this research gap. We propose to examine HGF learning processes and how learning changes along the scaling-up phases. Consistent with prior work, we define learning as systematic changes in cognition and/or behaviour (Miner, Bassof, and Moorman 2001) that require organizations to change and adapt to new ways. Inspired by the work of Bingham and Davis (2012) on learning sequences, we approach learning at HGFs as a dynamic

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phenomenon that include at some point in their development traces of trial-and-error learning, experimental learning, social learning, and vicarious learning. In considering the dynamic nature of this phenomenon we examine how learning changes as high-growth firms develop and company management team (Piaskowska, Tippmann, and Monaghan 2021b) evolves. Using the recent typology of Jansen and colleagues (2023), we investigate how gazelles, scale-ups, superstars, and mature HGFs learn. Through analysing the key learning processes and their evolution throughout the growth cycle of these ventures, we identify distinct learning transitions that emerge throughout the journey of scaling up.

The purpose of this chapter is to address the overarching research question: 'How do HGF evolve their learning processes while scaling up in Europe?' and an interrelated question 'What are the learning transitions that occur?'. Empirically we employ a qualitative methodology drawing on semi-structured interviews focusing on the key learning processes that accompany growth. As Coviello et al. (2024) posits "rich inductive research is required to unpack the nuances of scaling before quantitative assessment becomes meaningful".

Our core contribution is exploring the evolution of learning processes in the context of high-growth firms uncovering critical *learning transitions*— systematic changes in the learning processes that impact on cognition behaviours, action, and timing intersect to enable scaleup entrepreneurs to design an effective learning sequence for their rapid growing teams. We identify a set of learning transitions essential to develop preparedness to the next stage of growth. This thesis extend the work of Lumpkin and Lichenstein (2005), by describing how the sense of chaos typical of start-up is continued beyond this stage to create adequate learning conditions for unlearning and relearning (Durst et al. 2020). To the learning literature, we contribute by enriching our understanding of how learning works across the four stages of high growth. In doing so we respond to a long standing question raised by Sexton and colleagues

(1997). Broadly, we contribute to further understanding of high-growth firms' theory by adding an important piece to the theoretical puzzle —*learning transitions*—on how scaleups actually adapt and learn to create value. Furthermore, it is noteworthy to recognize the potential of merging theories of firm growth and learning (Macpherson and Holt 2007; Sexton et al. 1997) that have traditionally been treated as separate entities. This approach could lead to significant theoretical advancements in our understanding of high growth dynamics. The study is of great importance both to researchers and practitioners, as it can shed light on the processes that underlie effective learning and inform best practices for achieving optimal high-growth performance.

The remainder of the chapter is structured as follows. In the next section we provide a theoretical background, followed by explaining the methodology of the study (sample, data collection and data analysis). We then describe the study's main findings. Finally, we present our framework in relation to existing literature and suggest future research directions.

3.2.THEORETICAL BACKGROUND

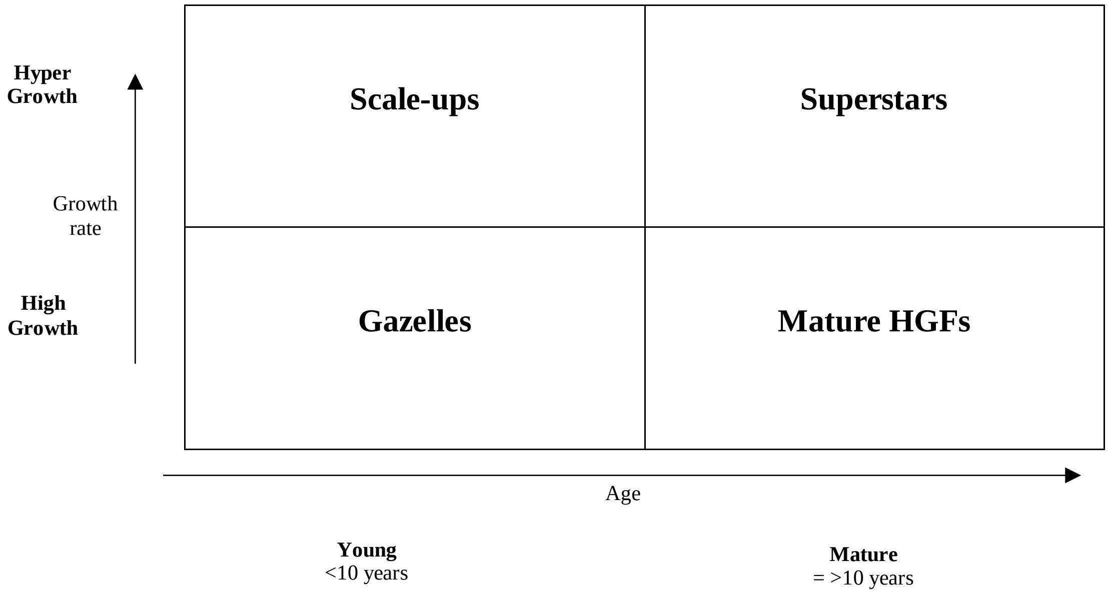
Research on high-growth firms (HGFs) is rapidly growing drawing on both management and entrepreneurship studies (Delmar, Davidsson, and Gartner 2003); scaling is a significant management challenge (Bohan et al. 2024). High-growth firms deal with a sense of turmoil, chaos, and great inefficiencies while growing (Piaskowska, Tippmann, and Monaghan 2021b) and this makes them an interesting phenomenon to study. This is because the internal organization of scaling firms is neither well developed nor cost-optimized (DeSantola and Gulati 2017). We build on McKelvey (2004) emphasis on helping entrepreneurs deal with adaptive tensions, critical values, phase transitions, and coevolving causalities, suggesting learning in high-growth firms as a non-linear outcome resulting from phase transitions and by processes in motion.

Historically, assimilating learning from local partners was achieved via subsidiary embeddedness, implying the necessity of establishing long-lasting, trust-based relationships (Andersson, Forsgren, and Holm 2002). Yet, the current landscape calls for scaling organizations to contrive innovative methodologies for rapidly sourcing such knowledge. Simultaneously, the scaling process is intrinsically tied to accelerated learning (Ott and Eisenhardt 2020) and proficient unlearning management thereby underscoring the importance of knowledge and learning perspectives in decoding and navigating the intricacies of scaling (Shepherd and Patzelt 2022).

Whilst the literature on entrepreneurial learning has been well-established in academic discourse sitting at the interface of entrepreneurship and organizational learning (Wang and Chugh 2014), it has focused mainly on debates such as how ‘Opportunity exploration and exploitation’ involve different types of learning (Wang and Rafiq 2009; Lumpkin and Lichtenstein 2005). Entrepreneurial learning transcends traditional methods, with frameworks such as Cope's entrepreneurial learning model (Pittaway and Thorpe 2012) suggesting that knowledge is also constructed through the complex interplay of cognitive, affective, and social processes, which are critical for the development of dynamic capabilities in scaling firms. Moreover, the entrepreneurial learning process is characterized by the application of both existing and emergent knowledge (Pittaway et al. 2015), enabling scale-ups to not only exploit current capabilities but also explore and adapt to new growth opportunities, a duality that is crucial for sustained high performance in dynamic markets. Existing research on dynamic capabilities - the abilities of firms to sense and seize opportunities and reconfigure their resources in response to changing environments (Teece, Pisano, and Shuen 1997) has mostly focused on large established firms or new ventures but has largely overlooked the distinctive characteristics and contexts of scale-ups (Jansen et al. 2023). They enable firms to adapt to new situations and create value in dynamic markets (Eisenhardt and Martin, 2000). However, little is known about how scale-ups develop dynamic capabilities and whether these link with the learning processes. We examine the relationship between the evolution of learning and its contribution on the development of dynamic capabilities. We argue that scale-ups need to balance different types of learning processes (e.g., trial-and-error, imitation, experimentation) in the different phases of their growth to develop dynamic capabilities.

Adaptive learning processes like trial and error, experimentation, and bricolage seem broadly beneficial, but determining where to deploy them to gain significant growth remains a mystery (McDonald and Eisenhardt 2020). Autio et al (2021) called for a better understanding of 'what is the role of congenital, vicarious, grafted, or experiential learning in an organization trying to scale?'. Rather than limiting research to the typical high-growth firm, we followed the avenue suggested by Delmar et al. (2003) to expand the scope and investigate the diversity of factors and processes that exist across different types of high-growth firms. Using the typology proposed by Jansen et al. (2023) illustrated in Figure 1, we consider on x-axis the age of the firm with the trigger being more or less than 10 years since foundation. The other axis is firm growth rate: some firms exhibit *hyper* growth rates exceeding 40% annually (World Economic Forum, 2016), which is substantially above the 20% rate that normally denotes *high* growth (OECD, 2007). This expansive approach enables a comprehensive examination of learning modalities across a spectrum of HGFs, illuminating how the interplay between the firm's age and growth rate informs distinct learning trajectories, and how these, in turn, influence the firm's capacity to navigate the complexities of scaling effectively.

Figure 3.1 – Typological spectrum of High-Growth Firms: a foundation for analysing Learning processes (adapted from Jansen et al. 2023)



We acknowledge the importance of two major sources of learning. First, *indirect learning* as a form of knowledge acquisition where individuals obtain expertise from external sources. This mode of instruction includes vicarious learning, wherein one learns through the experiences and missteps of another (Kim and Miner 2007), and accessing external advice – as an example venture capitalists are a source of expertise (De Clercq et al. 2006) and networks that may be of particular use to scale-ups (Lefebvre, Radu Lefebvre, and Simon 2015). Second, *direct learning* involves acquiring knowledge effectively on their own through a variety of processes, including experiential methods (controlled situations), trial-and-error (previous actions), improvisational learning (real-time learning - as it occurs) and deviance-error learning (when breaking from successful patterns). Much is known about how firms use specific learning processes but as Shepherd and Patzelt (2022) suggest future research can explore the activities that promote the accumulation of experience as well as how these activities are learned (from doing and observing) and how they impact organizational scaling. Building on this understanding of how and when to use each of these processes we then focus on the core contribution from (Bingham and Davis 2012) that it matters which learning processes organizations use and when they use them - *Learning sequences*. Their study of nine firms reveals that all had experienced one of the two following learning sequences: seeding - those that begin with indirect learning (e.g., vicarious learning, external advice) and then continue with direct learning (e.g. trial-and-error, experiential) or soloing- begin and continue with direct learning. In this chapter we assess *learning processes* in the context of different types of high growth firms including gazelles, scale-ups, superstars, and mature HGFs, and apply those findings to contribute to the understanding of *how* and *why* they evolve. We also observe passive learning (learning by pausing to observe) and learning by borrowing as suggested by McDonald and Eisenhard (2020). This study makes a significant contribution to the field by advancing our comprehension of the processes of entrepreneurial learning and high growth firms.

3.3 METHODS

Research Design

Mindful of the need to address the *how* and *why* we follow a qualitative method, to help us gain insight into this unexplored or under-explored research domain where empirical evidence is not abundant (Eisenhardt and Graebner 2007). We do so by seeking a complex balance between inductive and deductive data collection and analysis methodologies, where insight is grounded in our interview and archival data but the analysis inspired by recent theoretical understanding offered by Rayport and colleagues (2023a). Oscillating between the insights of theory and the rawness of data allows us to generate a deeper comprehension of the experiences of the participants and the unique situations they encountered when individually and collectively learned in the context of high growth firms.

As a consequence we describe our insights using *power quotes* from the multiple interviews with Founders and C-Level from the various high-growth firms (Gephart 2004) helping us to characterise in richer ways how learning occurred. This approach produces a more complete, accurate picture than does a single informant (Kumar, Stern, and Anderson, 1993) producing links to theory that are stronger and more explicit.

Sample and Data collection

We began by identifying a potential sample of potential participants from high-growth firms drawn by an initially larger pool of individuals met by the authors in the context of their business school activity. This generated more than twenty potential firms to be interviewed. From this initial sample, we purposefully selected ventures (Denzin and Lincoln 2000; Patton 2002; Pratt 2009) across multiple stages of development (see Table 3.1. how the sample included gazelles, scale-ups, superstars, and mature HGFs). Thus, our final sample encompasses eighteen interviews from ten high-growth firms in Europe. Including a total of ten high-growth firms was essential to broaden the descriptions of learning within and across distinct growth stages.

Table 3.1. - Interviewed High Growth Firms and HGF typology

Company	Type of HGF	Country HQ	Founding date	Money raised ($)	Estimated Last Round Valuation	# employees	Size	Sector
Lovys	Gazelle	France	2017	24.5 M	+100M	100	medium	InsurTech
Rows GmbH	Gazelle	Germany	2016	25 M	N/A	48	small	AI Software
Sensei	Gazelle	PT	2017	6.1 M	50-100M	74	medium	Retail

Saltpay	Scale-up	UK	2018	1.1 Bi	Unicorn	1003	large	FinTech
Stream	Scale-up	Netherlands / US	2014	58 M	+100M	183	medium	Enterprise software
Indie Campers	Superstar	PT	2013	N/A	unknown	290	large	Leisure
T*	Superstar	*	2011	>500 M	Unicorn	1586	large	Enterprise software
W*	Mature HGF	*	2002	N/A	+100M	696	large	Services
Outsystems	Mature HGF	PT / US	2001	802 M	Unicorn	2058	large	Enterprise software
F*	Mature HGF	*	2009	>250 M	Unicorn	600	large	FinTech
*: (*anon. at request*)	Classification applying criteria from Fig. 3.1. (firm age and average revenue growth from last 3y – Orbis)		Data from Dealroom	Data from Crunchbase	Data from Crunchbase	Data from Linkedin	<50; <250; >250	

More specifically and as learning is initially enacted by founders across the organization (Jones and Macpherson 2014) our sample includes a mix of Founders, C-level and top management teams, with a minimum private valuation of one hundred million euros and individuals with a wide range of personal backgrounds and different business roles. As proposed by Demir et al. (2017) we used valuation as a proxy for scale-up as most firms are privately owned with limited publicly available information on precise employee or revenue numbers. Within the ten companies four of them have publicly disclosed being a Unicorn, a sub-set of high-growth firms whose valuation is higher than one billion dollars (Somaya and You 2024).

Table 3.1. also provides details of the interviewed firms. The sample of the ten HGFs have an average age of 11 years old and employ 671 employees. All of them are younger than thirty years old aligned with the study European Scaleup Monitor (2023) in which 91% of the HGFs

have the same profile. In terms of size, one firm is considered small (less than 50 employees), three are medium (between 50 to 250) and five are large (above 250 employees). The interviewed HGFs come from a variety of sectors from enterprise software to professional services and are geographically spread six culturally distinct (Hofstede, 1980) countries: UK, USA, Germany, Netherlands, France and Portugal. This selection of countries provided different institutional context (North 1990). Also, studying multiple countries enhances the relevance and generalizability of results (Bingham and Davis 2012). Furthermore, each sample HGF has operations in at least four countries, with more than half operating in more than fifty countries.

Table 3.2. Summary of interviewed participants

#	Company	Type of HGF	Position	Code Name	Interview Date
1	Lovys	Gazelle	Co-Founder & CFO	AC	30-Jan
2	Saltpay	Scale-up	Country Leader	FB	30-Jan
3	Indie Campers	Superstar	CBDO	AP	31-Jan
4	Outsystems	Mature HGF	VP Platform	ML	31-Jan
5	Lovys	Gazelle	CMO	JJ	07-Feb
6	Stream	Scale-up	CPO	MM	22-Feb
7	Sensei	Gazelle	Co-Founder & CEO	VP	13-Feb
8	Rows GmbH	Gazelle	Co-Founder & CEO	HP	13-Feb
9	Saltpay	Scale-up	Head of M&A	JJO	22-Feb
10	Sensei	Gazelle	CGO	DM	03-Mar
11	Indie Campers	Superstar	Head of Finance & Strategy	RC	07-Mar
12	Rows GmbH	Gazelle	Co-Founder & COO	TS	10-Apr
13	T*	Superstar	Co-Founder	ZZ	12-Apr
14	W*	Mature HGF	Co-Founder	PJ	9-May
15	W*	Mature HGF	Senior Director	JJ	10-May
16	F*	Mature HGF	SVP	MA	3-Oct
17	Outsystems	Mature HGF	SVP	AA	28-Sep

18	Rows GmbH	Gazelle	Head of Growth	HC	6-Nov
	*:(*anon. at request*)			Initials only - to anonymise	

Table 3.2. provides details of the participants and their firms (for reasons of anonymity, their names, exact valuation, businesses and specific details of participants are not reported). The interviews were recorded (Mason 2002) and lasted an average 80 minutes, with a minimum of 45 and a maximum of 110 minutes. The protocol for each interview consisted of three main parts: (1) background information on the HGF and participant, (2) questions on knowledge and learning, and (3) reflections on learning while scaling (interview script in appendix 1).

We triangulated data from the interviews with both publicly available data (archival data, company websites, press releases business publications and so forth) and internal materials produced inside the sample of firms that specifically referred to learning or knowledge dissemination (Creswell 2007; Denzin and Lincoln 2005). Typically, the latter consisted on the rules for learning and knowledge management or similar documents (for instance in *Outsystems* we analysed 'The Small Book of a Few Big Rules'). These data also enabled us to see how well the firm was doing externally triangulating growth paces (Eisenhardt 2021). In addition, we also used e-mails, phone calls, and follow-up chat interactions to track the real-time reflections triggered by the interviews and to fill in specific gaps in the firms learning trajectories.

Data analysis

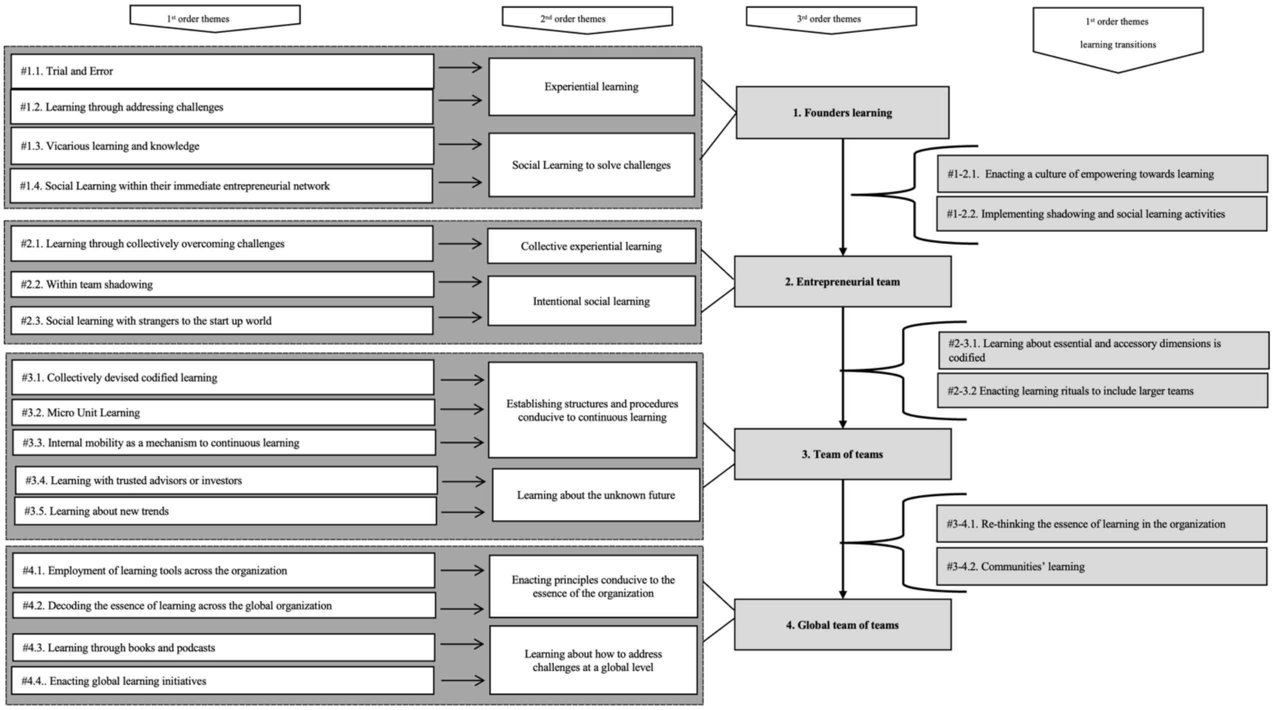
The interviews were transcribed *verbatim* yielding 312 pages of transcription, and then combined with relevant notes and observations to provide the raw data. We then began reading and re-reading the data searching for incidents related to learning from the extensive material gathered (Zozimo, Jack, and Hamilton 2017). While this allowed us to significantly reduce the material, it also helped us to organise it in relation to time and space so we could identify more clearly the links between learning processes and scaling-up stages as well as the relationship between these dimensions. Each member of the team took extensive notes, sharing these throughout analytical meetings where relationships between learning processes and sequences were determined and considered.

Navigating between inductive and deductive stances, the team used the theoretical guidance of Rayport et al. (2023a) that define three key stages for start-up growth: exploration, extrapolation and exploitation. We followed this framework as participants seemed familiar with the three stages albeit labelling them differently as it often happens in qualitative studies. Indeed as our interest was focused on the learning processes within and across stages of growth, the growth framework helped us only to locate learning in relationship to the challenges founders and teams were facing. Using an approach that dances between the theory and data is typical of studies in entrepreneurial learning (Karataş-Özkan 2011) allowing us to better understand and contextualize the descriptions of learning mechanisms and key dimensions offered by participants. When analysing the data the notion of unlearning (Durst et al. 2020; Tsang and Zahra 2008) became particularly important. It was clear and unsurprising that, as participants moved through distinct growth stages, they added competence and skills to themselves and their teams. What has perhaps less obvious and notorious immediately was how participants described unlearning as part of the "learning process". They often described unlearning associated with practices and dimensions that were inadequate to the growth of the organization. Appendix 2 illustrates some of the most relevant citations of interviews referring to learning and unlearning across and within each one of these stages.

3.4. FINDINGS

In this section of the chapter, we present the aggregated findings of our research. When articulating processes, mechanisms and moments of learning across distinct growth stages of their organization participants used staff as a central dimension. As an example, learning within the founding team was articulated differently to learning when the start-up first organized in small teams. The idea that learning evolves around the creation and management of the relationship with teams is a central dimension of learning within these ventures. This critical issue is thus explored in the way we describe the findings from our research. First, we describe how founders learned within the initial founding team, then learning that occurs within the first team beyond the founders, then learning underpinning the teams of teams and finally, adding complexity to the last layer, learning processes that occur when teams are spread globally. Figure 3.2 illustrates these findings.

Figure 3.2. – Data Structure



4.1. Founders learning

Like in any other dimensions of the start-up, the way founders see and experience learning opportunities shapes their learning imprint. Thus, during this initial stage learning activity and mechanisms are mostly impacted by previous experience of the founders. As the founders relate, learning employed at this stage originates from previous *"trial and error, from previous successes and failures" (IndieCampers).* As the pressure to perform as a start-up mounts, learning is focused on creating value and addressing the technical challenges posed. In this stage failure happens often almost becoming a necessary condition for learning . The CEO of *Sensei* explains that *"You fail several times to reduce the scope of possibilities"* and in doing so *"you reduce it so much that you actually get it right".*

At this stage, learning is about collectively finding answers to address the multiple challenges. This is grounded on the belief that change is possible and that the solution created by the founding team can beat the market and become an entrepreneurial winner. As the team leader from Outsystems shares *"We threw ourselves into new products and new markets and we* *would figure it out"*. Rows posits it clearly *"really the biggest predictor of success is how fast you iterate on the product and on the market and what we learned from it"*. Collective learning is critical both in the form of collective experience and finding other solutions somewhere else. The SVP of Saltpay explains the importance of learning internally and externally "To discover something I go to Google. If I'm not understanding something, maybe I can look for references within the company".

However, as a company expands the activities and begins to employ additional staff, a new learning need emerges in relation to the complexity of managing both the technical processes and the teams developing them. The experiential and social learning mechanisms that created a strong initial solution become limiting and new sources of learning are sought (T*).

4.1.1. Adapting to a new team reality

As they add new members to the start-up, founders face the challenge of relearning some of the critical assumptions in relation to managing the team and the overall process. An important dimension of this process is to allow others in the team to empower and lead learning processes and mechanisms. This means for example maintaining a culture of iteration and learning that is enacted by multiple individuals across the start-up. As the founder of Rows explains in relation to their software "the biggest predictor of success is how fast you iterate on the product and on the market and what we learned from it". At the centre of this relearning process for founders sits the importance of shadowing and additional social learning activities. Keeping a collective culture for learning, conversations across coffee and social activities are encouraged as explained by the CPO of Stream a media platform "I also feel that I learn a bit from seeing the processes of the people around me and talking to them during coffee but at a smaller scale." Keeping a feeling of small-scale learning whilst the company grows seems essential. This is explored further as CEOs explained learning processes within their entrepreneurial teams beyond the founders.

4.2 Learning within the entrepreneurial team

In this stage a functional yet small (around less than forty employees) organizational structure is implemented, leading to a rise in specialized job roles arranged across relatively small teams. The influence of previous experiential learning continues as the teams now engage in learning collectively through addressing challenges related to the product and especially the growth. This is explained here by *IndieCampers* as they reflect how learning at this stage is *"20% trial and error, 80% of what you already know."* What is interesting at this stage is that, as teams grow, they find ways of making better decisions by sharing responsibilities and engaging in deliberate job sharing and shadowing. Observing each other and learning through small task shadowing is considered of great value to accelerate finding good solutions for the growth challenges faced by the start-up. As the COO of Indiecampers shares shadowing allows specific opportunities where "a lot of the times let's find out together".

Social learning at this stage is also expressed in the way founders and their team's sought advice from individuals that brought specific knowledge. Most often than not these individuals were strangers to the start-up world offering opportunities for conducting *"a lot of benchmarking, calls with external people to understand best practices" (Saltpay). What we observe here is that* entrepreneurial founders and their direct teams begin to face new challenges to solve. Challenges that cannot be solved with previously gathered knowledge and beliefs and therefore they have to combine "*online information, information from our network or advisors and our own past experience".* As scaling accelerates eventually the structure becomes inappropriate for controlling a more diverse and complex organization requiring a need to rethink how learning is supporting the development of a more decentralized organization. At this stage they engage again in addressing some of their learning shortages by engaging in two practices that are described next.

4.2.1 Reshaping learning objectives and practices

Our data shows that as the organization continues to grow, founders and their teams become aware of need to be more intentional about the usefulness of learning. This means, for example, that they begin to distinguish what is essential from what is accessory learning focusing on creating systems and rituals that reinforce the latter. Indeed, these two dimensions appear to concur to learning objectives that are more structured and tangible. This is summarised by the CEO of W here: "There have been instances when prior experience did not provide the solution we needed. In those moments, we leaned into the discomfort of not knowing, revisited our assumptions, and sought new perspectives. This often meant seeking external expertise, conducting additional research, or experimenting with innovative solutions". As the organization grows, they seek for better ways of addressing current challenges.

4.3 Team of teams

In this stage companies enhance their expansion potential by empowering lower-level managers with increased responsibilities and motivation. Adding to these new teams they also establish profit centres by product or geography for instance *(Sensei)* and bonuses as incentives. The ability for continuous learning is understood as a central feature of their organizational development. *Rows* states "*that's really the biggest learning on organizational design: speed of iteration with small teams, low overhead*". As these managers gain autonomy learning serves to help them manage the chaos associated with accentuated growing processes. Learning mechanisms that have worked and delivered growth – in opposition to the ones that have helped to solve problems – are codified and transferred across the organization whilst the latter ones are replaced. A critical dimension of this learning-oriented growth is keeping teams small, agile and entrepreneurial. The CPO of Stream exemplifies the learning benefits of this strategic choice: “My strategy is to keep teams small and focused on specific objectives, giving them the freedom to learn and operating on their own but promoting clear and identical communication processes between them.”

In addition, internal mobility through job rotation is a critical mechanism for continuous learning. For example, *Saltpay* continued to use rotation as an enabler for learning because they want to accelerate performance in other areas of the organization. Continuing previously learned rituals is then enhanced by specific mechanisms that complement ways of doing. The internal rotations work in ways that promote the best employees. The SVP of Saltpay continues “Great people, whom we believe in, are constantly being rotated, 180 degrees and taking challenges with different positions and roles”. Although forceful, the key benefit of this practice is that it allows knowledge to flow across the organization.

During this important learning stage, participants also described the importance of sources of learning related to understanding and decoding the unknown future. As uncertainty ranks high across these organizations, they purposefully engage with trusted advisors and investors in an attempt to better manage the future. In addition to close ties, teams are also encouraged to seek other sources of learning to learn about new trends which include hiring new people, listening to customers or discuss issues with their technical communities. As the organization continues to grow, founders and their teams become frustrated with the repetition of mistakes and past errors. Attempting to find ways to correct these practices, data suggests that organizations engage in a process of re-thinking the essence of learning and knowledge management. This is explained next.

4.3.1. *The Why? Re-thinking the essence of learning in the organizations*

As processes and mechanisms of learning become ill-equipped to deal with the continuous organizational growth founders and their teams invest time to reflect on the key issues that need addressing. In this point in time, the entrepreneurial organization has already raised several rounds of investment showing strong commitment to growth. Exploring and exploiting growth opportunities demands learning about new dimensions of the business, new markets or new industries. F explains the complex situation these leading organizations find themselves in "You need to think ahead, but then the company is growing so fast that sometimes you take decisions, but you quickly realize that things have changed already and you have trouble coping with... In Scaleups everything is constantly changing. You want to do what great looks like. But if you are leading your industry, how do you know what that is?" To answer this, organizations that are growing at this high-rate focus on understanding the essence of their learning. W explains "I wouldn't say learning ever stopped happening; it just evolved. There were times when progress seemed to plateau, but we recognized that as a signal to challenge our existing knowledge and seek new learning opportunities. This could involve initiating new projects, entering new markets, or investing in training and development for our team.". Focusing on enacting learning in a more explicit way shows the impact of this dimension in the global expansion of these organizations.

4.3.2. Communities' learning

In the context of expanding teams and diverse working environments, the integration of community learning has become increasingly pertinent. As elucidated by the CPO of Stream, "Whether through online platforms or meetups, it's a dynamic way to learn". The convergence of individuals from multifarious backgrounds into a cohesive learning entity underscores the dynamism inherent in contemporary educational paradigms. Stream articulates that whether it occurs via online platforms or physical meetups, the essence of community learning is characterized by its fluidity and adaptability. This modality not only fosters a rich exchange of insights but also serves as a crucible for innovation and collective problem-solving. By leveraging the collective intelligence and experience of the community, learning transcends traditional didactic boundaries, evolving into a more interactive and pragmatic experience that is emblematic of the contemporary learning landscape.

4.4. Global team of teams

At this stage of development, standardization of many processes is now a reality within the participating organizations. Learning mechanisms are essential to these organizations as they find ways of communicating globally. In this regard, many build repositories of knowledge so that both learning processes and past outcomes can be disseminated across the organization. As the CEO of *Sensei* exemplifies "We have our own wiki, with our own documentation set that facilitates some processes. We don't have a lot there yet, but we are building it." What is particularly interesting about this quote is the way *Sensei*, an IT focusing on developing better retail experiences, assumes that the process of building these tools is an ongoing task. At this stage, learning needs to support the internal processes of the large organization. *W** shares 'We have indeed instituted structures dedicated to learning'. More than acting across the organization, we observe how learning allows the scaling mindset to develop and its entrepreneurial culture to continue. Whilst the size of the venture impacts on the possibilities of learning, participants stressed the importance of keeping teams small and focused for learning to flow rapidly and adequately. Interestingly, participants shared their focus on reminding the organization of their vision and principles. *Saltpay* emphasised “the need for one-to-one meetings with my team and once a month with the entire company” in order to align what we are doing presently with the growing culture while maintaining agility.

Searching for the best way to disseminate knowledge and enact on past learning lessons is a critical part of the decoding the essence of how learning and knowledge contribute to success. As the COO of *Outsystems* insisted “always ask why. This is the constant reminder from our founder and CEO. To go back to basics and to the first principles. “ (*Outsystems*).

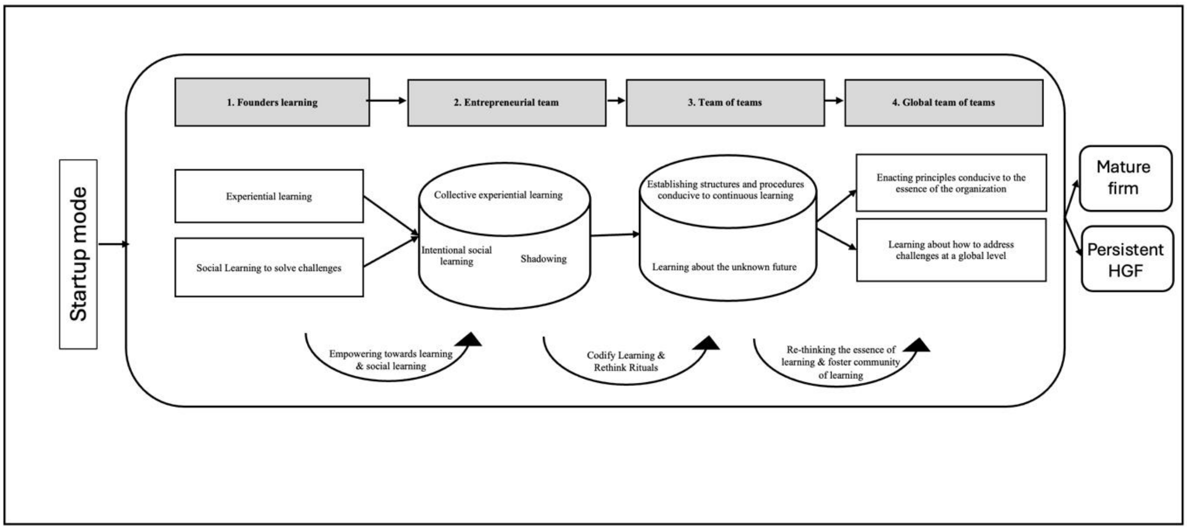
What we also observed during the interviews is that at global level learning advice is simple. Read books, explore, engage. *Saltpay*, *Stream* and *Sensei* all had initiatives regarding books. As the SVP of *Saltpay* shares how continuous learning equals “reading, I always carry books around with me.“ Naturally, learning at this stage also occurs with learning initiatives designed to activate exchange and social learning across the multiple global teams. *Indiecampers* explains “Annual two-days event with everyone from the company including operations, for teambuilding and workshops”.

The description of findings shows how social learning evolved across the distinct stages of growth contributing and impacting on the multiple trajectories of growth that participants share. What we find is that a combination of social learning processes and mechanisms contribute to how learning occurs in these organizations. The next section discusses these findings in light of scaling and learning theory.

A Grounded Theory of Learning in HGFs

Our investigation reveals that the process of learning within high-growth firms is multifaceted and protracted. The structure illustrated in Figure 3.2. elucidates all pivotal concepts—encompassing the second-order themes—that have surfaced from our research. A grounded theory, however, must articulate not just the concepts but also their dynamic interplay. In this exposition, we proffer a theory of learning transitions, as exemplified in Figure 3.3., which is rooted in the empirical data derived from our study. Figure 3.3. positions the identified second-order concepts within a dynamic model that imparts the necessary vitality to their interrelations and delineates the trajectory of learning evolution within HGFs. At the crux of the model lies a sequential progression comprising four stages, depicted as unfilled rectangles in Figure 3.3, and the accompanying recurrent themes. This model not only captures the essence of each learning phase but also the iterative nature of transitions as firms scale from startup mode to a mature firm or persistent High Growth Firm.

Figure 3.3. – Grounded model on HGF Learning evolution process



The conceptual framework depicted in Figure 3.3 offers a distilled representation of the dynamic evolution characteristic of high-growth firms as they navigate through the learning and unlearning transitions. While this portrayal is intentionally streamlined, it serves the crucial function of fostering clarity and coherence in the communication of the intricate and protracted developmental journey that our research participants and supplementary data sources have elucidated. It is apparent and will be further developed upon in the subsequent discussion, that the emergent themes constitute an intricate tapestry in the development of a firm's competencies and capabilities during the scaling process.

3.5. Discussion

Shepherd and Patzelt (2022) enquired future investigations into the mechanisms of knowledge communication in order to significantly enhance our comprehension of high-growth firms. Our study undertakes a novel analysis of the learning processes in high-growth firms, how these processes evolve during scaling-up and investigates the learning transitions that occur as they scale-up. In high-growth firms, learning trajectories are nuanced and multifaceted. Greiner's model (Greiner 1998) introduces a cyclical progression of growth and crisis and is a touchpoint in our understanding but not a singular blueprint. The initial stage is characterized by learning driven predominantly by the founders' vision and knowledge. As the organization matures, the locus of learning shifts towards teams, capitalizing on collective expertise. Further growth necessitates a transition to 'teams of teams', where knowledge is diffused across an ecosystem of cross-functional groups. This pattern aligns with Levie and Lichtenstein's perspective (2010) on the unpredictable nature of entrepreneurial growth, where learning is not linear but rather an iterative, emergent process.

Key dimensions of learning and unlearning

Several interviews touch upon the process of discarding existing knowledge or replacing it as scaling transitions occur. As *Outsystems (ML)* shared "*the biggest mistake is not to learn from mistakes*". We find evidence of cycles of unlearning and relearning as these HGF cope with changing environments, learn from failures, and establish new learning processes. *Outsystems* mantra about "Always ask why" provides a clear example.

Furthermore, *Sensei (DM)* clearly puts these notions together*: "I think the key thing to learn when you're in a startup is how do you learn to adapt, right? Because you have to be constantly adapting. So that adaptability and having a mind that is able to sometimes forget* (unlearn). *You need to forget things to be able to learn like all of that is for me something that I put a lot of focus on with my teams."*

Whereas chaos (Murphy 1996) is well-documented in scaling processes our findings show stronger flexibility in the scaling-up learning processes. The dimensions of learning and unlearning in high-growth firms are fundamentally intertwined with the formal and informal communication processes, often referred in interviews as *Rituals.* This is consistent with Shepherd and Patzelt (2022): 'scaling involves the spreading of excellence as the organization grows and excellence is manifest in knowledge (such as schemas, routines, systems, and norms)'. As firms grow, they transition from informal, experiential learning methods to more structured, formalized processes. This is also evident in the evolution of rituals, which begin as flexible, informal practices but gradually become more formalized to manage increasing complexity and scale. In the case of *Rows* learning from customers has always been present but it evolved from various informal conversations into a structured formal practice in which a manager is expected to share with all the team all transcripts of calls had with customers (on average over 150 calls per year per manager).

Learning involves not only the acquisition of new knowledge but also the relearning of some old practices (*T**: *remember good old days*) and unlearning of outdated practices. This is manifest in the rapid disbandment of processes that are proven non-scalable, reflecting the firms' agility and adaptability: 'Previous established processes are rapidly disbanded if proven non-scalable (*Lovys*)'. As highlighted by Rao and Sutton (2014) as organizations 'grow larger and older, and as the consequences of past actions accumulate, once useful but now unnecessary roles, rules, rituals, red tape, products and services build up like barnacles on a ship; to make way for excellence to spread, these sources of unnecessary friction must be removed'. Simultaneously, the formalization of communication, as seen in the implementation of all-hands meetings and the ritual of asking 'what value have you produced?' (MM), fosters a culture of transparency, accountability, and continuous learning. It is crucial that not only the founder(s) but all organizational members acquire the knowledge necessary to articulate, codify, and effectively disseminate their expertise to other members within the organization. Hence, the transitions in learning and unlearning, marked by the evolution of communication rituals, constitute key dimensions of growth and adaptation in high-growth firms.

Learning and dynamic capabilities

Literature suggests that learning is a key component of dynamic capabilities and that firms that invest in continuous learning and knowledge development are more likely to develop and maintain dynamic capabilities over time. Our results align with the findings from Zahra & George (2002) that argue that absorptive capacity, a firm's ability to acquire and utilize external knowledge, is a key component of dynamic capabilities, and that firms with high absorptive capacity are better able to learn from their external environment and adapt to changing conditions.

We also examined the link from learning processes and dynamic capabilities in scale-ups. Specifically, data illustrates that scale-ups need to balance different types of learning processes in the different phases of their growth to develop dynamic capabilities. *Rows (HP*) illustrates it "*by evolving our way of learning we are able to change the mindset matrix of our employees preparing them for growth and change*". An interesting finding are the identification of the factors that influence the choice and evolution of learning sequences in scale-ups (e.g., initial conditions, feedback mechanisms, environmental dynamism).

While learning is critical for success in fast-moving, unpredictable environments, the very character of those environments makes learning difficult (Bingham and Eisenhardt, 2008). As firms mature the development of the dynamic capabilities are vital as illustrated in the cases of *Outsystems "Whilst facing a significant change in the macro environment we had this silly expression for boring work – we must eat the broccoli – meaning we sometimes listened to 200 client recordings to learn what we are doing wrong and what can we improve".* Similarly, *ML* emphasised (relearning) from a previous HGF experience "*I think that what guided us was the logic of consensus, the versatility and resilience of people with their return to the core. We need to make it work and we will because in the past we did it with less".*

Our findings highlight the transitions in learning and unlearning practices across four stages of high-growth firms. The shifts in focus can be observed as firms move from informal, experiential learning in the exploration phase to the increasing importance of social learning in global exploitation phase. The emphasis broadens to capturing tacit knowledge, maintaining the *startup* spirit, and incorporating external expertise. In the last phase, mature firms prioritize time management and agility, personalized mentorship, and process adherence. These transitions reveal a dynamic interplay between preserving the entrepreneurial spirit and adapting to the evolving demands of scaling, underlining the complexity of learning and unlearning processes within high-growth firms. These transitions were further accelerated by the growth pace (highly visible in hypergrowth firms) and in firms with higher valuations, interestingly aligned with Somaya et al (2024) recent insights that found evidence on scalability being positively associated with startup valuations.

A primary contribution of our chapter is a grounded model framework illustrated in Figure 3. This framework identifies a hierarchical transition from founders' individual learning experiences to a global orchestration of knowledge across expansive teams. At the foundational level, we observe founders grappling with trial and error, utilizing social learning to navigate initial challenges. Progressing to the next tier, entrepreneurial teams emerge, employing collective experiential learning and intentional social interactions to foster a culture of empowerment and shadowing, critical for organizational learning. The third stratum introduces 'teams of teams', a concept where internal mobility and the codification of learning facilitate knowledge transfer within larger organizational structures. At the apex, we encounter a 'global team of teams', indicating an advanced stage of the firm where learning transcends individual and team boundaries, becoming an institutionalized entity-wide pursuit that leverages global insights and tools to decode and address challenges at a macro scale. Our data indicates that HGF effectively transitioned their learning processes. Specifically, they engaged in a process that we call *learning transitions* - systematic changes in the learning processes that impact on cognition behaviours, action, and timing. These processes of *transitions* are dependent upon various factors including chaos (evidenced by *Saltpay*), founders and top management team previous experience (e.g. *Outsystems*), the institutional context (e.g. *Sensei*) and the HGF typology. Decision-makers in high-growth firms should be mindful of the transitions between phases, acknowledging the inherent tensions that come with each shift. Learning to anticipate these transitions and understanding the implications of the dynamic capabilities' theory can significantly enhance their decision-making processes. Furthermore, the conscious decision to unlearn certain practices and relearn new ones is crucial for navigating these transitions. Embracing this as part of the firm's learning process can lead to more effective adaptation, flexibility, and willingness to unlearn when necessary. Moreover, our data underscores the importance of maintaining a delicate balance between structure and agility. While formalized systems become necessary as the firm grows, it is equally important to avoid the red tape crisis (Greiner 1998) by fostering an agile, collaborative environment that promotes innovation, further revealing the importance of fostering a culture of trust and delegated responsibility (Jansen et al. 2008). Particularly in the later stages, promoting internal mobility and discomfort can lead to enhanced learning and contribute to the pursuit of persistent growth.

Furthermore, our findings regarding *rituals* align with those of Pentland and Feldman (2005), emphasizing that routines play a crucial role in numerous fundamental organizational phenomena, including stability, change, flexibility, learning, and transfer. Importantly, these rituals are subject to change as these firms grow enacting learning beyond the founders and their direct reports. High-growth firms typically induce internal organizational changes at the juncture of the organization and its external environment, an environment often marked by dynamism and complexity for expanding firms (Shepherd and Patzelt 2022). In this dynamic setting of scaling-up we observe the dynamic capabilities arising to respond the various crisis that arise in each stage in order to pursue persistent high-growth. Articulating these dynamics helps understanding the learning transitions that happen in scaling up when firms develop, refine, and reconfigure their capabilities to navigate new challenges and crises. In exploration stage learning is predominantly experiential and entrepreneurial: founders and top management teams learn from their interactions with the market, customers, and the product itself. However, as the firm grows, there is a need to unlearn the informal, ad-hoc management practices and learn more structured, formalized methods. Subsequently in the extrapolation phase we observed learnings such as implementation of functional organizational structures, formal communication channels, and accounting systems. As a high-growth venture expands, formalization, defined by Mahmoudsalehi et al (2012) as the standardization of organizational tasks and the regulation of members' behaviours through rules and procedures, becomes a critical element in its organizational design. As firms learn how to delegate authority, trust their subordinates, and foster entrepreneurial attitudes, learning evolves towards greater coordination and control whilst sprouting social and community learning. Leaders use formal systems, merge decentralized units, and establish intensive planning procedures while teams get further support from their relative communities. As Shepherd and Patzelt (2022) advance ‘Even with the benefits of formalization, ventures still face the challenge of formalizing their operations without building an unresponsive bureaucracy, a bureaucracy that obstructs entrepreneurial actions’. These last transitions apply particularly to mature HGFs and superstars, and aims to foster interpersonal collaboration, managing through spontaneity and enabling organizations leverage the value in the unexpected. Building on the transitions we thereby observe these are *Scaling-up Capabilities* which are fundamental to enable preparedness and competitive advantage, but also as indicated by a Mature HGFs the opportunity for serendipity - the notion of making surprising and valuable discoveries (Busch 2022). Learning transitions are not easy or smooth. They require a balance between continuity and change, stability and innovation, exploitation and exploration. Moreover, our data indicates that firms facing hyper-growth also exhibit faster learning transitions. Older HGF tend to focus more on the importance of keeping agility and finding ways to avoid excessive bureaucracy to allow continuous acceleration. Firm acceleration occurs at the intersection of firm and market-level conditions (Belitski et al. 2023) and so transitions. They also involve overcoming resistance, inertia, and conflicts that may arise from different interests, values, and perspectives among stakeholders. Therefore, firms need to be aware of the challenges and opportunities that each stage of growth presents, and be prepared to adapt their strategies, structures, and cultures accordingly.

Policy discussion

Scaling is a complex and multifaceted phenomenon (Jansen et al. 2023). While it is often perceived as a linear progression, a closer look reveals a diversity of scaling scenarios, each unique in size, age, sector, and scope. These organizations face distinct challenges, not only in their operational and strategic aspects, but also in their learning processes, as they strive to adapt, innovate, and grow. This study highlights the importance of supporting HGFs in Europe through policies that facilitate their learning capabilities, such as funding for research and development, entrepreneurship education, and access to networks and partnerships. By providing such support, policymakers can help to create a more dynamic and innovative business environment that enables HGFs to thrive and contribute to economic growth and job creation. Additionally, by encouraging HGFs to reflect when managing their *learning transitions*, policymakers can help to promote more persistent and sustainable growth. Such policy initiatives can serve to stimulate a dynamic and innovative business ecosystem, one that allows HGFs to flourish and make substantial contributions to economic expansion and job creation. Aligned with Tippmann et al (2023b) learning from ecosystem participants operating under diverse paradigms emerges as a crucial factor for achieving success in scaling endeavours. Lefebvre et al. (2015) findings suggest that 'entrepreneurs should choose to integrate formal networks that are in tune with their learning expectations'. Moreover, by incentivizing these firms to actively engage in continuous learning, unlearning, and relearning transitions, policymakers can lay the groundwork for more consistent and sustainable growth trajectories. This is crucial as it equips HGFs with the adaptive capacity necessary to navigate fluctuating market conditions and emerging challenges in their growth journey.

3.6. Implications, Limitations and Conclusion

In this research we shed light on 'How do High-Growth Firms evolve their learning processes while scaling up in Europe?' and 'What are the learning and unlearning transitions that occur?'

illustrating the various learning processes followed by the ten HGFs studied. We address how their learning evolves and introduced the concepts of *learning transitions*. Indeed, our study provides several practical implications for entrepreneurs, top managers, and stakeholders of high-growth firms, particularly in understanding and navigating the key learning transitions. Awareness of these transitions should enable managers to anticipate issues, thereby facilitating the development of preemptive solutions and strategies to manage potential upheavals effectively. Our proposed theoretical framework underscores the dynamic and social nature of learning in high growth firms. As these firms transition through the stages of growth, the learning methods of founders and top management teams need to evolve. Recently Genedy et al. (2024) provided insights that resonate strongly with the findings of our own research, which suggests that the process of scaling within high-growth firms is indeed a multifaceted journey, rather than a binary state. This reconceptualization of scaling as a spectrum permits a more granular examination of how learning and unlearning processes are intricately woven into the fabric of employee experiences within these organizations. Our study's framework, mapping the evolution from founder-driven learning to a global network of knowledge exchange, aligns with the view that scaling is a dynamic continuum. It further underscores the importance of considering the individual and collective well-being of employees as they navigate through various degrees of organizational growth and learning transitions. In this light, our discussion extends beyond the traditional focus on structural and strategic aspects of scaling, to include the human dimension, where employee learning experiences and well-being are acknowledged as pivotal elements in the scaling narrative.

Another key implication that expands on Pittaway and Thorpe (2012) is a strategic imperative for entrepreneurial education to evolve in harmony with business practices, by fostering a pedagogical ecosystem that privileges the complex learning processes inherent in scaling high-growth firms. Embedding experiential learning opportunities that simulate the scaling-up stages and encourage reflective practices can cultivate agile thinkers. Educators should thus reassess and recalibrate instructional strategies to align with this dynamic learning paradigm, facilitating a bridge between theoretical knowledge and practical entrepreneurial acumen.

There is still much to learn about learning in HGF, therefore we encourage additional phenomenon-driven research (Eisenhardt and Graebner 2007) and building on theories of practice (Sandberg and Tsoukas 2011) to help us better understand these transitions. Future research could further investigate the complexities of learning and unlearning transitions by examining the interplay between diverse organizational and macro factors across varying market conditions (Tippmann et al. 2023b), including the role of rapid technological advancements and digital platforms and further exploring different institutional contexts as there is growing evidence of scaling heuristics being applied across different institutional jurisdictions and cross-country locations (Busch and Barkema 2021). Addressing the limitations of our current study, future research could explore variations in the pace and nature of these transitions, as well as the influence of managerial focus and strategic orientation at different stages. We encourage further investigation into additional drivers of social learning and its transitions, such as decision-makers' perceptions of extreme contexts and risk management strategies. Additionally, examining the generalizability of our findings across diverse countries and socio-economic contexts would be valuable as highlighted by Coal et al. (2020). In conclusion, our hope is that this research serves as a catalyst for continued investigation into the dynamics of learning transitions in high-growth firms, contributing to a more nuanced understanding of firm scaling and development.

CHAPTER 4[3]

SCALING MINDSET

4.1. Introduction

As highlighted in this thesis previously, High-Growth Firms face complexities in scaling, and in such dynamic context, understanding the *how* is crucial (Zahra and Wright 2011). Tippmann et al. (2022) share a testimonial from *Maple* Managing Director that elucidates the scaling mindset complexity:

> *"One of the hardest challenges that you can have as a company is scaling... But you never want to lose that entrepreneurial scrappiness that you need to grow fast. As soon as you lose that, the growth is going to peter off*."

The scaling mindset depends on ambition and motivation - these drive the entrepreneur to dream big, persevere through difficulties, and relentlessly pursue high growth. But what affects that?

Tippman et al. (2023b) posits institutional theory as a core theoretical perspective amenable to scaling; we propose to explore informal institutions (North 1990; 2005) research that define them as deeply rooted values and norms which can drive individual behaviour. This chapter embarks on the exploration of these facets and its interplay with founders' mindset, underlining their centrality to the entrepreneurial success in scaling firms. Within the entrepreneurship discourse, considerable attention has been accorded to the exploration of entrepreneurial mindset as evidenced by the works of Ireland (2003) and Haynie et al. (2010), among others. Ireland et al. (2003) define it as "a growth-oriented perspective through which individuals promote flexibility, creativity, continuous innovation, and renewal," underlining its importance

[3] *Published in Edward Elgar Handbook on Scaling and High Growth Firms 2024

as a cognitive framework for interpreting and navigating business complexities (p. 968). An entrepreneurial mindset is both an individualistic and collective phenomenon; that is, it is crucial for individual entrepreneurs as well as for managers and employees in established firms to think and act entrepreneurially (Covin and Slevin 2017), fostering a culture of innovation and adaptability across all levels of an organization. However, a discernible lacuna persists in the extant literature concerning the conceptualization and understanding of the scaling mindset with its emphasis on managing growth challenges and scaling operations effectively, and how it helps navigate the intricate pathways of high growth.

Moreover, an integral facet of the scaling mindset is the evolution of learning throughout the scaling process. Understanding this evolution is vital as scaling is a journey fraught with unprecedented challenges and rapid changes that demand continual learning and adaptation. Thus, the capacity to learn and unlearn (Bingham and Davis 2012) is a cornerstone of the scaling mindset and key determinant of a firm's success in managing and sustaining high growth.

It is our hope that by the end of this chapter, the reader will not only appreciate the value of the scaling mindset but also grasp its intricate nature, its role in driving high growth, and the ways to cultivate this mindset for organizational and individual success. As we navigate through the complexities and nuances of the scaling mindset, we keep a sharp focus on its overarching significance: to act as a catalyst in propelling firms to consistently achieve and manage persistent high growth. To delineate the contours of a scaling mindset, this chapter has been meticulously structured as follows: initially, we provide the theoretical foundations and embark with a discourse on various lenses potentially useful for exploring scaling mindset within management and organizational studies. Subsequently, we delve into the characteristics of the scaling mindset with dynamic and adaptive organizational paradigms that acknowledge the quintessence of scaling. We then transition to a discussion on how organizations can effectively foster a scaling mindset, embracing the dynamism and adaptability it heralds, to navigate the multifaceted scaling challenges and opportunities. We conclude with a reflection on the prospective trajectory of integrating a scaling mindset within organizational theory and practice, envisioning a paradigm where scaling is not merely an operational phase, but a fundamental mindset imbued across the firm.

4.2. Theoretical Foundations

Conceptual definition

The term "scaling mindset" may be a recent entrant in the lexicon of entrepreneurship, but the underlying concept is deeply rooted in a variety of theoretical frameworks. This cognitive frame is built upon layers of psychological constructs, behavioural economics, and traditional business theories, all combining to help entrepreneurs make decisions that favour scalable, persistent high growth.

It is important to acknowledge the existent significant literature on *entrepreneurial mindset.* McGrath and MacMillan's (2000) words, "the successful future strategists will exploit an entrepreneurial mindset, melding the best of what older models have to tell us with the ability to rapidly sense, act, and mobilize, even under highly uncertain conditions." Ireland et al (2003) refer that entrepreneurial mindset is both an individualistic and collective phenomenon; that is, it holds relevance not only for individual entrepreneurs but also for managers and employees within established firms, fostering a propensity to think and act entrepreneurially.

The scaling mindset, as posited within this research framework, extends beyond a mere cognitive attribute or aspirational goal - it emerges as a necessity for navigating the intricacies of exponential growth in entrepreneurial endeavours. Recent studies (Bohan et al., 2023) have shifted the conceptualization of scaling from a linear model to one of exponential expansion, thereby delineating it as a distinct phenomenon that necessitates a growth-oriented entrepreneurial mindset. Palmié et al. (2023) define scaling as ‘an increase in the size of a focal subject that is accompanied by a larger-than-proportional increase in the performance resulting from the said subject’. Shepherd and Patzelt (2022) elucidate organizational scaling as the dissemination of excellence within an organization as it expands, whereas DeSantola and Gulati (2017) construe it as synchronizing internal organizing with growth.

The entrepreneurial and scaling mindsets share a core focus on growth and value creation but diverge significantly in their application and emphasis throughout the business lifecycle. The entrepreneurial mindset is characterized by a penchant for innovation, a high tolerance for ambiguity and risk, and a flexible organizational culture that supports rapid iteration and agility. It thrives on the thrill of start-up creation, pioneering new markets, and the continual refinement of business models. In contrast, the scaling mindset is honed for amplifying established successes; it's less about discovery and more about systematization for growth. It calls for a calibrated approach to risk that favours sustainable expansion, and an organizational culture that's less fluid and more focused on replicability and operational excellence to ensure consistent delivery at scale. While both mindsets value ambition and learning, the entrepreneurial mindset sees these as tools for iterative development and market entry, whereas the scaling mindset directs them towards market domination and the optimization of processes and systems for efficiency. The transition from entrepreneurial to scaling mindset is not just a shift in strategy but also a metamorphosis of organizational ethos and leadership focus.

While the term 'mindset' typically applies to individual psychological attitudes, Dweck's work (2008) broadens the scope of the mindset concept from personal to collective, underscoring its broader organizational impact. Mindsets and cognitive frames, while deeply rooted in the individual psyche, do not exist in isolation (Wallace et al. 2023); they invariably influence and are influenced by the collective ethos and strategic direction of the firm. As individuals at various echelons of an organization embrace a particular mindset—be it entrepreneurial or scaling—these perspectives converge, creating a resonance that shapes organizational culture and orientation. This aggregation of individual cognitive frameworks catalyses a ripple effect, where personal ambition and adaptability become mirrored in the organization's strategic pursuits and capacity for change (Yeager and Dweck 2020). Therefore, a company's orientation transcends a simple directive from leadership; it emerges from the intricate interweaving of its members' individual mindsets. Subsequently, to extend the conceptual definition of scaling mindset we propose to delve into various analytical lenses.

The Interplay between Scaling Mindset and Learning

Consistent with prior work, we define learning as systematic changes in cognition and/or behaviour (Miner, Bassof, and Moorman 2001) that require organizations to change and adapt to new ways. We acknowledge the importance of two major sources of learning. Firstly, indirect learning serves as a modality of knowledge acquisition where individuals garner expertise from external reservoirs. This instructional mode encapsulates vicarious learning, through which individuals assimilate through the experiences and missteps of others (Kim and Miner 2007), and the engagement with external advisement – i.e. expertise from venture capitalists (De Clercq et al. 2006), along with networks that may hold particular utility for scale-ups. Secondly, direct learning delineates a process where individuals adeptly acquire knowledge autonomously through a spectrum of processes, inclusive of experiential methods (controlled scenarios), trial-and-error (reflective of previous actions), improvisational learning (real-time acquisition as situations unfold) and deviance-error learning.

While substantial understanding exists concerning how firms employ specific learning processes, Shepherd and Patzelt (2022) extend that future inquiries could delve into the activities that facilitate the accrual of experience, alongside exploring the modalities through which these activities are learned and the implications thereof on organizational scaling. An enriched understanding of the interplay between direct and indirect learning, and its resultant impact on scaling endeavours, may offer fertile ground for optimizing learning strategies to bolster organizational scaling efforts, thereby contributing to the overarching discourse on developing a scaling mindset.

The Interplay between Scaling Mindset and Dynamic Capabilities

In describing the complex environment that businesses currently operate, Schoemaker et al. (2018) highlight the VUCA acronym referring to a volatile, uncertain, complex, and ambiguous world. In this the convergence of a Scaling mindset and dynamic capabilities emerges as a compelling analytical lens.

Dynamic capabilities are conceptualized as a firm's inherent abilities to integrate, build, and reconfigure internal and external competences to address and adapt to rapidly changing environments (Teece, Pisano, and Shuen 1997). At their core, these capabilities are about the preservation of competitive advantage amidst the vicissitudes of business landscapes, emphasizing the sequence of sensing opportunities, seizing them, and subsequently transforming the organization (Teece 2007). Furthermore, a scaling mindset can be perceived as an organizational orientation, referring to the attitudes, values and beliefs that pervade the organization and that underscore the significance of adaptability, continuous learning, and strategic allocation of resources in the pursuit of growth. This mindset is not merely about expansion but about growth that's smart, sustainable, and in sync with the organization's vision (Smith and Lewis 2011).

Thus, in an era where the only constant is change, a scaling mindset becomes an enabler of dynamic capabilities. It acts as the cognitive foundation upon which dynamic capabilities are built and exercised. Let's delve into these parallels. While dynamic capabilities underscore the reconfiguration of resources to address changing landscapes, a scaling mindset provides the impetus for such reconfiguration, ensuring that resources are channelled in directions that promise sustainable growth (Winter 2003). A scaling mindset, with its emphasis on learning and adaptability, complements the dynamic capability of integrating external knowledge, ensuring the firm remains attuned to market shifts and customer feedback (Eisenhardt and Martin 2000). Furthermore, the entrepreneurial orientation intrinsic to a scaling mindset aligns seamlessly with the dynamic capability of developing new competencies, ensuring that opportunities are not just sensed but effectively seized (Helfat and Peteraf 2009). Finally, both concepts acknowledge the weight of institutional factors in shaping trajectories. The scaling mindset, informed by these dynamics, can either leverage or transform them beneficially, making it a potent tool in the dynamic capabilities toolkit (North 1990). In the contemporary business paradigm, the pursuit of persistent high growth necessitates more than just operational efficiency or strategic prowess. At the heart of this relentless quest for growth lies the intrinsic importance of cultivating a scaling mindset. Such a mindset acts as a compass, guiding firms through the labyrinthine challenges of expansion, while ensuring that growth is not ephemeral but enduring. It is this very cognitive orientation—emphasizing adaptability, continuous learning, and visionary foresight—that provides organizations with the resilience and agility to navigate the complexities of dynamic markets. The scaling mindset, therefore, emerges not merely as an enabler but as an indispensable cornerstone for firms committed to achieving and sustaining unparalleled growth trajectories. In this light, while dynamic capabilities provide the operational framework, it is the scaling mindset that breathes life into it, invigorating firms with the passion, purpose, and perspective essential for persistent high growth.

The Interplay between Scaling Mindset and Strategic Entrepreneurship

The notion of strategic entrepreneurship, involving the integration of opportunity-seeking and advantage-seeking behaviours, provides another useful lens for examining the scaling mindset (Ireland 2003). At its core, the scaling mindset reflects entrepreneurial alertness to new opportunities coupled with the strategic leverage of resources and capabilities. Scaling requires learning agility as firms rapidly accumulate and assimilate new knowledge to support exponential growth. Leaders must nurture a culture that promotes ambition, innovation and intelligent risk-taking. Paralleling strategic entrepreneurship, the scaling mindset entails bisociative thinking to identify disruptive innovations that propel growth into new spaces. Ultimately, the scaling mindset enables the value creation and competitive differentiation vital to exponential expansion. In essence, strategic entrepreneurship underscores how the scaling mindset integrates the cognitive abilities, learning orientation, and motivational drive needed to master exponential growth.

This nuanced conceptualization emphasizes that scaling-up is not solely an external event, but rather a transformative process requiring internal organizational changes. It involves continuous learning and adaptive strategies to recalibrate organizational inputs, structures, and processes (Bohan et al., 2023). This transformative approach resonates with and supports the argument for evolving learning capabilities as a foundational element of the scaling mindset.

The psychological perspective: Growth mindset and entrepreneurship

Moreover, the pursuit of super-linear scaling - where outputs grow disproportionately faster than inputs - demands an elevated level of ambition and motivation (Bohan et al., 2023). These psychological constructs are indispensable for the relentless identification and exploitation of new opportunities, operational efficiencies, and competitive advantages.

The psychological underpinnings of the scaling mindset can be traced back to Carol Dweck's seminal work on "growth mindset"(Dweck 2016). According to Dweck, individuals with a growth mindset believe in the potential for intelligence and skills to be developed over time. This belief system naturally extends to entrepreneurship, where a growth-oriented mindset can significantly impact how one approaches challenges, manages failures, and capitalizes on opportunities.

The marriage between the growth mindset and entrepreneurship manifests as a scaling mindset—an amalgamation of resilience, adaptability, and the never-ending pursuit of growth. Entrepreneurs with a scaling mindset do not merely adapt to changes; they anticipate them and see challenges as opportunities for learning and scaling.

In synthesizing psychological theories with entrepreneurship, the growth mindset, as defined by Dweck (2016), surfaces as a pivotal construct interlinked with the scaling mindset. Growth mindset embodies the belief that abilities and intelligence are malleable and can be honed through dedicated effort and practice. This contrasts sharply with the fixed mindset, which construes these traits as static and unchangeable.

In the entrepreneurial context, a growth mindset serves as a catalyst for viewing challenges as conduits for skill enhancement rather than as insurmountable obstacles. This perspective enhances both motivation and resilience, particularly when confronted with setbacks—a phenomenon especially relevant for high-growth firms operating in volatile and complex markets. Notably, Dweck (2016) posits that mindsets exist on a continuum, allowing for shifts from a fixed orientation to a growth-oriented perspective depending on contextual factors. This dynamic nature is significant for entrepreneurs, as the scaling process often demands different cognitive orientations at various stages.

While a growth mindset accentuates the importance of effort, it neither negates natural aptitudes nor posits that any individual can become an expert in any domain. Rather, it centres on the realization of potential through relentless work and strategic effort. In line with this, entrepreneurial organizations with a scaling mindset often invest in resources and training to continually upskill their workforce, rewarding not just innate talents but demonstrable improvements and achievements.

Leaders within such organizations serve as mentors, coaching their teams through setbacks instead of categorizing them as failures. This leadership orientation is highly conducive to fostering a scaling mindset across organizational strata (Van Hemmen et al. 2015). Additionally, growth mindset principles are operationalized within organizations through targeted training, role modelling by leaders, and incentivizing behaviours indicative of growth orientation—such as embracing challenges, demonstrating persistence, and collaborating effectively. In summary, the psychological constructs introduced by the growth mindset theory form an integral component of the scaling mindset. By focusing on the capacity for growth, adaptability, and the relentless pursuit of potential realization, this theoretical framework enriches our understanding of the cognitive dimensions' imperative for successful scaling.

Importance of a scaling mindset in the high-growth context

In an entrepreneurial setting, a scaling mindset manifests in various operational and strategic domains, from market expansion strategies to innovation management. The literature suggests that the importance of a growth mindset is amplified in such volatile, uncertain, complex, and ambiguous (VUCA) environments typical of high-growth firms.

The elements of ambition and motivation, explicitly highlighted in this chapter, serve as catalysts that further enrich the growth mindset in an entrepreneurial context. These factors drive entrepreneurs not just to adapt and evolve, but to proactively redefine the markets they operate in and the value they provide, with an overarching focus on high growth and scalability.

4.3. Characteristics of the Scaling Mindset

To navigate the complexities of scaling, certain cognitive and behavioural attributes have emerged as especially salient for entrepreneurs. These characteristics form the bedrock of the scaling mindset, serving as a blueprint for understanding how entrepreneurs think, decide, and act in high-growth environments. The following sections detail these pivotal attributes.

Ambition and Vision

The driving force behind any scaling effort is a profound ambition. Entrepreneurs with a scaling mindset possess a clear and compelling vision for their organization's future. This vision is not just a distant dream but a tangible goal, coupled with the ambition to see it realized. Entrepreneurial leaders harbour a robust vision, exhibit proactivity in discerning opportunities, and demonstrate a willingness to undertake risks to propel growth. They create an entrepreneurial culture within the organization, empowering employees to think and act like entrepreneurs (Van Hemmen et al. 2015). It's this combination of clarity and passion that propels firms into new horizons and positions them for exponential growth.

Resilience and Adaptability

Scaling embodies a journey punctuated with unforeseen challenges and setbacks. Entrepreneurs proficient in scaling exhibit an exceptional capacity to rebound from adversities. Their resilience transcends mere recovery, encapsulating the agility to recalibrate strategies, thereby ensuring the sustained viability and competitiveness of their ventures amidst dynamic market landscapes.

Resilience emerges as a quintessential mindset for leaders and individuals alike in adeptly navigating through challenges and setbacks (Urbano, Aparicio, and Audretsch 2019a). It delineates the capacity to bounce back, adapt, and recuperate from adversities or challenging scenarios. A body of research (Munoz, Billsberry, and Ambrosini 2022; Youssef and Luthans 2007) accentuates that resilience is a pivotal determinant in realizing success. Leaders endowed with a resilient mindset are better poised to manage uncertainty, setbacks, and change. They uphold a positive outlook, derive learnings from failures, and engender creative resolutions to problems. Moreover, resilient leaders instil resilience within their teams by fostering a supportive and empowering work milieu, championing open communication, and availing resources and support conducive for growth and development.

The cultivation of a resilient mindset encompasses the fostering of self-awareness, adherence to self-care regimes, the construction of robust support networks, and the honing of problem-solving and coping skills. Resilience, as a mindset, holds a significant bearing in both leadership and the scaling mindset. It equips individuals and leaders with the requisite prowess to traverse challenges, acclimate to change, and preserve well-being amidst adversities. Through this lens, resilience and adaptability emerge as indispensable attributes to navigate through the vicissitudes inherent in scaling-up journeys and high-growth.

Openness to Learning and Continuous Improvement

Entrepreneurs possessing a scaling mindset epitomize the ethos of perpetual learners, driven intrinsically to acquire new knowledge, refine existing processes, and pivot when exigent. This steadfast commitment to continuous improvement propels their organizations to maintain a vanguard position in innovation and market relevance. Recent scholarly discourse has underscored the cardinal role of learning within the process of scaling-up (Jansen et al. 2023), elucidating its substantive impact on venture success. The empirical insights from the work of

McDonald and Eisenhardt (2020) corroborate the significance of learning, accentuating the imperative to delineate the interlinkages between learning and scaling within entrepreneurial ventures. The discourse posited by Ott and Eisenhardt (2020) further cements the intrinsic association between the scaling process and accelerated learning, rendering a rich theoretical tapestry for analysing the dynamics of learning-centric scaling endeavours. Enhancing an organization's learning ability necessitates a focus on building its long-term capacity to learn, grow, and adapt for the future, underscoring the critical role of learning in ensuring scalability and sustainability (Cannon and Edmondson 2005).

In elucidating the practical resonance of this theoretical construct, a poignant exemplar can be assembled from the reflections of Chamath Palihapitiya, an eminent American venture capitalist who also partook in a period of hyper-growth at Facebook. In a recent interview (Fridman 2022), Palihapitiya expounded upon the ethos of leveraging missteps as a fertile ground for learning and scaling, encapsulated in his axiom:

> *"Amplify the mistakes = amplify the learnings*
>
> *Bezos said it the best… There is a tendency after things work to create a narrative fallacy because it feeds your ego. And you want to have been the person that saw it coming. And I think it's much more honest to say we were very good probabilistic thinkers that tried to learn as quick as possible, meaning, to make as many mistakes as possible. At Facebook we had: Move fast and break things."*

This pragmatic insight underscores the quintessence of embracing a learning-oriented approach in the intricate journey of scaling, thus shedding light on the practical manifestation of the theoretical dialogues surrounding learning and scaling in the entrepreneurial ecosystem.

Risk Tolerance, dealing with uncertainty and future orientation

Entrepreneurial endeavours, by their very nature, involve risk. Those with a scaling mindset, however, understand that calculated risks often lead to significant rewards. They possess the acumen to weigh potential gains against possible setbacks, making bold decisions that drive growth and differentiation. Entrepreneurship literature has found evidence for low uncertainty avoidance (R. G. McGrath, MacMillan, and Scheinberg 1992; Hvide and Panos 2014) leading to increased entrepreneurial activity, however scaling often situates organizations within diverse economic, legal, and cultural milieus, thereby escalating complexities. Firms with a scaling mindset may exhibit enhanced navigation through the heightened uncertainty intrinsic to scaling initiatives. Conversely, mitigation strategies informed by a scaling mindset, aimed at curtailing, or managing uncertainty may significantly impact a firm's scaling capabilities and methodologies. Furthermore, varying typologies of uncertainty and risk (Beckman, Haunschild, and Phillips 2004) may interact distinctively with different facets of scaling. This exploration could elucidate pivotal insights into fostering a risk-tolerant culture within scaling-aspiring organizations. Organizations capable of successfully dealing with uncertainty tend to outperform those unable to do so (Ireland 2003). Moreover, a scaling mindset is inherently forward-looking. As companies prepare to scale up, the roles of founders also change through interactions with new joiners who take on important responsibilities (Van Lancker et al. 2023). Entrepreneurs are not just reacting to current market conditions but are also anticipating future trends and disruptions. This foresight enables them to position their ventures in a manner that capitalizes on emerging opportunities while navigating potential threats. Interestingly, leveraging a dataset encompassing Swedish start-ups over a span of 15 years, Grillitsch and Schubert (2021) found that the swift expansion of skills through new hires significantly bolsters growth, in contrast to an incremental approach which propels a diminished growth trajectory. Bohan et al. (2024) highlights proactiveness, which entails employing foresight to envisage the future organizational landscape and instituting alterations to the business in anticipation of the pressures engendered by scaling, well captured by one of its informants “trying to anticipate what the future looks like, and you're trying to get some longevity out of the decision and the investment of time, effort and money".

Organizational culture for Opportunity Recognition and Exploitation

Recognizing an opportunity is just the first step; exploiting it is where the real challenge lies. Entrepreneurs with a scaling mindset excel at both. They have a keen eye for market gaps and unmet needs, combined with the strategic prowess to convert these insights into tangible business offerings. Individuals with an entrepreneurial mindset can discern and capitalize on new opportunities owing to their cognitive aptitudes that enable them to ascribe meaning to ambiguous and fragmented scenarios (Alvarez and Barney 2017). However, the scaling mindset transcends the entrepreneurial mindset, demanding a cultural change of macro-management over micro-management, fostering role development rather than rigid role design, prioritizing collaboration over control. Van Lancker et al. (2023) delineate two distinct phases within the evolution of founder roles: initially, in the founder-driven phase, alterations predominantly pertain to the formal roles of founders, emanating from their own role-crafting endeavours. Subsequently, during the interaction-driven phase, the formal and/or informal roles of founders may experience further transformation, attributable to the (attempted) role-crafting by joiners and the emergence of surrogate founders and social builders within the joiner cohort.

Crucial to further understand this scaling mindset is to learn from the seminal paper by Ireland et al. (2003), that delineates fundamental components. Initially, the recognition of entrepreneurial opportunities is portrayed as a crucial wealth-creation activity (Shane and Venkataraman 2000). These opportunities often arise in markets where new goods, services, or organizing methods can be introduced profitably, with information asymmetries often catalysing these opportunities. Changing demographics, social change, and alterations in governmental regulations are cited as conditions potentially fostering entrepreneurial opportunities. Subsequently, the concept of entrepreneurial alertness is explored, characterized by "flashes of superior insight" that enable the identification of novel or unexpectedly valuable goods or services. This alertness, stimulated by the allure of wealth creation (Hitt et al. 2001), informs the pursuit of entrepreneurial opportunities and fosters an entrepreneurial culture and leadership within firms.

Lastly, when assessing the exploitation an entrepreneurial framework should be considered, encompassing goal setting, opportunity registration, and strategic timing for exploiting entrepreneurial opportunities, to ensure resource allocation is aligned with the firm's capabilities and the value potential of identified opportunities. Rayport et al. (2023b) recently highlighted the need for a thoughtful transition from a bustling start-up to a stable, profit-generating entity, underscoring a prudent blend of opportunity recognition and exploitation under the aegis of a scaling mindset. The sagacity in extrapolation—simultaneously exploring growth avenues while exploiting economies of scale and scope—carves out a path of sustainable and profitable scaling, shedding light on the often overlooked, yet crucial, bridge between youthful exploration and mature exploitation in scaling. We propose this bridge as a delicate balance between confidence and humility as crucial for decision-making and inspiring teams. Overconfidence can lead to strategic missteps. This delicate balance is important for entrepreneurs' scaling mindset: it exudes the self-assuredness necessary to lead, yet remain humble enough to listen, learn, and recalibrate when necessary.

A salient contribution of this chapter resides in the articulation of an emergent theoretical framework, as depicted in Figure 1, which orchestrates a cadre of foundational pillars conducive for nurturing a Scaling Mindset.

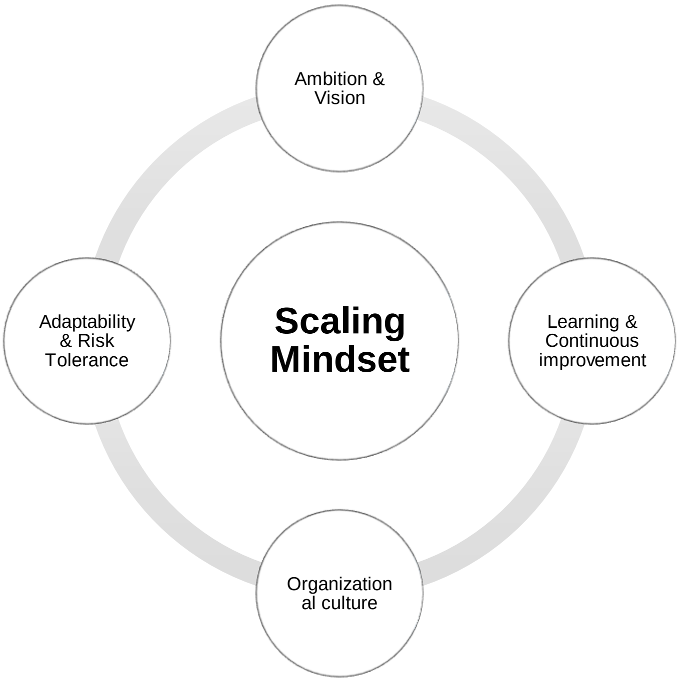


Figure 4.1: Pillars for fostering a Scaling Mindset

In this chapter we seek to increase understanding on the distinct characteristics and nuances between an entrepreneurial mindset and a scaling mindset, thus we have developed a comparative table that delineates how each mindset navigates the four foundational pillars of Ambition & Vision, Learning & Continuous Improvement, Adaptability & Risk Tolerance, and Organizational Culture. Table 4.1., presented below, serves as a detailed guide for understanding the subtle yet significant differences in how these mindsets operationalize each pillar. While there may be overlaps, the table clarifies unique aspects and approaches inherent to each mindset, offering a clearer conceptual demarcation.

Pillars	Entrepreneurial Mindset	Scaling Mindset	Observations
Ambition & Vision:	Centred around finding new opportunities and breakthrough innovations. Vision is often about creating something new and capturing initial market interest.	Concentrated on scaling operations, entering new markets, and multiplying success. Vision extends towards dominating markets or being best-in-class.	The ambition grows from launching to dominating market share.

Learning & Continuous Improvement	Focused on learning from each venture to refine ideas and business models. Encourages a mindset of pivoting and agility.	Emphasizes improving and standardizing best practices, often through data and metrics, to support scaling. Learning is geared towards sustainable growth and systematization.	Learning in an entrepreneurial context is about discovery, while in scaling it is about optimization.
Adaptability & Risk Tolerance	Emphasizes rapid iteration and comfort with high levels of uncertainty in the initial stages. Tends to take bold risks for market entry and innovation.	Focuses on adjusting strategies to sustain growth and manage risks at scale. Risk tolerance is calibrated for controlled expansion.	Both mindsets require adaptability, but the type and scale of risk-taking differ.
Organizational Culture	Values creativity, disruptive thinking, and a high tolerance for failure. The culture is often informal and fluid to accommodate changes.	Prioritizes processes, efficiency, and a stable culture that can be replicated across a growing organization. Incentivizes consistency and operational excellence.	Culture shifts from being innovation-driven to growth and replication-focused.

Table 4.1 – A comparison between entrepreneurial mindset and scaling mindset

Moreover, Table 4.2. below offers a practical and actionable framework for practitioners aiming to foster a scaling mindset within their organizations. This table not only breaks down the theoretical underpinnings of each foundational pillar but also provides concrete, real-world examples that illustrate how these pillars can be effectively operationalized. By grounding the discussion in tangible scenarios, Table 4.2. serves as a valuable resource for managers and entrepreneurs seeking to transition from an entrepreneurial to a scaling mindset. The examples provided are designed to be directly applicable, enabling practitioners to implement strategies that promote growth and sustainability within their firms. This actionable guidance bridges the gap between theory and practice, making the abstract concepts of scaling more accessible and applicable in day-to-day operations.

Pillar for fostering a Scaling Mindset	Interpretation	Example
Ambition & Vision:	At the heart of a scaling mindset lies a clear and ambitious vision. This pillar signifies the role of foresight in driving	*Elon Musk founded SpaceX with the vision of reducing space transportation costs to enable the colonization of Mars. This ambition goes beyond the*

	organizational growth. By setting bold objectives and maintaining a clear direction, organizations can align their strategies and resources efficiently. A strong vision, fuelled by ambition, serves as a beacon, illuminating the path ahead and instilling a sense of purpose throughout the scaling journey.	*general goal of space exploration; it's a vision of making humans a multi-planetary species. Every decision and innovation at SpaceX, from the development of the Falcon rockets to the Starship, revolves around this overarching vision.*
Learning & Continuous Improvement	Essential to navigating the dynamic landscape of growth is an organization's commitment to learning and relentless refinement. This pillar underscores the importance of adaptability and the continuous pursuit of excellence. By fostering a culture of feedback and iterative development, organizations can ensure they remain agile, relevant, and equipped to handle challenges that come with scaling.	*Amazon started as an online bookstore but didn't stop there. Through continuous learning and adaptability, it ventured into various sectors, from e-commerce and cloud computing to entertainment and AI (with Alexa). Their principle of being "Day 1" emphasizes staying agile, curious, and always ready to learn and innovate. Feedback loops from customers have always been central to Amazon's continuous improvement strategy.*
Adaptability & Risk Tolerance	Scaling invariably introduces new challenges and uncertainties. This pillar emphasizes the significance of adaptability—a willingness to adjust strategies and approaches in response to changing circumstances. Coupled with risk tolerance, adaptability ensures that organizations not only anticipate and prepare for potential disruptions but also seize emerging opportunities, even when they come with associated risks.	*Netflix - Originally a DVD rental-by-mail service, Netflix showcased adaptability by pivoting to online streaming in response to changing consumer preferences and technological advancements. Later, they took the risk of producing original content, which has now become a significant part of their brand identity. Throughout its history, Netflix has demonstrated an ability to adapt to industry changes and take calculated risks to stay ahead.*
Organizational Culture	Beyond individual mindsets, the collective ethos of an organization plays a pivotal role in its scaling endeavours. This pillar represents the shared values, beliefs, and practices that influence how an	*Airbnb's organizational culture is built around a sense of belonging and community. From the start, the company has emphasized the importance of trust between hosts and guests. They have designed their entire user experience around this, from the*

	organization's members interact and how decisions are made. A supportive organizational culture promotes collaboration, encourages innovation, and creates an environment where the scaling mindset can flourish.	*way profiles are created to the review system. Internally, Airbnb focuses on core values that foster a sense of belonging among employees, ensuring that they feel valued, heard, and part of a larger mission. Their commitment to culture is evident in initiatives such as their annual "Airbnb Open" events where hosts from around the world come together to share experiences, learn, and foster a sense of global community. This strong organizational culture has been pivotal in Airbnb's growth and in navigating various challenges over the years.*

Table 4.2 – Actionable interpretation of Pillars for fostering a Scaling Mindset

From our exposed framework and examples, the essence of cultivating a scaling mindset is underscored. Ireland et al (2003) elaborates on developing an entrepreneurial culture, that is characterized by the anticipation of novel ideas and creativity, the encouragement of risk-taking, a tolerant stance towards failure, the promotion of learning, the advocacy for product, process, and administrative innovations, and the perception of continuous change as a harbinger of opportunities. Moreover Tippman et al (2022) explains the enduring contradiction as a 'paradox of global scaling'. Not only the distinct demands for replication and entrepreneurship but also acknowledged their consistent contradictory nature. While replication propels the nutrition of the global business model, entrepreneurship catalyses modifications to seize new opportunities. A cornerstone for fostering this lies in a robust education and ongoing training regime to empower founders to adeptly recognize opportunities and devise effective scaling strategies. Metacognition, a process of "thinking about thinking" (Haynie et al. 2010) can be enhanced through training (Schmidt and Ford 2003). Mentorship, coaching and networks facilitates knowledge exchange and resource accessibility, amplifying the probability of recognizing and capitalizing on scaling opportunities. An organizational culture that champions continuous learning and collaborative ethos embeds scaling ambitions within operational frameworks, aligning organizations to sustainably harness scaling opportunities. As Jansen et al (2023) sets scaling internationally necessitates coordination and reciprocal adaptation across domains of the organization to ensure coordination, foster collaboration, and reduce conflicts.

4.4. Case studies linking Scaling Mindset and Organizational Success

While there is still limited empirical evidence of the correlation between scaling mindset and firm growth, we propose to explore recent longitudinal analyses and case studies, encompassing diverse industry sectors and geographical contexts, to better understand organizations embodying the principles of a scaling mindset consistently outperform their counterparts. This section should be considered purely elucidative and a potential avenue for further empirical research.

Case studies illustrating the impact of a Scaling mindset

A few illustrative case studies provide nuanced insights into the transformative power of a growth mindset on organizational scaling endeavours.

The metamorphic journey of Just-Eat (subsequently merged with Takeaway.com) serves as a canonical representation of the profound influence a growth-oriented scaling mindset wields in guiding platform businesses from nascent stages to expansive global operations. Drawing from the comprehensive longitudinal case analysis by Varga et al. (2023), this narrative delves into the intricate role of strategic cognition and actions undergirded by a scaling mindset, as manifested in the Top Management Team (TMT) of Just-Eat.

Founded in 2000 in Denmark, the trajectory of Just-Eat is emblematic of a growth mindset in action – one that emphasized being "faster, bolder, and smarter" than the competition (Bingham et al., 2007). Within the span of merely three years, such a growth philosophy spurred Just-Eat into penetrating 13 novel European territories, epitomized by a series of strategic acquisitions. This aggressive expansion strategy was further accentuated by their innovative zeal, marking them as the pioneers of the online takeaway concept. In consonance with their scaling mindset, Just-Eat's revenues experienced a meteoric rise, skyrocketing from €45 million to an impressive €1.5 billion in a decade.

A closer examination of Just-Eat's scaling endeavours, as highlighted by Varga et al. (2023), sheds light on the nuanced strategic cognitions of its TMT. During its nascent high-growth phase, the TMT orchestrated a portfolio of simple decision rules that prioritized the rapid cultivation of indirect network effects, thereby fuelling exponential user and value growth. The underpinning of these rules was a resolute commitment to scaling, vividly manifested through acquisitions and territorial expansions. Such strategies positioned Just-Eat as a dominant force in the food delivery landscape, exemplified by their £200 million acquisition of the UK competitor Hungryhouse, in 2016.

However, the scaling journey is seldom linear. As external pressures emerged, Just-Eat's TMT astutely revised their decision rules portfolio, pivoting towards leveraging data network effects to pivot from sheer growth to sustainable and profitable growth. This strategic recalibration underscored the adaptability essential to enduring scaling, illuminating how a TMT's scaling mindset intricately entwines with the micro foundations of scaling, such as decision rules and network effects.

Furthermore, the merger of Just-Eat with Takeaway.com in 2020 is a testament to the firm's adaptive scaling mindset. Rather than mere integration, the combined entity astutely maintained and optimized both brands for their respective markets, thus enabling swift market expansion under diverse brand umbrellas. Innovations like Scoober, their proprietary delivery service, further showcase Just-Eat's growth orientation, underscoring a forward-looking vision focused on long-term benefits over transient profitability.

To encapsulate, the longitudinal study of Just-Eat offers empirical testament to scholarly discourses that emphasize the pivotal role of a TMT's growth-oriented scaling mindset in navigating the intricate chasm between growth and scaling in platform businesses. The firm's growth trajectory, punctuated by its continual evolution in response to emerging challenges and opportunities, reinforces the profound influence of a scaling mindset on organizational success.

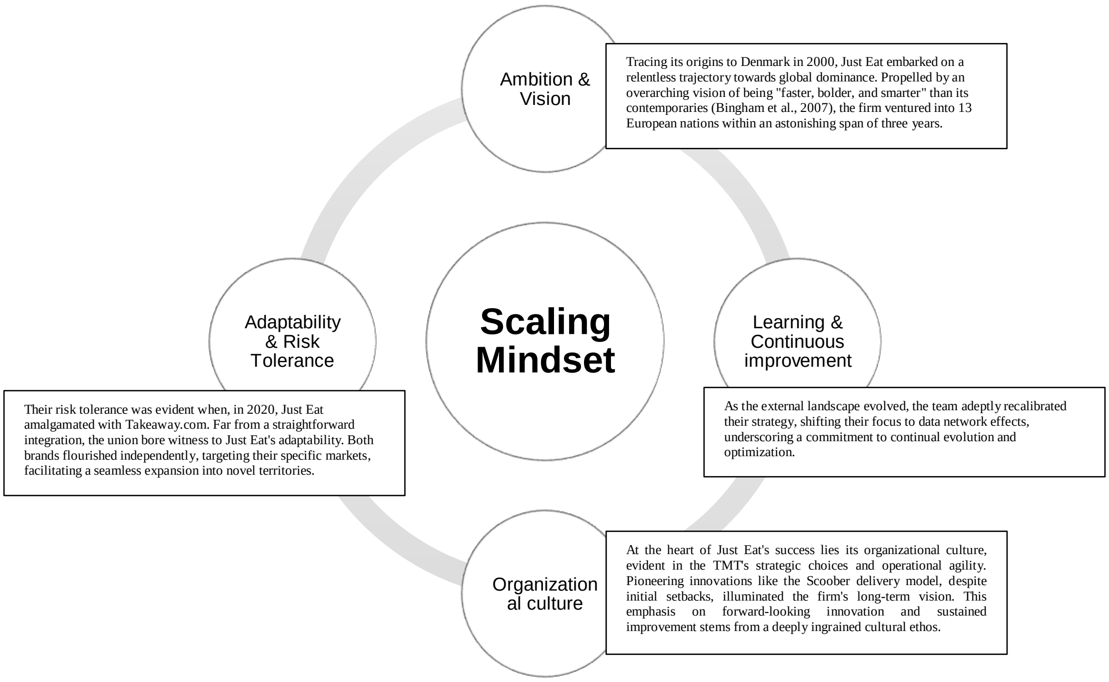


Figure 4.2: Pillars for fostering a Scaling Mindset applied on Just-Eat Case Study

Another salient case study recently published is that of Tencent. A revelatory longitudinal case study by Zeng, Yang, and Lee (2023) on the exponential growth of Tencent, a leading Chinese platform-based entrepreneurial firm (PBEF), offers salient insights into how a scaling mindset predicated on continuous learning and improvement propelled rapid scaling. Founded in 1998 as a social networking platform, Tencent exhibited a scaling mindset right from inception by relentlessly focusing on enhancing customer experience through iterative data-driven learning. As Tencent's founder and CEO Pony Ma noted, "We were constantly collecting data and feedback, and kept changing the features and functionalities of QQ [its messaging app]".

This learning orientation enabled Tencent to attract over 100 million users within a decade by adding complementary products and mining user data to drive network effects. When the ecosystem expanded to mobile, Tencent opened its platform to external developers and adopted a partnership mindset. Continuous learning from ecosystem resources powered the morphing of offerings like WeChat which achieved 1 billion users by 2018. According to the study, Tencent's scaling was fuelled by a "dialectic tuning" logic which involved dynamic interplay with ecosystem partners to orchestrate internal and external resources. This open and iterative approach reflects a growth mindset geared toward co-creating value with collaborators.
Tencent demonstrates how cultivating a learning-focused growth mindset oriented toward improving customer experience in collaboration with partners can unlock exponential scaling for PBEFs. Its emphasis on skill development, innovation, and ecosystem relationships underscores the potency of a scaling mentality in propelling organizational expansion in digital environments. The company's leadership not only recognized emerging sustainable trends ahead of the curve but also demonstrated the tenacity and adaptability required to capitalize on these trends. Tencent's remarkable ascent is an example of how a scaling mindset propels an organization to unprecedented heights. Beginning as a modest messaging service, Tencent swiftly embraced 'Ambition & Vision', charting a course to become a multifaceted powerhouse within the digital ecosystem, venturing into realms as varied as social media, gaming, and finance. The pillar of 'Learning & Continuous Improvement' is reflected in Tencent's voracious appetite for innovation and strategic partnerships, adapting to technological advancements and user trends to retain its market dominance. It's 'Adaptability

& Risk Tolerance' is manifest in its strategic diversification, allowing Tencent to navigate regulatory changes and market volatility with agile shifts in business models and international expansion strategies. Lastly, Tencent's 'Organizational Culture' - one that prizes agility, innovation, and an entrepreneurial spirit - has been instrumental in fostering an environment where calculated risks and creative thinking are not just encouraged but are the norm. Together, these pillars have not only underscored Tencent's scaling mindset but have also acted as an enabler of its growth, sustaining its evolution from a local player to a global titan.

These case studies, placing entrepreneurial storytelling centre stage (Brattström and Wennberg 2022), help spotlight the profound impact that a scaling mindset, when operationalized effectively, can wield on the scaling trajectory of firms, irrespective of their initial size or industry domain.

4.5. Challenges in Cultivating a Scaling Mindset

The trajectory of organizational growth, while loaded with opportunities, is fraught with intricate challenges that can jeopardise the realization of a scaling mindset. Navigating these challenges necessitates a profound understanding of their intricacies and implications. When examining the scaling mindset, it's crucial to differentiate between the impediments to adopting this mindset and the potential negative consequences that may emerge once it's established. The barriers to nurturing a scaling mindset often stem from entrenched organizational routines, resistance to change, or a lack of resources that hampers the ability to scale. Such obstacles can prevent individuals and organizations from shifting to a growth-oriented perspective necessary for scaling (McDonald and Eisenhardt 2020). On the other hand, the downsides of a scaling mindset, once adopted, might include a propensity to overemphasize standardization at the cost of innovation, a possible rigidity in response to market changes, or a dilution of core values in the quest for expansion (Piaskowska, Tippmann, and Monaghan 2021b). This section delineates some of the most salient impediments encountered in the cultivation of a scaling mindset.

Influence of Institutional Factors

Institutional factors, as highlighted by North (1990), underscore the significance of both formal constraints (like regulations, laws, and rules) and informal constraints (such as norms, culture, and self-imposed codes of conduct) in shaping organizational and individual behaviours. When considering the cultivation of a scaling mindset, the overarching institutional framework becomes indispensable.

Formal Institutional Factors are typified by explicit rules, regulations, and structures that can either bolster or hinder the proliferation of a scaling mindset. For instance, stringent regulatory environments might stifle innovation and agility, two cornerstones of a scaling mindset. Conversely, regions with supportive legal frameworks for start-ups and growing businesses might facilitate a quicker adoption of the scaling mindset.

While formal institutions hold significance, preceding analyses suggest that informal factors often engender more favourable synergies with the antecedents of leadership behaviour compared to formal factors (Urbano, Felix, and Aparicio 2021). Informal Factors delve deeper into the intangible realms of norms, values, and culture. Informal factors might encompass societal attitudes towards failure, the cultural emphasis on innovation, or even the local business ethos. For example, cultures that celebrate entrepreneurial risk-taking might have an easier time instilling a scaling mindset compared to those that are more risk averse. Moreover, organizational culture, leadership values, and inter-team dynamics are paramount in nurturing or stifling the scaling mindset. If the prevailing culture is one of complacency or resistance to change, cultivating a scaling mindset becomes a Herculean task. The presence of specific leadership styles, namely transformational or charismatic, harmonizes with cultural values pertinent to association (i.e., social capital) and risk management (i.e., resilience). Moreover Sarasvathy (2001) underscores an entrepreneur's apprehension of their environment, coupled with motivational determinants such as the aspiration for significant financial gain, the endeavour to establish a venerable legacy like a lasting institution, or, more prevalently, the pursuit of an intriguing idea deemed worthy of exploration.

The interplay between formal and informal institutional factors can produce a mosaic of challenges and opportunities for organizations aspiring to cultivate a scaling mindset. Haynie et al. (2010) findings suggest that contextual influences are sometimes as – if not more – important in understanding how entrepreneurs process their environments. It's imperative to recognize and navigate these intricacies to truly harness the potential of scaling.

As organizations traverse the path of exponential growth, a keen awareness of the institutional landscape, both formal and informal, becomes vital (Felix, Aparicio, and Urbano 2019). By understanding and leveraging these factors, businesses can better position themselves to cultivate and sustain a scaling mindset, driving them towards unparalleled growth and success.

Resistance to change and fear of failure

Organizations, being intricate amalgamations of human interactions, often grapple with the deep-seated human propensity towards status quo bias. Resistance to change emerges as a formidable barrier, where the known comforts of present practices eclipse the latent opportunities in transformative actions. This resistance is further compounded by an omnipresent fear of failure. The looming shadow of potential setbacks can stifle innovation and deter enterprises from pursuing novel, albeit risky, ventures. As March (1991) articulates, the delicate balance between exploration and exploitation becomes skewed, often erring on the side of caution and eschewing potentially disruptive innovations. Conversely, a fully entrenched scaling mindset is not devoid of potential drawbacks. The relentless pursuit inherent to such a mindset may, paradoxically, engender its own set of challenges. While it drives organizations towards exponential growth, it may also inadvertently lead to overextension, where the scale of operations could surpass the firm's capacity to manage effectively. It could breed overconfidence, where the appetite for seizing every perceivable opportunity eclipses the pragmatic assessment of capabilities and risks. Hence, the scaling mindset, while a catalyst for expansive growth, must be tempered with strategic prudence to mitigate the risks of over-scaling and the dilution of organizational focus and resources.

Overconfidence and illusion of control

While ambition is a linchpin in scaling endeavours, unchecked confidence can metamorphose into hubris, a malaise detrimental to organizational growth. Overconfidence can engender a distorted perception of capabilities, leading firms to overextend themselves, neglecting potential pitfalls. Busenitz and Barney (1997) findings indicates that entrepreneurs do behave differently than do managers in large organizations and may suffer from overconfidence, that is overestimating the probability of being right. This illusion of control, where leaders erroneously believe they can steer all facets of the enterprise without falter, can result in strategic myopia, with organizations overlooking emergent market dynamics and underestimating competitors. In this context, maintaining high standards of corporate governance is of utmost importance.

Balancing growth ambition with realistic expectations and resource constraints

The siren call of rapid expansion can sometimes drown the pragmatic considerations of resource constraints and realistic market evaluations. Growth, when pursued with unbridled enthusiasm devoid of strategic foresight, can lead to organizational overextension, where aspirations surpass the tangible capacities of the firm. Such a misalignment can culminate in strained resources, operational inefficiencies, and eventual stagnation.

Within this complexity, the notion of the global scaling paradox provides invaluable insights into the intricate cognitive abilities requisite for a robust scaling mindset (Tippmann, Monaghan, and Reuber 2022). Scaling firms are ensnared in contradictory demands: the imperative to replicate for efficiency juxtaposed against the need to remain entrepreneurial for enduring competitiveness. To adeptly navigate this conundrum, firms must harness paradoxical thinking, forging synergies between replication and innovation. This entails a strategic acumen to discern replicable innovations that can galvanize exponential growth, echoing the essence of a scaling mindset. Further underscoring the challenge, such scaling endeavours mandate unyielding motivation and proactive inputs from the workforce across all echelons.

In essence, the cultivation of a scaling mindset, underpinned by the complexities of the global scaling paradox, is both a catalyst and a challenge for organizational growth. Recognizing and strategically circumventing these intricacies is paramount for firms aspiring to scale sustainably, ensuring that their growth trajectory remains both robust and resilient.

Perceived Trade-offs Between Scale and Quality in Hybrid Organizations

A pronounced challenge in nurturing a scaling mindset is observed among founders of hybrid and not-for-profit entities. Rooted in Schumacher's (2011) principle of 'small is beautiful', these entrepreneurs often harbour reservations about expansive scaling. Their apprehensions stem from a belief that scaling could potentially dilute the quality of their offerings. As these organizations grow, the introduction of structured organizational mechanisms and bureaucracy might inadvertently diminish the level of personal attention and commitment that is earmarked for each project and beneficiary (Kayser and Budinich 2015). The balancing act between scaling and quality preservation presents a considerable challenge, often deterring the full embrace of a scaling mindset within these organizations.

In Figure 3, we provide a comprehensive visual synthesis of these challenges, illustrating how they interconnect across different stages of scaling, thereby offering a strategic roadmap for entrepreneurs and managers to anticipate, understand, and effectively navigate these critical hurdles.

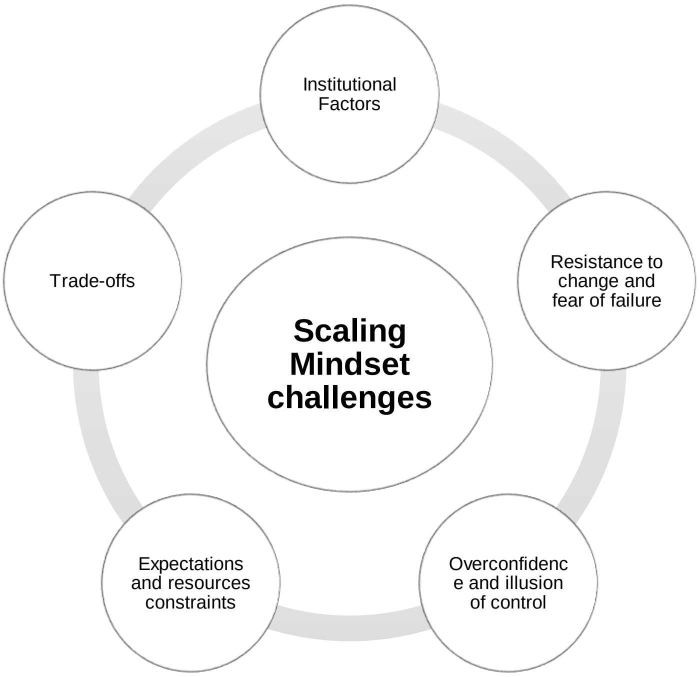


Figure 4.3: Challenges for fostering a Scaling Mindset

4.6. Limitations and Future Research Directions

The purpose of this chapter was to extend our comprehension on ‘scaling mindset’, so we started with an overview of related research. Our exploration is by no means exhaustive, and much works remains to be done in terms of conceptualising ‘scaling mindset’. Notably, its conceptualization is still in its nascent stages. While we have proposed a framework to understand this mindset, it is important to recognize that our approach is preliminary and may evolve as more empirical research accumulates. As the scaling up process is not linear, our model suggests a stepwise progression, but in reality, the stages of scaling up can occur concurrently, overlap, or even reverse, depending on various internal and external factors affecting the high-growth organization.

Moreover, this chapter has not delved deeply into the temporal dimensions of the scaling up mindset. The speed at which organizations scale, the timing of scaling efforts in relation to market and industry life cycles, and the duration for which a scaling up mindset is maintained are critical aspects that warrant further investigation. Future research could enrich our understanding by exploring these temporal factors and how they interact with the scalability of businesses. Our exploration of the scaling mindset, while foundational, has only scratched the surface of its multifaceted nature. Delving into this intricate domain, a plethora of uncharted avenues beckon scholarly inquiry.

While scholarly endeavours have commenced bridging the knowledge chasm concerning founder roles at the inception and subsequent growth phases of a firm, the exploration of founder role evolution in the context of scaling remains scarce (Van Lancker et al. 2023). Then operationalizing the scaling mindset is paramount. As this concept becomes increasingly pivotal in organizational discourses, a need to craft and refine robust measures for its operationalization emerges. A promising criterion may involve tracking cognitive evolution across a series of temporal checkpoints. Such endeavours will undoubtedly bridge the ongoing dialogue between practitioners, policymakers, and academics, ensuring a unified understanding and application.

However, it's vital to acknowledge that the scaling mindset, much like scaling itself, is profoundly context sensitive. Different institutional factors, industries, organizational structures, and even geographic locations may infuse nuanced interpretations and applications of this mindset (DeSantola and Gulati 2017; Urbano, Aparicio, and Audretsch 2019a; Tippmann et al. 2023b). This brings to the fore the pressing need to explore the scaling mindset across diverse cultural and industry contexts. How does a scaling mindset manifest in a tech start-up in Silicon Valley compared to a manufacturing firm in the bustling industrial zones of Guangzhou? The interplay of cultural, regional, and industry-specific factors and their influence on the scaling mindset remains a fertile ground for exploration.

Furthermore, the ripple effects of a well-entrenched scaling mindset on various organizational facets demand attention. An avenue of immense potential is examining the influence of the scaling mindset on other integral organizational elements, such as innovation, team dynamics, operational efficiency, and even leadership paradigms. Does the scaling mindset catalyse or inhibit certain processes? Is there a tangible correlation between a pronounced scaling mindset and enhanced team performance or accelerated innovation cycles?

Furthermore, an emerging perspective conceptualizes serendipity (Busch 2022; M. P. E. Cunha, Clegg, and Mendonça 2010) as a cultivatable organizational capability that is aligned with flexibility and improvisation. As high-growth firms scale up rapidly under uncertainty (Kor, McGrath, and MacMillan 2001), they pose an interesting context for unlocking value in the unexpected; thus, a better understanding of serendipity in this context and in particular to what extent it should prevail in a scaling mindset is required.

The dynamism inherent in the scaling mindset also necessitates a focus on sustainability (Goworek et al. 2018). Longitudinal studies can serve as an effective tool in this quest, shedding light on sustainability and scaling mindset over extended periods. Further, the link with metacognition is suited to qualitative research, such as in-depth interviews. Is it a transient phenomenon, or can organizations truly internalize and sustain it over prolonged timelines?

Furthermore, with the rapid proliferation of digital technologies and the surge in artificial intelligence (AI), the relationship between digitalization and the scaling mindset is ripe for investigation. To what extent AI will impact the scaling mindset of high-growth firms? Are contemporary organizations leveraging digital tools to refine and bolster their scaling mindset? Or is the onslaught of technology presenting cognitive challenges that impede the cultivation of this mindset? Finally, extending our gaze beyond conventional profit-centric businesses, how does the scaling mindset unfold in alternative settings, such as hybrid or social enterprises (Doherty, Haugh, and Lyon 2014)? These contexts, which often harmonize altruistic pursuits with growth imperatives, present a unique backdrop against which the intricacies of the scaling mindset can be studied.

The concept of the scaling mindset stands at the crossroads of numerous academic and practical intersections. While we have ventured some distance into this realm, vast expanses await exploration.

Practical implications

The concept of a scaling mindset extends beyond theoretical discussions within the realm of strategic entrepreneurship and assumes a critical, practical role for those involved in the orchestration of firm growth. For founders and organizational leaders, the scaling mindset acts as a compass guiding the strategic direction of a venture, necessitating an environment that nurtures flexibility, encourages creative risk-taking, and promotes continuous learning. The interplay of these elements is paramount in maintaining an innovative edge and ensuring the quality of offerings amidst expansion efforts. As the firms grow bigger, the scaling mindset also becomes integral for team members, who are on the front lines of operationalizing high-growth strategies. Individuals across all levels of an organization are called upon to embody and enact principles that align with the firm's scaling ambitions. This involves engaging in adaptive behaviour, proactive problem-solving, and the strategic allocation of resources - actions that collectively contribute to the firm's scaling endeavours. Meanwhile, investors, policymakers, and other stakeholders, by recognizing the value of fostering scaling mindsets, can better assess and fuel the growth potential and resilience of an organization. The presence of a scaling mindset thus becomes a bellwether for a firm's capacity to navigate the complexities of scaling, offering a signal for both strategic alignment and investment potential. It is through these practical applications that the concept of a scaling mindset truly comes to life, marking it as an indispensable element in the pursuit of sustainable, scalable business growth.

4.7. Conclusion

In this chapter, our exploration of scaling mindset serves as a foundational step in delineating its importance, intricacies, and the challenges it encompasses within the broader scaling up topic. By putting forth detailed characteristics with thoughtful examples, we aspire to pave the way for more rigorous research on this pivotal element of scaling up. The essence of our discourse is not just to compartmentalize the 'scaling mindset' as another academic construct but to underscore its paramount significance in shaping high growth organizational trajectories in an increasingly dynamic and volatile environment.

Drawing from various theoretical underpinnings and empirical findings, our primary objective has been to illuminate the intricate nexus between ambition, vision, learning, continuous improvement, adaptability, risk tolerance and organizational culture. Scaling, as articulated in previous sections, is not merely an operational objective but a nuanced interplay of cognitive orientations, strategic imperatives, and environmental contingencies (Palmié et al. 2023; Autio et al. 2021). The introduction of our 'Pillars for Fostering a Scaling Mindset' framework represents a seminal contribution to the discourse on scaling. This framework provides a cohesive structure, capturing the intricate balance of cognitive orientations and strategic imperatives necessary for sustainable scaling. Moreover, central to our discussion is the interplay between these pillars and the broader institutional landscape. Recognizing that both formal and informal institutional factors can profoundly shape an organization's scaling trajectory, our framework underscores the need for businesses to align their scaling ambitions with the prevailing institutional norms and dynamics. In doing so, organizations can more effectively navigate the complexities of scaling, ensuring that their growth efforts are both strategically sound and contextually relevant, capturing the benefits of uncertainty (Kor, McGrath, and MacMillan 2001). The institutional frameworks, both formal and informal, further compound these complexities, underscoring the necessity for firms to cultivate a scaling mindset that is attuned to these realities. Further investigation on institutional factors will be made in chapter 6.

The scaling mindset, as this chapter elucidates, is not just about achieving exponential growth but about understanding and navigating the inherent paradoxes of scaling (Tippmann, Monaghan, and Reuber 2022) – balancing ambition, learning, organizational culture and adaptability. We differentiated from entrepreneurial mindset aligned with the insights provided by Van Lancker et al. (2023) into how founder role changes are both similar and different in (pre-)scaling firms versus professionalizing and growing firms. By embedding this understanding, organizations can better connect the power of scaling mindset to deliver persistent high-growth and achieve sustainable competitive advantage.

In essence, this chapter aims to set the stage for further empirical, theoretical, and practitioner-oriented inquiries into the scaling mindset. The journey of understanding the scaling mindset is just beginning.

CHAPTER 5

Scaling Up by Chance and Choice:

The Impact of Serendipity and Improvisation [4]

5.1. INTRODUCTION

As stated in previous chapters scaling involves the dual capability of preparing and reconfiguring internal resources and capabilities, alongside efforts to enhance efficiency and achieve economies of scale (Coviello, 2019). The ability to leverage unplanned and unexpected opportunities, becomes particularly relevant as it can significantly enhance a firm's adaptability and scalability in such dynamic environments. Following Birch's foundational study (1981; 1987), a considerable focus has emerged in relation to the attributes of HGFs within both the academic literature and policy discourse. Scholars 'agree that HGFs can be defined as firms growing at or above a particular pace over a specific number of years' (Demir et al., 2017; Coad et al., 2014). As these firms rapidly scale up operations, they face major challenges in managing organizational growth, seizing new opportunities, and adapting to changing environments (DeSantola and Gulati 2017). Prior research highlights strategic agility, dynamic capabilities, and absorptive capacity as the key enablers of effective scaling (Zhou and Wu 2009; Zott and Amit 2008). HGF face complexities in scaling, and in such dynamic context, understanding the *how* is crucial (Zahra and Wright 2011; S. (Ronnie) Lee 2022). Serendipity, on the other hand, the phenomenon of making surprising and valuable discoveries, has been widely acknowledged as essential to the success of various individuals and organizations, allowing for the development of unexpected new products, insights, and market spaces (Busch 2022; M. P. E. Cunha, Clegg, and Mendonça 2010). Serendipity is traditionally viewed as

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[4] This chapter was presented in June 2024 at the II European Scaleup Institute Conference – Luiss Business School – Rome, Italy. The author is thankful for the observations and comments from both anonymous reviewers as well as the conferences' attendees.

adversative to strategic management, as it represents a lack of control and deviation from planning (Pina E Cunha, Vieira Da Cunha, and Kamoche 1999). Nonetheless, Busch and Barkema (2022) conceptualized serendipity as an organizational capability that can be cultivated. This aligns with organic rather than mechanistic views of organizing, where flexibility, improvisation, and doubt take precedence over rigid routines and certainty (Clegg et al. 2016).

However, relatively little is known about their intersection; that is, what is the role of serendipity – chance discoveries and unexpected events – in the scaling process of high-growth firms? How do HGF make sense of their luck? Our study addresses this gap in literature. As high-growth firms operate under greater uncertainty and ambiguity (Gioia and Chittipeddi 1991), they can't simply follow the initial plan; do they build an engine of serendipity: "search leading to unintended discovery" (Dew 2009)? By embracing errors, anomalies, and peripheral vision, high-growth firms may capitalize on chance events for strategic pivots and enter into new scaling episodes (Jansen et al. 2023). The process through which high-growth firms actively cultivate but do not control serendipity remains underexplored. How do scaling entrepreneurs unlock new scaling episodes to consistently achieve high growth in the face of the unanticipated and the unplannable? What strategies and leadership approaches enable firms to capitalize on chance events for growth? Examining these research questions can provide novel theoretical insights into serendipity and improvisation as strategic scaling capabilities. Moreover, the phenomena of improvisation and serendipity have been researched within their own silos, seldom intersecting within the academic discourse. This study seeks to bridge this gap, proposing that the interplay between these two processes offers a rich vein of insight for high-growth firms. By examining the conjunction of improvisational adaptability and the fortuitous gains of serendipity, we aim to provide a nuanced understanding of how these forces can coalesce to drive new scaling episodes and innovative capacity of HGFs. This chapter argues that a synergistic approach to examining both improvisation and serendipity unveils a more holistic view of the strategic agility necessary for successful scaling in the face of uncertainty and rapid change. By examining how leadership within high-growth firms orchestrates these processes to harness unexpected opportunities, we aim to shed light on the multifaceted dynamics of improvisation and its critical role in fostering organizational learning and flexibility. This approach not only challenges conventional narratives around firm scalability but also opens new avenues for understanding the nuanced interplay between structured strategy and the creative spontaneity essential for navigating the complexities of rapid growth contributing to the emerging literature on scaling organizations (Van Lancker et al. 2023).

Empirically, we employ a qualitative methodology drawing on semi-structured interviews, exploring core capabilities that not only accommodate but also harness serendipity and improvisation. Our study provides an emergent theoretical framework that elucidates the interplay of serendipity and improvisation in high-growth firms. This framework responds to the recent call by Jansen et al. (2023) for inductive research to uncover the essential capabilities that facilitate various scaling modalities. Furthermore, our findings translate into actionable insights for the founders and managers steering HGFs, equipping them with strategies to foster these capabilities and effectively leverage the unpredictable yet opportune moments that punctuate the scaling journey.

The remainder of this chapter is organized as follows. In the next section, we provide a theoretical background, followed by an explanation of the study's methodology (research setting, sample and data collection, and data analysis). We then describe the main findings of this study and propose an emergent grounded model that encapsulates the intricate dynamics of scaling, spotlighting the pivotal roles of improvisation and serendipity within a landscape full of uncertainty. Finally, we present our propositions in relation to existing literature and suggest future research directions.

5.2. THEORETICAL BACKGROUND

Research on high-growth firms (HGFs) is rapidly growing drawing on both management and entrepreneurship studies (Delmar, Davidsson, and Gartner 2003). High-growth firms deal with a sense of turmoil, chaos, and great inefficiencies while growing (Piaskowska, Tippmann, and Monaghan 2021b). In the dynamic landscape of high-growth firms, the capacity for rapid adaptation emerges as a cornerstone of unlocking scaling episodes.

Recently Kim and Lee (2024) posit that after start-ups identify a viable core business idea through experimentation, they enter a phase of scaling to capitalize on this idea. This scaling process, as detailed by Kazanjian (1988) and Eisenmann and Wagonfeld (2012), involves a shift in focus to the acquisition of resources and expansion of the customer base to foster internal and external growth. Penrose (1959) characterizes this growth as a result of the interaction between a firm's resources and market opportunities. However, this structured view may underestimate the role of improvisation and serendipity during the scaling phase. While there is an assumption of a linear progression from product validation to scaling, the reality is often less predictable. The entrepreneurial process may be nonlinear, with firms needing to adapt and improvise in response to unforeseen challenges and opportunities that arise as they scale. Rather than a smooth transition, scaling can be a complex (Jansen et al. 2023; Tippmann, Monaghan, and Reuber 2022), iterative process where learning and adaptation occur continuously, and unexpected serendipitous events can significantly influence growth trajectories and outcomes. In science, many of the most important discoveries have serendipitous origins, in contrast to their published step-by-step write-ups, such as penicillin, heparin and X-rays (Fink et al. 2017). Therefore, while strategic planning is important, an overemphasis on a linear process may neglect the emergent, adaptive behaviours that are essential during scaling.

Related to scaling it is important to acknowledge the concept of *scalability*, as delineated in the contemporary research on high-growth firms (Giustiziero et al. 2023; Somaya and You 2024) - characterized by the potential to exponentially increase value creation relative to the resources employed. This capacity, particularly notable in digital firms exploiting scale economies and network effects, often omits the crucial dynamics of unpredictability - those unexpected twists and serendipitous occurrences that punctuate the complex and dynamic market landscape, demanding strategic improvisation and adaptability from high-growth firms. Improvisation can be defined as a strategic synthesis of planning and execution, a process that infuses extemporaneity, novelty, and intentionality into organizational actions (M. P. E. Cunha and Clegg 2019). This deliberate fusion of design and performance enables HGFs to construct and enact new organizational productions that are not mere reactions to change but are planned innovations in the face of uncertainty. Improvisational actions, while originating from some existing action pattern or plan, diverge to create something novel—a key trait that differentiates improvisation from random, unplanned actions. In the context of scaling, improvisation is particularly valuable, allowing HGFs to blend forethought with agility to navigate and leverage the unpredictable nature of rapid growth. In addition to improvisation, the concept of serendipitous activities also plays a crucial role in scaling processes. Drawing on Busch's (2024) conceptualization of the 'propensity for serendipity,' we define these activities through a multi-dimensional lens, consisting of four core components: (a) encountering unexpected moments, where firms experience unforeseen events; (b) engaging in meaning-making, where these moments are interpreted and connections are drawn; (c) acting on such moments, where firms take advantage of these insights; and (d) realizing value, where the firm materializes benefits from these unexpected opportunities. By developing both improvisational and serendipitous capabilities, HGFs enhance their scalability by responding proactively to uncertainty, thereby converting challenges into growth opportunities..

The intricate dance between serendipity and improvisation serves as a catalyst for the dynamic evolution of high-growth firms, forging pathways that are less about predetermined strategy and more about agile responsiveness to unanticipated opportunities. Expanding on a nuanced understanding that serendipity transcends mere chance (Busch 2022; Kamoche, Cunha, and Cunha 2003; Pina E Cunha, Vieira Da Cunha, and Kamoche 1999), emerging through a confluence of sagacity and action—a conceptual duet that also encapsulates improvisation. HGFs often thrive within the spaces of planned action and serendipitous discovery, leveraging both to foster adaptability and expand their addressable market. As these firms navigate their rapid expansion, the ability to identify and exploit the affordances of serendipity while engaging in bricolage-driven improvisation becomes a strategic imperative. This duality not only redefines scalability but also repositions the roles of management and leadership, advocating for a paradigm where CEOs, teams, and investors harness serendipity and improvisation as vital competencies for scaling success. The unpredictable nature of scaling in such dynamic environments necessitates an embrace of 'negative capabilities' - a concept recently proposed by Cunha and Berti (2023) that poses 'Improvisation and serendipity as different or even opposite but that may also be, paradoxically, complementary'. This perspective shifts the focus from attempting to eliminate uncertainty to leveraging it as an intrinsic element of organizational life. Serendipity and improvisation epitomize these capabilities, as they require a predisposition for surprise and the capacity for decisive action in its wake. Rather than evading the unpredictable, modern organizations must seek it, creating conditions where serendipity is not merely a fortunate anomaly, but a strategic advantage exploited through deliberate improvisation. This reorientation acknowledges the impossibility of absolute control and positions HGFs to capitalize on the inherent unpredictability of their growth trajectories.

The propensity for HGFs to improvise, driven by necessity or strategic intent, can lead to what Wiedner, Croft, and McGivern (2020) term 'improvised innovations', which emerge from creative experiments with available resources. Such improvisational behaviour not only addresses immediate needs but also creates opportunities for serendipitous discoveries, where resource limitations become the breeding ground for unexpected solutions and novel approaches to scaling and growth.

The synthesis of insights from the literatures on scaling up, agile responsiveness, and serendipity underscores the importance of focusing on the often-overlooked 'negative capabilities' and actions employed by key managers in high-growth firms. This necessitates a more cohesive examination of the processes through which these leaders steer their scale-ups toward agility and adaptability, capitalizing on unforeseen opportunities as strategic resources to forge competitive advantage, particularly in environments characterized by high unpredictability and complexity. Given the limited research explicating these micro-foundations, our study has embraced an inductive, interpretative approach, amplifying the voices of those directly immersed in the experiences of scaling. Leveraging the insights of our knowledgeable informants, we probe our research question: How do scaling entrepreneurs unlock new scaling episodes to consistently achieve high growth in the face of the unanticipated and the unplannable?

5.3. Methodology

Research setting

We followed a qualitative method, which is especially effective in addressing ‘how’ and ‘why’ in unexplored or under-explored research areas. In formulating the methodological foundation of this study, we employed the systematic Gioia methodology (Gioia, Corley, and Hamilton 2013; Magnani and Gioia 2023), which is particularly adept at generating insights into phenomena not adequately explained by existing theory. We adopt an inductive approach to empirically examine our research questions as it is the most suitable for our investigation into the role of improvisation and serendipity in high-growth firms—a subject that remains largely uncharted in extant research. Following the principles of the Gioia methodology, we ensured a rigorous data collection and analysis process that permitted the emergence of rich, theory-building insights.

To enhance the study's analytical depth and validity, we engaged in a multi-case examination, scrutinizing instances within fourteen distinct high-growth firms that exemplified significant improvisational and serendipitous activities influencing their scalability. These firms were carefully selected based on their reputations for successfully navigating the challenges of rapid growth and their openness to innovative and flexible business practices. This selection enabled us to observe and analyse the nuanced interplay between structured strategic planning and the dynamic, often spontaneous, decision-making processes that characterize successful high-growth trajectories.

Sample and Data Collection

The study setting comprises fourteen high-growth firms, defined as independent private companies that have experienced over 20% annual growth in employees or turnover for at least three years (OECD, 2007). We limited our research to European countries aiming to reduce non-relevant contextual variation and thus help us to focus on the relationships between the constructs in the selected teams (Nag and Gioia 2012). We employ purposeful sampling to identify information-rich cases that are likely to reveal insights into the phenomenon of interest (Patton 2005).

The primary data source is in-depth semi-structured interviews with key informants of high-growth firms including founders and top managers (C-level). We posit that founders and top management teams, as "knowledgeable agents," proactively craft their organizational environments, equipped with a lucid comprehension of their goals and the capacity to express their cognitive and strategic orientations (Gioia, Corley, and Hamilton 2013). We developed an interview protocol shared in Appendix 1, to elicit perspectives on the roles of flexibility, improvisation, peripheral vision, errors, and unexpected events in a firm's high-growth journey. Interview questions also probe founders' leadership approaches and strategies for capitalizing on chance occurrences.

Our empirical investigation entailed conducting eighteen in-depth interviews across fourteen high-growth firms, capturing a diverse array of experiences and insights from various managerial echelons. Each interview, ranging from half an hour to an hour and a half, was rigorously recorded and transcribed *verbatim*, culminating in over 636 pages of rich, qualitative data. In Table 1 we outline the specifics of the interviews, including participant details and company key characteristics. The sample of the interviewed HGFs have an average age of 9 years old and all of them are younger than thirty years old aligned with the study European Scaleup Monitor (2023) in which 91% of the HGFs have the same profile.

Table 5.1 - *Summary of interviewed participants and their companies*

#	Interview	Company	Avg 3y Growth Rate	Founding date	Money raised ($)	# employees	Size	Sector
1 AA	Head of Growth	Rows	60%	2016	25	48	Small	AI Deeptech
2 AB	CEO & Co-Founder	Rows	60%	2016	25	48	Small	AI Deeptech
3 BA	Co-Founder	360Hyper	+100%	2020	1.1	33	Small	Online Retail

4 CA	Co-Founder & CEO	Offcoustic	50%	2020	0.75	17	Small	Industrial
5 DA	Co-Founder & CEO	Aptoide	55%	2011	32.4	95	Medium	Software
6 EA	Co-Founder & CEO	Boost	30%	2008	N/A	124	Medium	Tourism Services
7 EB	Co-Founder & COO	Boost	30%	2008	N/A	124	Medium	Tourism Services
8 FA	Co-Founder	Inlife Housing	78%	2019	N/A	20	Small	Proptech & real estate
9 FB	CTO	Inlife Housing	78%	2019	N/A	20	Small	Proptech & real estate
10 GA	Co-Founder & CEO	Code for All	50%	2013	N/A	98	Medium	EdTech
11 GB	Co-Founder & CFO	Code for All	50%	2013	N/A	98	Medium	EdTech
12 HA	Co-Founder & CEO	BusUp	75%	2016	15	76	Medium	Mobility
13 IA	Co-Founder	Worldcoin	+100%	2019	250	256	Large	Blockchain Identity software
14 JA	Co-Founder & CEO	Feels Like Home	+50%	2012	N/A	140	Medium	Hospitality & Tourism
15 KA	Co-Founder & CEO	Powerdot	+100%	2018	266	34	Small	Mobility
16 LA	Co-Founder & CEO	KlimtArt House	30%	2021	N/A	14	Small	Real Estate
17 MA	Co-Founder & CEO	Unbabel	40%	2013	106	349	Large	Software
18 NA	Co-Founder & CTO	The Loop Co.	40%	2016	12	102	Medium	Software

	anonymized			Data from Dealroom	Data from Crunchbase	Data from Linkedin	<50; <250; >250	

Of the fourteen high-growth firms eight of them provide digital services, and nine have raised venture capital with an average of 87 million euros and operate in more than four countries. In terms of size, six firms are considered small (less than 50 employees), six are medium (between 50 to 250 employees) and two are large (more than 250 employees). Table 5.2. provides additional details.

Table 5.2. – List of Case studies

Company	**HGF Typology** Justin et al. (2023)	**Avg 3y Growth Rate**	**Founding date**	**Money raised ($)**	**# employees**	**Size**	**Sector**
Rows	Gazelle	60%	2016	25	48	Small	AI Deeptech
360Hyper	Gazelle	+100%	2020	1.1	33	Small	Online Retail
Offcoustic	Gazelle	50%	2020	0.75	17	Small	Industrial
Aptoide	Super Scaler	55%	2011	32.4	95	Medium	Software
Bt	Mature HGF	30%	2008	N/A	124	Medium	Tourism Services
Inlife Housing	ScaleUp	78%	2019	N/A	20	Small	Proptech & real estate
Code for All	Super Scaler	50%	2013	N/A	98	Medium	EdTech
BusUp	ScaleUp	75%	2016	15	76	Medium	Mobility
Worldcoin	ScaleUp	+100%	2019	250	256	Large	Blockchain Identity software

Feels Like Home	Mature HGF	+50%	2012	N/A	140	Medium	Hospitality & Tourism
Powerdot	ScaleUp	+100%	2018	266	34	Small	Mobility
KlimtArt House	Gazelle	30%	2021	N/A	14	Small	Real Estate
Unbabel	Super Scaler	40%	2013	106	349	Large	Software
The Loop Co.	ScaleUp	40%	2016	12	102	Medium	Software
			Data from Dealroom	Data from Crunchbase	Data from Linkedin	<50; <250; >250	

All of our informants are senior executives playing key roles in the strategic activities of their organizations. We also spent time in their offices observing the flow of work and engaging in impromptu talks with employees.

Following the transcription, we embarked on a meticulous thematic analysis as per Braun and Clarke (2006), which entailed an initial familiarization phase, subsequent coding using NVivo, and the iterative development of categories to crystallize key themes. We employed an abductive approach to coding, enabling themes to naturally emerge from the raw data while simultaneously drawing upon existing serendipity and improvisation literature to inform our understanding. This dual analytical lens facilitated a granular within-case and a holistic cross-case examination, leading to the extraction of salient themes that underscore the relationship between serendipity, improvisation and organizational growth.

The depth of these qualitative inquiries allowed us to forge a theoretical model that elucidates how high-growth firms not only encounter serendipity during their scaling endeavours but also strategically leverage it while improvising. By interweaving within-case specifics with cross-case patterns, we have constructed a narrative that reflects the unique ways in which these firms navigate and capitalize on the unexpected, charting a course through the complexities of scaling in dynamic environments.

Data Analysis

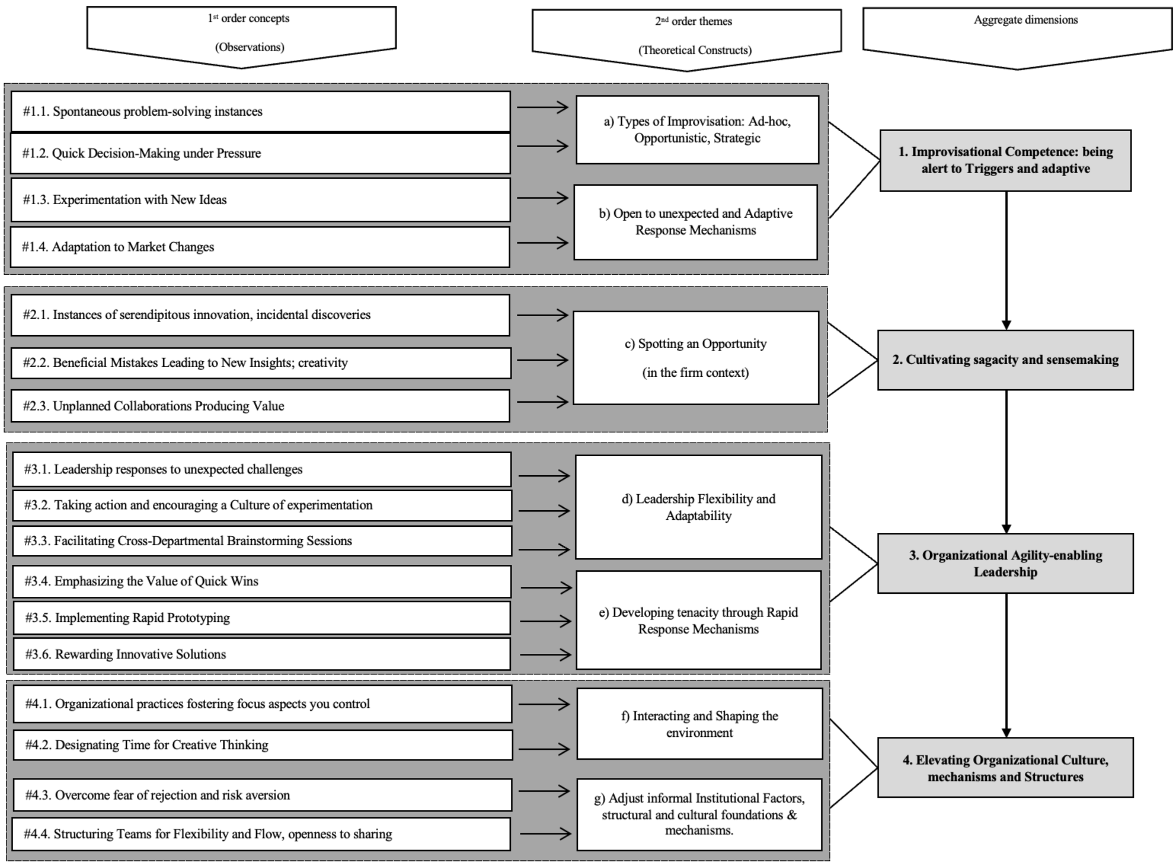
The data analysis for our study was meticulously conducted through a structured coding process, adhering to the staged approach of inductive analysis as outlined by Gioia et al (2013). This method involved a deliberate interpretative effort to elevate the empirical data into theoretical insights. To maintain methodological transparency and allow for peer evaluation, we meticulously documented each phase of the analysis, avoiding overreliance on raw data or premature conclusions, thus opening our analytical procedures to external review (Pratt 2009). We initiated the analysis by generating first-order themes from the interview transcripts, coding in NVivo each interview separately on the basis of in vivo terms or phases used by informants (Van Maanen 1988) encapsulating the recurring topics in the language of our informants. These initial themes were further refined into more abstract second-order themes, signifying a deeper interpretive layer of the data and advancing toward theoretical abstraction. Cross-case analysis during this phase was essential for identifying common strategic patterns. Through this iterative procedure, we developed higher-level themes that captured the shared experiences of the leadership teams across the high-growth firms studied. Any themes that did not contribute to our emergent narrative or did not resonate across the cases were carefully considered and, if necessary, set aside. Additionally, we facilitated two group discussion workshops with founders at a university setting, utilizing these dialogues as a means to triangulate our findings. In these sessions, we engaged with informants to garner their insights on our initial interpretations, allowing their input to further refine our understanding. These interactive workshops were instrumental in deepening our grasp of the second-order themes and the broader aggregate dimensions emerging from our research. This thorough process ensured that our final theoretical model is firmly rooted in empirical evidence while aptly illustrating the complex interplay of improvisation and serendipity in the context of organizational scaling.

Our analytical approach entailed a synthesis of inductive and abductive reasoning, allowing us to distil data-driven first-order concepts (Van Maanen 1988) into theoretical second-order constructs, and further refine these into the foundational elements of our emergent theory. This methodology illuminated not only the interconnections within our data but also their resonance with established scholarship in each of the specific fields. In particular, our analysis drew distinctions between manifest and latent elements of improvisation, as well as between the rudimentary and complex facets of serendipitous phenomena within high-growth firms. By iteratively navigating through the data, extant literature, and evolving theoretical insights, we discerned and mapped the relationships among these conceptual components, culminating in a cohesive theoretical model. This model integrates our principal discoveries into a comprehensive explanation of the mechanisms by which high-growth firms manage the duality of improvisation and serendipity within their scaling processes.

5.4. Findings

Figure 5.1. illustrates the data structure emerging from our analysis, detailing the intricate relationship between serendipity and organizational agility within high-growth firms (right side of the figure). It is through this framework that the primary dimensions of our study—Improvisational Competence: being alert to Triggers and adaptive; Cultivating sagacity and sensemaking; Organizational Agility-enabling Leadership, and Elevating Organizational Culture, mechanisms and Structures - are distilled and further decomposed into their contributing second-order themes, and the first-order concepts from which these themes arose (middle and left side of the figure, respectively).

Figure 5.1. – Data Structure



The relationship among these dimensions and their components reflects a complex, non-linear interplay rather than a simple causal chain. For instance, while Types of Improvisation may initially spark the capacity for adaptability within the firm, the enduring value of such improvisation is reinforced by the subsequent strategic leverage of serendipitous discoveries. Similarly, while Leadership Flexibility and Adaptability are vital in responding to unexpected challenges, they are also instrumental in cultivating and maintaining an Adaptive Organizational Culture that continually fosters innovation and agility.

The dynamics presented in the model also suggest a cyclical, rather than a unidirectional, progression. Adaptive Response Mechanisms, for example, are not only the outcome of improvisational competencies but also serve as a catalyst for further innovation and serendipity. Organizational practices fostering improvisation both respond to and shape the surrounding market dynamics and competitive pressures, illustrating a bidirectional influence between the firm and its environment.

For clarity and coherence in our discussion, we sequentially unpack the emergent dimensions, recognizing the recursive nature of these processes and the temporal overlaps that occur within the lived experiences of high-growth firms. This approach allows for a nuanced understanding of how high-growth firms navigate the complexities of scaling, highlighting the centrality of improvisation and serendipity in achieving sustained growth and adaptability.

Table 5.3. presents corroborative evidence for each of the identified second-order themes. Our findings are articulated through a narrative that conveys the essence of our data, supplemented by pertinent quotations from participants.

Table 5.3. - *Representative Evidence from participants*

Representative Supporting Data for Each 2nd Order Theme	
2nd Order Themes	Representative 1st Order Data
a) Types of Improvisation: Ad-hoc, Opportunistic, Strategic	AA: “the way we ship this was it was not in our roadmap that we wanted to do the integration with open AI; so 100% not part of the plan. We saw the opportunity we went for it and we just built it” AB: I'm insistent when it comes to decision-making, especially if we're not quickly aligning on a solution. I'll drag everyone if needed, to ensure we make a quick decision. We've nicknamed it the 'kidnapping technique' – decide within 24 hours, or I will. It's tough, and not my proudest method, but it's effective and I use it often. Now, our people promotion process is bound by the same 24-hour rule”
	SO: “this was a good luck for me. But also I make my luck and with some with things that are unexpected, I grab it and I deliver it so.” We shifted quickly because we needed to stay ahead in our very dynamic environment.
	GA: As a team, we thrive on spontaneous problem-solving. In many unplanned initiatives our most innovative solutions appear. We make fast but informed decisions under pressure. We continuously explore new ideas without the fear of failure."
	EB: “only when you have a good feeling”. FA: “I'm always visualising and picturing scenarios”. “my mindset was always on. Like hey, this happened. Interesting. How can I benefit from it exactly?” FA: “you just need to be comfortable knowing that things will just happen to you. You need to be comfortable in chaos.”
	HA: “you cannot have (…) in your website and we lost 85% revenue overnight. We were not expecting. We had to do 2 things immediately and we have done it in a couple of days.” HA: “one thing that I think is not obvious for startup founders, but for scale-up founders: we all learnt the near-death experience and you think “Oh it’s impossible to recover from this”. You need to have the right mechanism internally.”
	FB: “Planning will never be perfect 100%, you have to start with the plan but the most important thing, and in our case lead to growth, is to adapt the initial plan.”
	IA: “Strategic planning it's like that famous Mike Tyson quote: everyone has a plan until they're punching their face. the challenge is kind of figure it out. Like what path to take, then I think this is something that you only do while you're on the road. There's not enough planning that will basically allow you to ensure that you have a smooth sailing.”
	JA: “In the beginning, it's only growing and then you stop and realise you’re not in the right path. For us, COVID gave us the opportunity to think about the company and the path forward.”

	JA: ” You have to be flexible in your business and the decisions have to be made it instantly. The decision process must be really quick so you can take advantage of your competitors. They probably are thinking about what they are going to do next, so you move and stay a step ahead.”
	MA: “I'm going to catch this wave, and it's a very quick decision. You must make when you look at the wave, you're like, hey, OK, ‘So what am I going to try to do here? How do I ride this wave?’ The best possible thing. And then a lot of times you actually have ‘Strategy’ of like, where I'm going to position myself, you know, like which waves I'm going to try to make a run for it, assuming that I might not catch all of them. And so if I try to make a run for a wave and I miscalculated it, it takes me a while to get back.”
b) Open to unexpected and Adaptive Response Mechanisms	AA: “a real inflection point was killing the home page” AB: “For me, it's about ramping up the number of experiments that could yield disproportionate returns. I'm not looking for a mere 5% growth; I'm aiming for 200%. So, the more out-of-the-box experiments we run, the better our chances.”
	GA: “if we see that we made an error, we have to be agile and to change it fast. Because if not that error will persist and continue. Our most valuable collaborations weren’t always planned”
	DA: “In growing and nurturing our tech talent ecosystem, we’re not just investing in new skills that change lives and help organisations finding a new talent pool but also in creating a vibrant community where opportunities abound and technology becomes a force for a positive change." FA: “it was mostly about flexibility and adaptation” FA: “Interconnecting the dots requires time. If you get home totally exhausted and totally overwhelmed already with stuff scheduled for the next day, you won't even have time to think about it and connect the dots”
	HA: “Right now we are fine tuning the value proposition again because otherwise we will not be the rabbit, we will start to be the dog. Even the company that makes €40 million a year needs to reinvent” HA: “we knew that they (customers) were not happy. So we listened them, we tried to understand the pains they had, and we created a value proposition that we think is going to address that. We did an internal work and now we're asking them, what do you think about this? Would you pay for this? How much would you pay for this?” EB: “it has nothing to do with business. It's just that when you have events that somehow force you to change the rules, you need to understand what rules are those and how can I take advantage out of it. I call them Inflexion points” HA: “I see three phases. Understanding very early that you have a problem, look for the solution everywhere amongst intelligent people. Ask help in that phase. To commit and to invest and to execute it as executed correctly, because execution at the end of the day, the most critical part.”

	FB: "COVID happened and people couldn't travel so in theory it was bad for our business, but we realised that if we couldn't be focused on sales, we would focus on developing our products. For one year, we concentrated on developing our platforms and that for us was a major benefit." FB: "We had this fantastic business plan and after two months everything was changing quite fast. We started building the platform and on-the-go, we started changing things very fast because of market. We realised that that was difficult to scale and we switched everything, including the business model, in less than one month, as we jumped into an agile approach." FB: "There's always an unpredictable event that will come up and you will have to find a solution for it. The solution is always there. I never had the experience of not finding a solution. But it will take some discovery and some digging to find it."
	IA: "There was a lot of trial and error and especially in projects like ours, where there's no road map, no one has done this. You need to be fast on your feet and just basically ensure that you have the right people in place and that your team is All Star team to help you being faster on the execution part." IA: "Usually, innovation goes faster than regulation. You've to be working very closely with the regulators to ensure they understand and that you're able to adapt."
	JA: "Going with the flow, in the beginning of the company you are a tiny company and must accept what the market gives you and think about strategy too much." JA: "Covid forced us to change. We outsourced non-core parts of the companies with external teams to focus on core processes. We improved our management system, we gave more opportunities to our people, better remuneration and resulted in the business growing in a healthy way.
c) Spotting an Opportunity (in the firm context)	AA: "the fastest way of growing a company is hitting any inflection point in an exploding market – GPT/ AI analyst was the best example" AA: "you think you might have been luck that it was that particular feature that changed a bit to trajectory but It isn't like that. You try multiple things as fast as possible before you run out of money. I think that's the real thing: how many things can you do fast enough before you run out of money until you hit one of those inflection points" EA: "you need to create your network in the area and be open minded in terms of not thinking that everyone is your competitor… you need to be near them and share the same pains that everyone has and after a few years that will compensate you as opportunities will appear". "we created MOA because we were struggling with the covid… we have that huge garden that we are not using, and people want to be outside, not inside. Monsantos, the name was due to then were the "Santos Populares" in Lisbon, it was expected to be like during one month - June and then close"

	EB: “So when you are looking to so many businesses, so many verticals, so many situations, so many people, **positive accidents will happen for sure**, because businesses are constantly changing situations or people in the business that you met…” GB: “we launched earlier this year our introduction to AI course… out of the many students one was a lawyer. In the few weeks after we discovered an opportunity and launched a product for lawyers that then became quite successful. Only possible because we talked with this specific client”.
	FA: “going to these international conferences (Middle East, Cannes, etc) where all the big operators and marketplaces are… my goal is just strategic” FA: “working in person at the office, this helps in serendipity. People run into each other, they grab a coffee and that’s the reason something clicks” HA: “if you listen to the market, you will be evaluating what are the boundaries of your business and how can you try to mitigate the risks to try to find or to try to reinvent.” HA: “It happened that in six months time after that event we were doing 400 times better than originally, because actually it came to be that sourcing from different ad networks was much more profitable”. DA: “to take benefit from it, they need to integrate the idea of taking advantage of something that you are not expecting in the moment and always being open to innovation. Always be open to see that there are improvements there that can be done and those improvements can come from any place”
	JA: “You have to want to run the business and to assume the risk. Otherwise, if you only watch the Excel probably you will not reach anywhere. I am expecting future unplanned events that will give us opportunities for new business and we are prepared for them. We have a healthy company, we at our full power and prepared for is to come.” MA: “It was a random encounter and it was such an interesting insight and he ended up leading the series C and we ended up doing that and like that kind of took us, I want to say probably 2-3 years to go from.” MA: “Like in waves, they're not predictable in the sense that they come in different spots. And you know, there's a lot of serendipity of being the right place and but also be able to recognise when the wave's going to form early enough that you can, you know, paddle to it. And then there's the whole actual technique of being able to catch the wave and stay on the wave all the way to the end. And, you know, but it's finite, right? It it always ends. It's there's never a infinite wave.” MA: “Lot of it was this random conversation, all of the connections are very serendipitous. The weird thing is that we only attribute meaning to the ones that we feel are meaningful. But actually, I would say that every day you're making 510 decisions. There are probably incredibly meaningful your life. You just don't know it yet

	because they're not obvious will start the butterfly effect to the point where then you'll have the opportunity to make a another decision that maybe will be more obviously serendipitous" MA: "Every entrepreneur is making a bet. We think the world's going this way. If you're building for what happened last year, you're not going to do it right. You have your building for what you think people will want, what the world's going to be in a certain amount of time."
d) Leadership Flexibility and Adaptability	AA: "people are more successful in the projects that come from small teams… that are kind of intrinsically motivated to wanting to do something beyond what is expected" AA: "promote them as fast as possible. Have a happy hyper productive team" AA: What we can do better is creating engaging moments that bring more people to the office… we mostly have a remote team. But we know that when people are together things happen." AB: "We're looking for people who are truly passionate about this specific hard problem. We see it in the backend work — folks who thrive on complex computing challenges. You're not here to just add another button to the interface. No one's here for that; it's not what we do. We tackle complex issues."
	DA: "Scaling an impact venture is a multifaceted process that demands a holistic approach, innovative thinking, and a strong commitment to a dual goal of achieving both growth and impact. Our leadership is defined not by the challenges we expect, but by our responses to the unexpected." HA: "the good ideas could come from anywhere. Foster a mindset where the good idea could come from like the most junior programmer. Always be honest and listen actively others". HA: "It comes from the culture and I'd say that the culture and the mindset is what kind of enables that. It's much more about how do you actually act on it, because opportunities will show up." GB: "I tell the leadership team: you need to plant seeds and then a lot of those seeds are not going to grow into flowers or plants. And some of them will."
	GA: "We do many cross departmental brainstorming sessions, i.e. customer success with marketing." HA: "Experimentation and flexibility that you give to your employees… Leadership is a consequence. When people recognise you as a reference." HA: "it's just the way you face adversity that ultimately allows you to understand whether or not you're resilient"
	KA: "Is important to have a company that is open minded in terms of new opportunities and the culture of mistake, so we can we can learn from them. It comes a lot from the leadership team and the founders to help share that spirit across the organization." MA: "We've always done a bunch of like we've really encouraged people to find spaces within and outside of the office to spend time together. Which is why culture is so important. Right, like. And there's no one way of doing culture, but it's why defining a culture

	really helps. The more you're able to define your culture, the more you let people self select and say, hey, I want to be part of this or I don't want to be part of this."
e) Developing tenacity through Rapid Response Mechanisms	AA: "one of our developers wanted to take a couple of days to build the integration outside of the plan and so he built first version in a few days".
	GA: "our team turns ideas into tangible products at a speed that outpaces the industry standard. We created a new solution for Sonae really quickly because there was an opportunity." KA: "our investors and board members were flexible across the several opportunities that came to us, such as going to other markets, and to adapt the business plan very fast, to new opportunities and new realities"
	HA: "You may get the golden egg and then you may get another golden egg, but the trick is not to get golden eggs is to get the chicken that makes the golden eggs so and that normally is not neither the first neither the second either the third attempt, although you make money on the three." HA: "An example… You have a department that normally manages something with an Excel spreadsheet because the volume is not big. You are focusing your resources on trying to improve some other departments in the company, but suddenly you have a very important growth and that excel that was very easy to manage first, now it's impossible to manage. So, you need to suddenly create a software to help you run that or just ask the department to find some software to help. And they find their own ERP or Zendesk or whatever." HA: "We have built a company in our case that allows people to change in the company to learn different things. We try to empower people to be self-responsible."
	DA: "I think *God* or someone in this startup metaphysics thing is telling me something. So, I just deep dive like in the rabbit hole. In less than a week we proposed a plan to the board saying we would double down and put everything in in this new idea and the board was very supportive. We set a team of seven people, back then I would say like I turned off the company, just working on that" FB: "During COVID, we realise that we didn't need such a big team, that we were able to be faster, to be more efficient. We learned how to work with the smaller team, and we did more progress." IA: "We had this kind of crazy ideas, and we were able to stress test them and you can only do it if you're on the "ground". If you're building this as it goes, it's always kind of the building the aeroplane as it is falling off the cliff."
f) Interacting and Shaping the environment	AB: "It's crucial to carve out time for creative thinking. That's when the magic happens — when we step back and let new ideas flow. It's not just about the day-to-day tasks; it's about the future"
	GA: "The management provides a fertile ground for creativity to grow unrestrained."

	EA: “since the beginning we have the idea that if the company has a huge dependence on you (the founder), it's more difficult to grow”. EB: “Nowadays is a little bit more difficult in that area because they are struggling in the city centres, with the new limitations imposed by the municipalities” EB: “if we are always trying to anticipate what will happen, it's easier if you create a network that you are always talking with other companies inside the area or looking what they are doing”
	HA: “you decide that this department is going to take care of this. But when you grow 75%, you need to separate that department into 2-3 months after you build it… It's a constant and continuous change of everything you do in order to adapt.” DA: “Our advisor was saying, OK, you cannot do it now, you have to postpone it, in March will be much better. And I took a difficult decision and said no, we'll do it now (in November). We'll take the risk now and in two hours we sold all our tokens, raising $15 million”.
g) Adjust informal Institutional Factors, structural and cultural foundations & mechanisms.	AA: “our mindset is every feature that we do I ask the team: can a million people use this?” “We have this Most Wanted challenge which was each engineer lists five ideas that are outside the roadmap, if they want to build it they are fully autonomous and if deployed then we give them an extra bonus” AB: “We're building our team for the stars, not the average. We've got different productivity levels here (…) but I need to focus on organizing for the top performers to keep them happy. The rest tend to pick up on that vibe of productivity and innovation, and it really drives the whole team forward.” AB: "I see two philosophies: one is the Google way, algorithmic, metrics-driven, like 'fake it 'till you make it,'… then there's the Apple approach, focusing on human experiences and heuristics. It's not algorithms; it's about satisfying users with an outstanding product first. I lean more towards the heuristic side of things. (Other C-level) is all about the algorithms, finding the perfect fit. It's great to have a team where we complement each other like this." AB: “Each area had its mission, giving people room. But if they didn't manage, it was a head-on collision, and we had to force a solution.”
	GA: “it’s not just patting backs; it’s about showing real gratitude for out-of-the-box thinking. Every time someone comes up with a clever workaround or a fresh idea, we’re not just saying good job — we're making it clear that this stuff is what keeps us at the front... It’s about celebrating the brainwaves as much as the hard work, you know? EB: “I think that is a matter of culture… Sometimes the company has another issue, after another one, so it's easy to learn from the mistakes from one side and to not do it in the other side.” FA: “I prefer to rely on a more operational CEO and me as a founder and board members bringing in the ideas and the strategic alignment”

	DA: "there are ingredients that you don't control and ingredients that you control. I say that an important ingredient to understand is you might get early to a market and you need to be resilient and pivoting a little bit to get to niches until that market explodes. And if you get interesting niches just to put your head outside the water, then there is a moment that your niches become the mainstream". DA: "I attribute to some of the success the ability to take advantage of unexpected events." IA: "It is the ongoing adaptation that also makes it fun. Because that's when serendipity happens. That's when you discover great things about yourself, about your product, about how people interact with your product that you weren't thinking about when you started your journey." IA: "You need to have boots on the ground. You need to go meet your users, meet the people that are building the product. You cannot just be kind of building in in an ivory tower as much as you can have contact with these people, the better those serendipity moments will happen, the better you're going to have awareness of how your product is used and how it's being perceived." IA: "when you're building this and when you have an open cooperation with regulators and open-source community, I think that's where the magic really happens." KA: "Finding the right people to the right role, the people that have a mindset of building things and doing things from scratch and having an operational mindset is crucial" MA: "The clearer responsibilities are defined the easier it is to respond because you know the less people are involved in the decision, the faster it is for them to adapt."

a) Types of Improvisation: ad-hoc, opportunistic, strategic

This first element starts with spontaneous problem-solving instances, delving into the varied styles of improvisation that manifest within organizational settings. AA's recount of an ad-hoc decision to integrate with OpenAI, "*the way we ship this was it was not in our roadmap that we wanted to do the integration with open AI; so 100% not part of the plan. We saw the opportunity we went for it and we just built it*" exemplifies the reactive yet agile nature of ad-hoc improvisation. It reflects a willingness to pivot swiftly from planned activities in response to emerging opportunities or challenges. Opportunistic improvisation, as highlighted by SO's approach, "*this was a good luck for me. But also, I make my luck and with some with things that are unexpected, I grab it and I deliver it so*" suggests a proactive lookout for advantageous circumstances, aligned with Makri et al. (2014) which are then seized with efficacy. Strategic improvisation, meanwhile, is underscored by the practice of making quick, yet impactful decisions within constrained timeframes to ensure competitive advantage, as encapsulated in AB's *'kidnapping technique'*. MA also builds an analogy with surfing imagining that "*if I'm going to catch this wave, it's a very quick decision. If I try to make a run for a wave and I miscalculated it, it takes me a while to get back.*"

b) Open to unexpected and Adaptive Response Mechanisms

AA's reflection on a pivotal shift, "a real inflection point was killing the home page," unveils the daring nature of adaptive responses that may entail significant departure from previous practices. The agility in adaptation is further affirmed by GA's commitment to corrective actions: "*if we see that we made an error, we have to be agile and to change it fast. Because if not that error will persist and continue*" and "*our most valuable collaborations weren't always planned."* It signifies the importance of resilience and the capacity to pivot promptly to rectify missteps. This relates to insights uncovered by Weick and Sutcliffe (2013), that advocate for creating systems sensitive to the nuances of operations, enabling organizations to preemptively identify and respond to potential failures, thus cultivating a resilient framework that thrives amid uncertainty. Furthermore, IA's company developing at the forefront of blockchain technology and identity, shares "*Usually, innovation goes faster than regulation. You've to be working very closely with the regulators to ensure they understand and that you're able to adapt*."

c) Spotting an Opportunity (in the firm context)

In line with Busch and Barkema (2022), who highlights the importance of "intuitively" developed conditions that foster unexpected encounters and serendipity, our findings echo the significance of such phenomena in organizational scaling. As articulated by AA, "*the fastest way of growing a company is hitting any inflection point in an exploding market – GPT/AI analyst was the best example*" underscoring the impact of serendipitous market dynamics that far exceed planned strategic initiatives. MA articulated "*Lot of it was this random conversation, all of the connections are very serendipitous. The weird thing is that we only attribute meaning to the ones that we feel are meaningful*". This theme captures the essence of serendipity as not merely a byproduct of innovation but as an integral component of the growth strategy. It is through the embrace of the unplanned and the unknown—where entrepreneurs forge connections before the value of a relationship is fully realized—that the true potential for innovation is unleashed. Moreover, on managing for the unknown future MA elaborates "*When you're building a startup, you're building for a future, right? You're making a bet that the world's going to evolve in a certain way and you're building for that future. If you're right and the world does shift your way, then you have the opportunity to build a big company.*" AA's strategy of rapidly experimenting across a spectrum of ventures aligns with this notion, revealing a deliberate embrace of the unpredictable as a source of competitive advantage. The readiness to engage with and leverage serendipitous discoveries is a hallmark of organizational agility and a testament to the foresight that turns incidental discoveries into unintended yet substantial success.

d) Leadership Flexibility and Adaptability

Flexibility is a broad construct; building upon the work of Verdú and Gómez-Graz (2009) this thesis refers flexibility in high-growth firms as the ability to adapt swiftly to unforeseen circumstances and to initiate deliberate changes. KA’s company that is currently in hypergrowth after raising 250 million euros in the last two years to pursue growth that was not initially in their plans nor it was blind luck, share: “*Is important to have a company that is open minded in terms of new opportunities and the culture of mistake, so we can learn from them. It comes a lot from the leadership team and the founders to help share that spirit across the organization.*” We conceptualize leadership flexibility as the capacity of high-growth firms to respond swiftly to unforeseen events and to instigate intentional shifts. This is captured in the transformational leadership practices reported by AA, "*people are more successful in the projects that come from small teams... that are kind of intrinsically motivated to wanting to do something beyond what is expected.*" The adaptability of leaders is seen not just in their response to the unexpected but in their transformational impact on the organizational ethos (Hansen 1995).

Moreover, MA posits “*The more you're able to define your culture, the more you let people self-select and say, hey, I want to be part of this, or I don't want to be part of this*.” This approach to cultural clarity not only empowers potential and current employees to align with the firm’s values but also intersects with Cattani’s (2023) observation on the paradox of firm identity. While a distinct firm identity can strengthen internal cohesion and external brand perception, it also may restrict strategic flexibility as decisions deviating from the established identity may provoke resistance. This duality underscores the critical balance organizations must manage between cultivating a strong, identifiable culture and retaining the adaptability and leadership flexibility to respond effectively.

e) Developing Tenacity through Rapid Response Mechanisms

The ability to innovate promptly in response to emerging needs or insights is pivotal. EB's depiction of their team's agility in creating novel solutions, "*As a team, we thrive on* *spontaneous problem-solving. In many unplanned initiatives, our most innovative solutions appear,*" exemplifies a rapid response mechanism that serves as a catalyst for innovation. It echoes the sentiment that in the absence of prolonged deliberations, the immediacy of action can often lead to ground-breaking solutions.

This is further substantiated by GA's reflection on transforming ideas into marketable products expeditiously, thus underscoring the firm's capability to not only react to opportunities but to do so faster than industry norms, echoing Sonenshein's (2014) insights on how organizations can dynamically foster creativity through structured yet flexible resource utilization practices. Additionally, KA testimonial highlights the importance of this agility and alignment at the board level: "our investors and board members were flexible across the several opportunities that came to us, such as going to other markets, and to adapt the business plan very fast, to new opportunities and new realities". Recent literature on venture boards underscores that a venture board takes a crucial role in developing and maintaining an entrepreneurial firm's strategic adaptability and alignment, significantly impacting its capacity to pivot and integrate new business opportunities effectively (Garg 2020; Garg and Furr 2017).

f) Interacting and Shaping the environment

AB's assertion illustrates the importance of designating time for creative thinking: "*It's crucial to carve out time for creative thinking. That's when the magic happens — when we step back and let new ideas flow. It's not just about the day-to-day tasks; it's about the future*" speaks to the importance of creating a conducive environment for new ideas. This theme explores how the dynamics of the market and competitive pressures shape an organization's innovative capacity. The notion that management's role is to cultivate a fertile ground for unrestrained creative growth, as indicated by GA, further demonstrates the influence of environmental factors on innovation. By providing space for creativity to flourish, organizations can adapt to and shape market dynamics rather than merely respond to them. The necessity of creating time for creative thinking aligns with the effectuation (S. Sarasvathy and Dew 2008) principle of leveraging available means, where entrepreneurs use what they have at their disposal to invent new ends. This practice illustrates how giving space for creativity can serve as a strategic manoeuvre, enabling firms to generate innovative solutions proactively rather than reactively, thereby not only adapting to but also shaping market dynamics. This strategic creation of space for thought and experimentation exemplifies the 'bird-in-hand' principle from effectuation, suggesting that firms can use their existing resources and strengths to explore new opportunities and foster a culture of innovation.

g) Adjust informal Institutional Factors, structural and cultural foundations

The final theme examines the infrastructural and cultural underpinnings that facilitate agility in innovation. AA's perspective, "*our mindset is every feature that we do I ask the team: can a million people use this?*" reveals the ambition and scale that drive the organization's innovative efforts. The introduction of initiatives like the *'Most Wanted challenge'* demonstrates a structural mechanism that encourages autonomy and rewards ingenuity, fostering a culture that values and stimulates agile innovation. AB's comparative reflection on different philosophical approaches within the industry — algorithmic versus heuristic — underscores the significance of having a diversified strategy that marries metrics with user experience.

These foundations are not merely about creating an efficient system but also about celebrating and rewarding the intellectual agility necessary for pioneering in a fast-paced technological landscape. As DA articulates, it's about appreciating and acknowledging the intellectual leaps as much as the diligent execution, indicating that a culture that honours innovation is crucial for maintaining a leading edge in the industry.

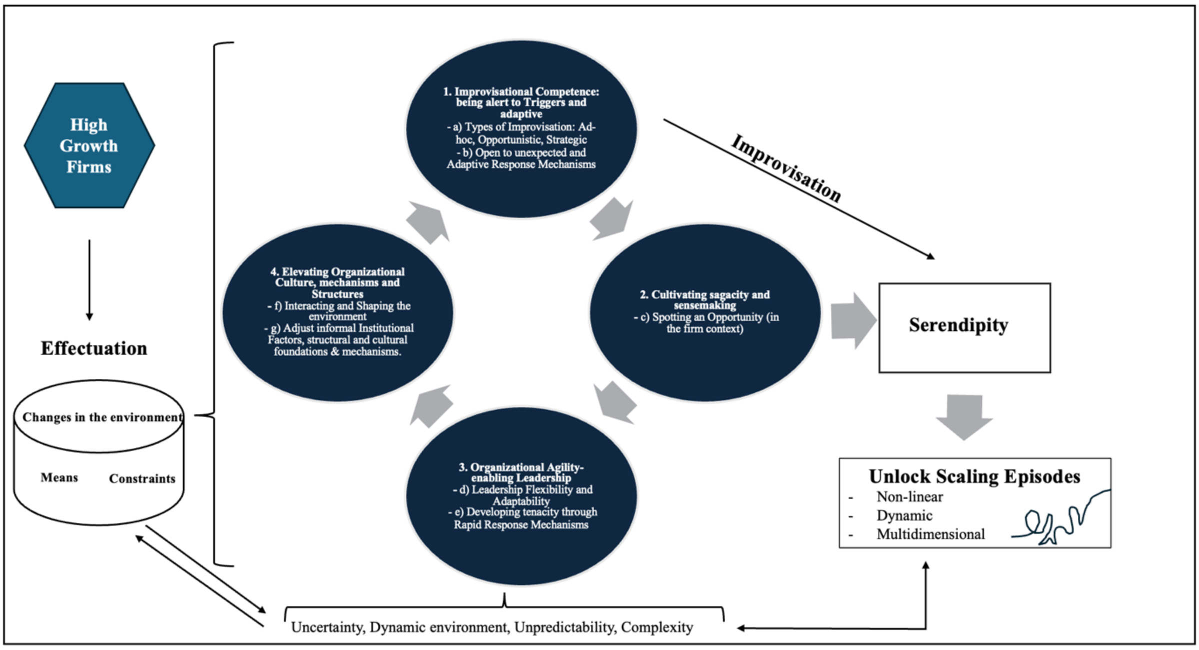
Building on the theoretical insights from Kent D. Miller's work (2007) on risk and rationality in entrepreneurial processes, we can integrate the concept of serendipity as a partly endogenous outcome of structured environments like incubators. Such settings facilitate 'social embeddedness' that can stimulate serendipity in entrepreneurial actions, aligning with Miller's recognition that entrepreneurial processes are not entirely calculative but involve adapting to and shaping uncertain environments through action and practice. This notion dovetails with our empirical observations that high-growth firms often prosper not just by strategic planning but through harnessing the emergent and unplanned, nurturing a culture that is responsive to and conducive for serendipitous innovations.

Our data illuminates a nuanced landscape where serendipity and improvisation emerge. Rather than relying on rigid planning, these organizations embrace the fluidity of change, leveraging happenstance and rapid ideation to pivot and iterate in real-time. The empirical evidence underlines a sophisticated alchemy of foresight, agility, and an environment that celebrates intellectual curiosity, thus converting serendipitous encounters and improvised actions into strategic advantages. These findings point to a dynamic interplay where the unexpected is not a detour but a deliberate path to novel and uncharted territories of opportunity. In our group discussion workshops with founders it became clear that most of them have indeed experienced serendipitous events in their scaling despite not necessarily acknowledged that from beginning, evidencing a fusion of fortuity and ingenuity. We turn now to our emergent theoretical framework to explain these interconnections, seeking to distil the essence of this complex choreography between planned strategy and the serendipitous art of the possible.

A Grounded Theory of Serendipitous Improvisation in HGFs

Our research question asks: How do scaling entrepreneurs unlock scaling episodes to consistently achieve high growth in the face of the unanticipated and the unplannable? Our emergent framework unveils that the phenomena of serendipity and improvisation within high-growth firms are not merely concurrent but integrally linked in a complex, evolving process. Figure 5.1. presented captures the essential constructs—reflecting the second-order themes—that have emerged from our analysis. Beyond identifying these themes, a robust theoretical model must also delineate their interactions. Accordingly, we present an emergent theory of entrepreneurial adaptability, underpinned by the empirical data, which maps the interdependencies between serendipitous encounters and improvisational actions, as critical drivers of scalability and innovation in high-growth firms.

Figure 5.2. – An emergent model on Fostering Scaling Episodes by creating Conditions for Serendipity in the Context of Uncertainty.



Our emergent model (Figure 5.2.) encapsulates the intricate dynamics of scaling, spotlighting the pivotal roles of improvisation and serendipity within a landscape rife with uncertainty, unpredictability, ambiguity and complexity. The model delineates four strategic and organizational constructs that enable serendipity to unlock new scaling episodes.

The first aggregate dimension, *Improvisational Competence: being alert to Triggers and adaptive*, focuses on the capability of high-growth firms, to harness the potential of unexpected opportunities and challenges through improvisation. Central to this competence is the notion of peripheral vision, which involves the ability to perceive and interpret subtle cues and changes in the environment that are not directly in the line of sight. This broader awareness enables firms to anticipate and react to shifts in the market, technology, and consumer behaviour more swiftly and effectively. Improvisational competence requires a heightened state of alertness to triggers - events or signals that necessitate a deviation from standard procedures or strategies (Busch and Barkema 2022). The ability to be adaptive, responding creatively and effectively to these triggers, distinguishes firms that successfully navigate the complexities of scaling. It's not just about quick reactions, but about making smart, strategic decisions that leverage unexpected events to the firm's advantage. Like in the case of *Powerdott* "came to their radar to deploy EV chargers in private spaces. What did they do? They analysed, quickly made two pilots but soon realized that it was a defocus and did not pursue that".

This adaptive response is enhanced by a firm's peripheral vision, allowing leaders to detect and interpret indirect or incomplete information that could signify emerging threats or opportunities. By developing this aspect of organizational awareness, firms equip themselves to engage more effectively with the dynamic and often unpredictable landscape of business, turning potential disruptions into avenues for innovation and growth.

The second aggregate dimension *Cultivating sagacity and sensemaking*, underscores the critical role of strategic intuition and interpretative skills in high-growth firms. Drawing on insights from Weick, Sutcliffe, and Obstfeld (2005), this dimension explores how leaders in scaling firms engage in sensemaking—interpreting and acting upon complex, ambiguous situations to maintain organizational coherency and direction. The concept of sagacity, or possessing a 'prepared mind', is fundamental to capitalizing on serendipity. Dew (2009) asserts that it is not enough for serendipitous events to simply occur; individuals and organizations must have the insight and readiness to harness these unexpected opportunities and turn them into valuable outcomes. This blend of sensemaking and sagacity fosters a culture where insights derived from unplanned events are seamlessly integrated into the strategic fabric of the organization, enhancing adaptability and resilience. This approach is essential for managing the unexpected, ensuring that firms not only respond to emergent challenges and opportunities but also proactively shape their futures through informed, agile decision-making processes (Weick, Sutcliffe, and Obstfeld 2005).

The third aggregate dimension, *Organizational Agility-enabling Leadership*, underscores the vital role of leadership in fostering an environment that not only adapts to but also anticipates and shapes market dynamics through agile decision-making. This leadership approach aligns closely with the principles of effectuation (S. D. Sarasvathy 2001; S. Sarasvathy and Dew 2008), which emphasizes the ability of entrepreneurs to control future outcomes through their current actions and resources, rather than predicting the future based on existing markets or trends. Effectuation focuses on strategic choices made with available means, adapting goals based on unexpected opportunities. This link posits a new *Prospective Adaptation Principle*, that is, leaders in high-growth firms exhibit the ability to prepare for and adapt to future contingencies with agility. This principle involves not just reacting to changes and challenges as they arise but also proactively developing strategies that allow for flexibility and quick pivots in tactics without losing sight of the overall strategic objectives, the north star as developed by Busch and Barkema (2021). Such leadership fosters a culture where change is not only managed but expected, ensuring the organization remains resilient and dynamically aligned with both current and future market conditions. *Organizational Agility-enabling Leadership* facilitated through the lens of effectuation involves creating partnerships, leveraging contingencies, and remaining open to redefining goals based on what is practicable and advantageous in real-time scenarios. This approach helps transform uncertainty into a competitive advantage, aligning closely with the continuous and strategic adaptation required in rapidly evolving markets.

The fourth aggregate dimension, *Elevating Organizational Culture, Mechanisms, and Structures,* highlights the significance of cultivating an organizational culture and structural dynamics that prioritize flexibility, strategic control, and a proactive stance, deeply influenced by the principles of effectuation (elements within control) and bricolage (Busch and Barkema

2021; Liu et al. 2021). By structuring teams for flexibility and flow, organizations enable responsiveness and quick adaptation to change circumstances, reflecting the effectual principle of leveraging available means to new ends. Moreover, integrating Douglass North's (1990) perspective on informal institutional factors, this framework accentuates the necessity for cultural shifts led by senior management to alleviate the fear of new idea rejection and risk aversion, as posited by AA "*how many things can you do fast enough before you run out of money until you hit one of those inflection points"*. Encouraging a culture that values experimentation and openness to sharing ideas plays a crucial role in mitigating these fears, fostering an environment where innovative solutions are not just proposed but actively pursued. Additionally, by proactively interacting with and shaping their environments, firms that practice effectuation better navigate and influence the ecosystems in which they operate, aligning external business landscapes with strategic imperatives. This proactive adaptation and engagement also resonate with Weick, Sutcliffe and Obstfeld's (2005) exploration of sensemaking in organizations. Their research suggests that individuals draw upon existing frameworks—such as institutional constraints, organizational premises, and traditions—to make sense of disruptions and maintain continuity in operations. In this context, the elevation of organizational culture and mechanisms not only facilitates this sensemaking process but also enhances the organization's capacity to innovate and adapt in the face of uncertainty and competition. Cattani et al. (2018) conceptualize competition as an ongoing sensemaking process, wherein various stakeholders engage interactively. This interaction continuously shapes, challenges, and reshapes the boundaries of markets.

These constructs are operationalized through a range of processes, from ad-hoc improvisational actions to the strategic harnessing of unintended successes. The model underscores the nonlinearity of scaling, contending that HGFs do not expand through predictable increments but through multidimensional growth - often sporadic and dynamic, shaped by the interplay between deliberate strategy and the fortuitous exploitation of emergent opportunities. This framework posits that navigating the uncertainties of a dynamic environment is not merely about enduring unpredictability but strategically engaging with it to fuel high growth. In the forthcoming discussion, we will elaborate on how the emergent themes interweave to form a complex matrix that is fundamental to the progress of a firm's competencies and strategic scaling capabilities.

5.5 Discussion

A stream within the scaling literature often portrays the scaling phase as a period of rapid execution where firms like Spotify, ChatGPT, or Uber intensify their proven business models, a stage characterized by meticulous execution at hyper speed. Lee and Kim (2024) conceptualize scaling as the "subsequent process in which startups primarily focus on acquiring and committing new resources to implement the chosen core business idea and expand their customer base. This perspective is largely predicated on the idea that the experimentation phase is concluded once a viable business model is identified, paving the way for a scaling phase focused on expansion and replication.

Contrary to this view, our data and insights from interviews suggest a slightly different narrative. The data suggests that the scaling phase is not merely a high-velocity execution of a pre-established plan but is, in many instances, a continuation of the experimentation phase, punctuated with significant unplanned changes. This observation has led to the new concept of *'Improvendipity'*, which recognizes that scaling is not a linear trajectory but a multifaceted journey where strategic improvisation and the effective use of serendipitous events are instrumental in navigating the complexities and dynamic challenges of growth. The deliberate introduction of 'ambiguity by design,' (Gioia and Chittipeddi 1991), emerges as a potent strategy in our findings, enabling leadership teams to catalyse change and reframe existing paradigms towards the espoused vision, thereby complementing our understanding of strategic adaptability in non-crisis scaling scenarios. *'Improvendipity'* highlights the adaptability of firms that, even during scaling, remain responsive to new information, adjust strategies in real-time, and pivot when necessary. This agility allows them to capture emergent opportunities that were not part of the original business model or scaling plan. Far from being orderly and predictable, the scaling stage for many firms is a vibrant phase of discovery, where the ability to innovate and adapt quickly can be crucial for long-term success. This can be summarized in the following proposition:

> **Proposition 1**: we introduce the term *'Improvendipity'* to encapsulate the strategic agility firms must employ in anticipation of, and response to, serendipitous occurrences. This concept signifies the adeptness of a company in its scaling phase to harness unplanned, favourable events through adaptive, strategic manoeuvres, blending systematic growth with an inherent flexibility to pivot when leveraging the unforeseen, thereby driving innovative progress and expansion.

Such findings challenge the traditional scaling paradigm and suggest a need for a broader conceptual framework. This framework would not only recognize the planned execution of scaling activities but also the adaptive, emergent, and often improvised nature of successful scaling strategies. This expanded view could provide a more nuanced understanding of the scaling process, encompassing the role of serendipity and the capacity for improvisation as companies grow. Moreover the delicate balance between scaling and experimentation, as evidenced by Lee and Kim's (2024) large-scale analysis, underscores the importance for entrepreneurial ventures to remain agile and open to serendipitous innovations, rather than committing prematurely to rigid growth trajectories, that leads to the next proposition:

> **Proposition 2**: the timing of scaling activities is crucial; however, firms that maintain a strategic balance between scaling and open-ended exploration are more likely to harness serendipitous opportunities and improvise effectively, thus improving the odds of new scaling-up episodes and therefore pursuing persistent high growth.

Our findings propose a framework for understanding how various improvisational types contribute to organizational learning and adaptation. The research emphasizes that embracing the multifaceted nature of improvisation is key to maintaining organizational coherence amidst flexibility, thereby advancing theoretical rigor and offering new perspectives on management learning in the context of scalability.

An important reflection from our findings relates to the distinction proposed Mamédio et al. (2022) where in conceptualizing Strategic Improvisation (SI), it distinguishes from strategic agility, flexibility, or adaptation. Unlike these concepts, which either entail planned agility, the capacity for deliberate changes, or intentional decision-making for organizational-environment alignment, SI embodies the synthesis of unplanned actions with strategy and operations. It focuses on the creative integration and reconfiguration of resources to navigate the novelty and unpredictability inherent in dynamic environments. This perspective enriches our understanding of how high-growth firms leverage improvisation and serendipity, not as mere responses to external pressures but as proactive strategies for innovative problem-solving and opportunity capture. Plowman et al. (2007) showcase that in dynamic and complex business ecosystems, incremental and small-scale changes, when aggregated, can lead to radical organizational shifts. This phenomenon aligns closely with the nature of HGFs, where rapid scaling often coincides with a flexible and adaptive approach. The unanticipated interconnections between seemingly disparate actions and decisions coalesce, fostering an environment where serendipity thrives, and strategic improvisation becomes a competitive differentiator.

Our analysis suggests that the serendipity phenomenon can be seen as partly endogenous to the ecosystems that support innovation, such as incubators and accelerators. This conceptualization resonates with the findings of Dew (2009) and Engel et al. (2017), who emphasize the significance of social embeddedness in cultivating serendipity. In these settings, the intentional design of interactions and networks plays a critical role in fostering the conditions conducive to serendipitous encounters. As we have observed, firms that thrive are those that do not leave serendipity to chance; instead, they embed processes and structures that encourage the spontaneous exchange of ideas and the formation of unforeseen collaborations. This cultivation of serendipity thus becomes a strategic endeavour—part and parcel of the institutional support for entrepreneurship, setting the stage for innovations that while unplanned, are not entirely unexpected.

One of the interviewees findings resonate with Taleb's (2016) observation that some firms benefit from 'positive Black Swans' - unexpected events with significant positive outcomes - highlighting the value of being positioned to capitalize on the unpredictable, as it can lead to disproportionate advantages. Firms are capable of cultivating their own serendipity by developing a strategy that leverages information to advantageously adopt essential components at opportune moments (Fink et al. 2017).

Harvesting serendipity with improvisation

In the context of high-growth firms, the concept of 'harvesting serendipity with improvisation' can be thought of as an entrepreneurial art form that balances structure and flexibility. Engel et al. (2017) posits that the essence of entrepreneurial agility lies not in the mere occurrence of unexpected events but in the active leveraging of these occurrences. It is not just the occurrence of unforeseen contingencies that matters, but the entrepreneurial acumen to use these to the firm's advantage. As Harmeling and Sarasvathy (2013) suggest, the significance lies in how entrepreneurs respond to and capitalize on these unexpected events. This strategic improvisation becomes a vital process, particularly in environments characterized by high uncertainty and rapid change. Effectual networking, as described by Sarasvathy and Dew (2008), typifies this approach through its inherently open-ended and adaptable nature, enabling entrepreneurs to turn the unforeseen into strategic opportunities. Such a process becomes a testament to the entrepreneurial skill of not just navigating but also creating value from the unpredictable, crafting an ecosystem where serendipity is not merely encountered but actively cultivated and transformed into a strategic resource. Far from being a mere response to the absence of plans, improvisation acts as a proactive agent in creating serendipitous opportunities. This can be summarized in the following proposition:

> **Proposition 3**: In the face of ambiguity, high-growth firms that engage in adaptive experimentation and improvisation can stimulate the recognition and utilization of unforeseen affordances and redefine resource constraints, leading to the iterative reconfiguration of business strategies and uncovering latent market needs.

Contributions

Our study makes significant contributions not only to the scaling-up and HGFs literature, but more broadly to the literature on firm growth and entrepreneurial process. Firstly, it expands on the current understanding of uncertainty in the scaling context, which has been largely focused on general scaling-up as opposed to episodic scaling-up, by delving into the unique trajectories of firms that leverage serendipitous processes to unlock new episodes. By bridging gaps between serendipity and scaling knowledge (Busch and Barkema 2022; Jansen et al. 2023; Busch 2022), this chapter sheds light on how scaleups leverage serendipity and improvisation as strategic capabilities to enhance their growth pursuits. The role of serendipity in organic growth is underscored by Sivadasan et al. (2024), who found that organic modes significantly contribute to firm growth. This indicates that firms often grow through opportunities that may not be planned but arise from being prepared to seize unexpected chances.

Second, this chapter illuminates the significance of a refined understanding of adapting a ‘Serendipity Agility’, underscoring the transformative impact of serendipitous discoveries and improvisational strategies. This reinterpretation enriches our comprehension of the scaling-up process, bringing to light critical yet understudied fortuitus phenomena. By doing so, it contributes to the expanding body of research on scaling (DeSantola and Gulati 2017; DeSantola, Gulati, and Zhelyazkov 2023) and responds to the growing demand for deeper insights into this multifaceted topic (Jansen et al. 2023; Dushnitsky and Matusik 2019).

Third, we propose a model that connects serendipity and improvisation with the strategic outcomes of HGFs. This model suggests that the ability to capitalize on unexpected opportunities and to pivot strategically is a key differentiator of successful high-growth ventures, stimulating new avenues of inquiry on its antecedents. Our findings offer practical implications for entrepreneurs and policymakers looking to stimulate and support the scaling-up of innovative firms: the ability to capitalize on unexpected opportunities is a scaling ability of successful high-growth ventures. Furthermore, scaling education often abounds with cases in which the focus is purely on strategic planning whereas our findings illustrate the importance of preparing the ventures for dealing with ambiguity and the unexpected.

5.6 Limitations and Directions for future research

Our study has obvious limitations that also constitute opportunities for future research. First, one might wonder whether first time scalers are less aware of serendipitous processes. In our interviews a clear sense of self-awareness was more prevalent in more experienced founders.

Second, expanding upon our framework, subsequent inquiries can contribute to an expansive scholarly dialogue, aiming to elucidate the nuanced dynamics by which entrepreneurial environments shape interpersonal interactions. However, our data is limited to European High growth firms, and much remains to be explored in different high-uncertainty contexts like emerging markets. Scaling in very different settings might bring yet more complexities and serendipity may arise out of necessity to solve new problems. As Tippman et al. (2023b) posits there is much to learn about scaling, we suggest as an avenue for further investigation the complexities and nuances of the unplanned and the unforeseen.

5.7. Conclusion

Scaling is not a straightforward journey (Coviello et al. 2024). In this chapter, we have delved into the dynamic and often nonlinear trajectories of high-growth firms as they confront the complexities of various scaling episodes (Busch and Barkema 2021). Although these firms begin with structured plans and clear strategic objectives, our findings highlight scaling episodes characterized by unpredictability, improvisation, and the essential need for adaptability. The paths presumed to lead directly to high growth often unfold as intricate routes, dotted with unforeseen challenges and serendipitous processes. Our inquiry addresses how organizations can effectively harness the unplanned and transform these unexpected occurrences into catalysts for growth and subsequent scaling episodes. We argue that the ability to pivot, adapt, and leverage the unexpected, a capability we term '*improvendipity*,' is not merely a beneficial trait but a strategic scaling capability (M. Cunha and Berti 2023).

Furthermore, integrating the principles of effectuation, our research has illuminated the underdiscussed potential of improvisation to foster environments conducive to serendipitous discoveries. We contend that improvisation, aligned with effectual reasoning, is not merely a reactive measure in the absence of plans but serves as a proactive agent that cultivates serendipitous opportunities. Through the practice of bricolage (Busch and Barkema 2021), improvisational actions stimulate the recognition and utilization of unforeseen affordances, thus creating a space where serendipity emerges not merely as accidental luck but as a strategic asset. This emergent interplay between improvisation, serendipity, and effectuation underscores a deeper organizational capability to navigate and exploit the unpredictable nature of high-growth environments, leveraging contingencies and existing means to shape the future actively.

CHAPTER 6

Institutional Factors in High-Growth Firms Boards & Growth Intention

6.1. Introduction

As stated in the previous chapters recently there has been a remarkable rise in scaling-related research (Coviello et al. 2024; Bohan et al. 2024). High-growth firms (HGFs) in particular have been drawing substantial attention from academic scholars, industry experts, and policymakers owing to their contribution to enhancing national competitiveness, their beneficial effects on job creation and wealth generation, along with their social commitments (Shepherd and Patzelt 2022; Autio et al. 2021; Jansen et al. 2023). Research within this discourse has implied the role of institutional environments, external factors and industry characteristics in shaping firms' high-growth trajectories (DeSantola and Gulati 2017; Tippmann et al. 2023b; Coviello et al. 2024). While existing research has effectively corroborated the importance of institutional factors in HGFs (Somaya and You 2024; Coviello et al. 2024; Autio et al. 2021; Giustiziero et al. 2023; Tippmann et al. 2023b), there remains a gap in measuring it and understanding their relationship with Boards and the intention to pursue high growth. Therefore, our research questions are: To what extent do institutional factors affect HGF and their high growth intentions? How do board composition, behaviors, procedures, and characteristics impact High-Growth intentions (HGI)? Works by DeSantola and Gulati (2017) and Shepherd and Patzelt (2022) explore how characteristics of founders and team members, organizational members' experience, social capital, and organizational culture influence a firm's scalability. These factors, often internal and subtle, play a critical role in either facilitating or hindering rapid growth, suggesting a complex interplay between a firm's internal capabilities and external factors. By exploring how the intention to pursue high growth evolves and influences strategic decisions throughout the scaling process, we can illuminate the dynamic nature of growth motivation in high-growth settings.

In this context, this study aims to extend the current understanding of institutional factors in HGFs by exploring the effects of formal and informal factors, particularly their effect on the boards of such firms and, subsequently, on growth intentions. Our research is nested within institutional theory (North 1990;

Chowdhury, Audretsch, and Belitski 2019), aiming to unpack the factors driving intentions to sustain high growth, from the commonly referred formal factors to the often overlooked realm of informal institutions—encompassing cultural norms, unwritten rules, and social networks. This study posits that these informal institutions can amplify the effects of recognized scalability drivers, thereby playing a pivotal role in a high-growth firm's journey towards sustainable expansion. This study seeks to offer new insights into the macro perspective of HGFs, addressing a critical gap in the HGF and entrepreneurship literature.

Moreover, despite the significant attention given to boards of directors (BoD), most existing research has concentrated on large, publicly traded family firms (Bammens, Voordeckers, and Van Gils 2011). This chapter aims to deepen our understanding of how entrepreneurial governance through HGF Boards can serve as a catalyst for high-growth intentions. Autio et al. (2021) posit that entrepreneurship researchers have begun to assess various issues pertaining to HGFs, particularly board configuration and growth intentions (Rasmussen, Ladegård, and Korhonen-Sande 2018). A key research objective is to measure empowering institutional factors. Scaling-up dynamics require "managing the paradoxical tension between strategic focus and flexibility" (Eisenhardt and Bingham 2017). Over the past two decades, academic literature has highlighted that venture capitalists are uniquely well-suited to the monitoring and governance of entrepreneurial firms. Through mechanisms such as the replacement of management (Lerner 1995), the staging of financing (Gompers et al. 2020), and board meetings (Bernstein, Korteweg, and Laws 2014), investors address the issues of uncertainty and asymmetric information. Boards of directors (BoD) are known to complement the organization's human capital by serving as a source of information, experience, networking, and mentoring to senior managers (Zahra and Wright 2011). Particularly, in relation to mentoring, there is a gap in understanding how this practice occurs in scale-ups and its impact. To shed light on this, we collect data from 169 European High-Growth companies and assess the inputs and contributions provided by investors and board members.

This chapter proceeds as follows. We start by reviewing existing literature and formulate our hypotheses. Second, we describe the research method, including sample, measures, and analysis. We then test our hypotheses and highlight key findings. Finally, we detail and discuss the results, including implications for researchers and practitioners.

6.2. Theoretical background and hypotheses

Research has sought to comprehend the contextual factors, such as institutional and industry characteristics on scale-up growth. Hölzl (2009) suggested that institutional factors across different countries, regions, and industries can either hinder or facilitate the development of high-growth firms (HGFs). Coviello et al. (2024) 'indicate that the wider external context is influential to firms trying to scale' however many questions regarding external factors remain unanswered. Institutional theory, particularly as articulated by North (1990), posits that governance structures and rule systems constructed by individuals are critical driving forces in organizational behaviour and performance. This perspective emphasizes the formal incentives and governance systems that influence decision-makers (Bruton, Ahlstrom, and Li 2010). Tippmann et al. (Tippmann et al. 2023b) further highlight that institutional theory remains central to scaling research, pointing to the application of scaling supports and heuristics through diverse institutional jurisdictions and cross-country locations (Busch and Barkema 2021). However, systematic differences throughout institutional contexts and resource mechanisms deserve further exploration (Palmié et al. 2023). These studies suggest that while firms often navigate their institutional environments, they can also engage in institutional work or entrepreneurship to influence these settings. Formal and informal institutions interact together (Chowdhury, Audretsch, and Belitski 2019; Urbano, Aparicio, and Audretsch 2019a); we now move on from examining how the various institutional factors gather to exploring potential outcomes into HGF Boards and High-growth intention.

HGF Boards and High-Growth Intention (HGI)

Recent scholarship has increasingly focused on the dynamics of HGFs, particularly examining the configuration of boards and their influence on growth intentions (Autio et al. 2021; Rasmussen, Ladegård, and Korhonen-Sande 2018). According to Gans et al. (2019), entrepreneurs must strategically navigate among various entrepreneurial pathways, highlighting the importance of informed decision-making in achieving growth. Despite significant attention on Boards of Directors (BoD), extant research predominantly targets large, publicly-traded family firms (Bammens, Voordeckers, and Van Gils 2011). This study seeks to elucidate the extent to which entrepreneurial governance via HGF Boards serves as a catalyst for high-growth intentions, thus we measure empowering factors conducive to scaling-up dynamics. Such dynamics necessitate managing the paradoxical tension between strategic focus and flexibility (Eisenhardt and Bingham 2017). When assessing the role of the Boards we also employ the Dynamic Capabilities framework (Jansen et al. 2023), which underscores a firm's ability to adapt, reconfigure, and innovate (Teece, Pisano, and Shuen 1997).

Over the past two decades, academic discourse has underscored the unique suitability of venture capitalists in monitoring and governing entrepreneurial firms. Through mechanisms such as managerial replacement (Lerner 1995), staged financing (Gompers et al. 2020), and structured board meetings (Bernstein, Korteweg, and Laws 2014), investors mitigate issues of uncertainty and asymmetric information. However, Rasmussen et al. (2018) observe that a high proportion of independent directors does not necessarily facilitate additional growth in HGFs.

The board of directors complements a firm's human capital in two critical ways: as a source of information, experience, and networking, and through mentoring top managers (Zahra and Wright 2011). Notably, there is a lacuna in understanding the practice and impact of mentoring within scale-ups. To address this gap, our research will collect data from high-growth companies to evaluate the contributions of investors and board members.

Furthermore, research indicates that entrepreneurs, particularly founders of high-growth firms, exhibit solid preferences for long-term growth (Begley 1995). Growth intentions in entrepreneurial firms refer to the deliberate and strategic aspirations of entrepreneurs to expand and develop their businesses over time (Kolvereid 1992; Douglas 2013). Aiming to address our research questions "To what extent institutional factors affect HGF and their high growth intentions? How board composition, behaviours, procedures and characteristics impact firm growth intentions?" we now introduce our Research Model in Figure 1 and next introduce our hypothesis.

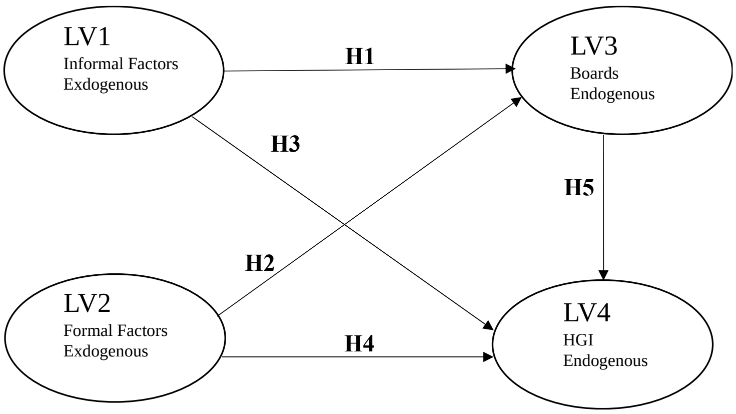


Figure 6.1: Research model on Institutional Factors, Boards and Growth Intention in the context of HGFs.

Building on institutional theory, we hypothesize that informal institutions influence the board configuration in HGFs. Informal networks, corruption fears and cultural norms can enhance or constrain the effectiveness of formal governance structures and board dynamics and characteristics. Different expectations may affect Board members differently and the existence of Role Models may accentuate Boards characteristics.

Ahn (2014) posits that BoD have a meaningful role in managing and creating value for evolving high-growth firms. When referring to HGF Boards we explore on their capabilities in expansion, replicability, and synchronization as effective board functions can translate external resources and supports into strategic actions that drive growth. Board members bring valuable resources, expertise, and networks to HGFs, enhancing the firm's dynamic capabilities. Their involvement in strategic decision-making and resource attraction is expected to positively influence the firm's ability to adapt and grow, thus leading to our first hypothesis:

H1: Informal Factors have a positive effect on High Growth Firms' Boards.

When referring to a 'positive effect,' we specifically mean improvements in the effectiveness of board-level work, including enhanced decision-making, strategic oversight, and engagement with firm leadership. This could result in better alignment of resources for scaling, more effective risk management, or increased coordination among board members to support the firm's growth trajectory.

Formal institutions consist of officially written and accepted rules, including those codified within the legal framework and rule of law. They encompass property rights, free trade laws, tax policies, availability of external finance, procedures for startup and business licensing, permits, and other regulatory dimensions essential for the functioning of the market economy. (Krasniqi and Desai 2016). Firms with growth intentions need to ensure they can protect their products and investments made in order to create them, e.g., intellectual property, to harvest a productive investment. We propose to assess how Formal factors, in our case a formative variable including government policies, labour laws and mobility conditions, access to capital, entrepreneurship education levels, and ease of doing business and entry, positively affect HGFs' Boards, which leads to our second hypothesis:

H2: Formal Factors have a positive effect on High Growth Firms' Boards.

Informal institutions are deeply embedded values and norms that influence individual behaviour. The process of change in social practices is gradual, as noted by Chowdhury, Audretsch, and Belitski (2019). These institutions are often path-dependent, meaning they evolve slowly over time is slow and informal institutions can be path-dependent, which means they change slowly. In our third hypothesis we explore whether informal factors such as family and friends' support, industry experience, media influence, social networks, perceived corruption, and role models positively influence HGFs' growth intentions. As highlighted by Nucci, Byrne, and Dimov (2024) the existence of role models is essential in the entrepreneurial journey, as they provide inspiration, impart crucial skills, and foster emotional resilience, which are vital not only when starting but as pointed throughout the scaling stage. Furthermore, they help mitigate fears of failure. This makes our Hypothesis 3 particularly compelling, as it seeks to quantify and contextualize their impact on growth intention.

H3: Informal Factors have a positive effect on High Growth Intention (HGI).

Wiklund and Scheperd expand the boundaries of organizational design research to include governance structures, arguing that boards are integral to entrepreneurial organizational design. They suggest that in firms where the CEO is a founder or holds significant equity, traditional agency problems are minimized, and the board's role shifts towards resource attraction and managerial involvement (Beckman, Haunschild, and Phillips 2004). This dynamic highlight the importance of board composition in influencing firm growth and decision-making processes, so the next hypothesis explores the extent that formal factors effect growth intention.

H4: Formal Factors have positive effect on HGI.

Next in this study we aim to specifically assess how the Boards influence High-Growth Intentions (Rasmussen, Ladegård, and Korhonen-Sande 2018). As Rasmussen et al. posit "continuing growth in high-growth firms requires that the board of directors is able to align its interests toward growth". We explore to what extent HGFs Boards may impact High Growth Intention as they address the paradox of short-term rapid growth and long-term sustainability

(Sundaramurthy and Lewis 2003). The role of the board in managing the tensions between control and empowerment, leadership and oversight, innovation and stability while scaling-up (Waldman et al. 2019). Therefore, to provide insights into how governance mechanisms support high-growth trajectories and intention (HGI), we propose our hypothesis 5:

H5: HGF Boards positively effect High Growth Intention (HGI).

Lastly, we hypothesize that the effects in our previous hypothesis may change according to the different typology of HGF proposed by Jansen et al. (2023). Specifically, four different typologies of HGFs are identified according to its high-growth pace (above forty percent considered hypergrowth) and firm age (more or less than ten years). These include young high-growth (gazelles), young hyper-growth firms (scale-ups), mature HGFs, and superstars (hypergrowth above ten years of firm age). Each type has unique characteristics and challenges that may influence the effectiveness of formal and informal institutional factors and board dynamics in fostering HGI. Therefore, we propose the following hypothesis:

H6: The relationship between Formal Factors, Informal Factors, Boards and HGI varies across different types of HGF.

6.3. Data and Methodology

6.3.1. Sample

The sample for this study comprised high-growth companies based in Europe. The data collection phase commenced in January 2023 and concluded in January 2024.

Identifying high-growth companies is inherently challenging due to the private nature of most firms and the limited availability of up-to-date, precise, publicly accessible data on employee numbers or revenue over consecutive years (Demir, Wennberg, and McKelvie 2017). Delmar, Davidsson, and Gartner (2003) emphasize the importance of selecting an appropriate growth indicator; accordingly, our selected sample comprised firms demonstrating an average growth rate exceeding 20% in revenue and/or full-time equivalent (FTE) employees over three years, in alignment with the OECD (2007) definition of HGFs. This definition is corroborated by scholarly consensus (Faems et al. 2024; Belitski et al. 2023; Coviello et al. 2024), which recognizes HGFs as firms maintaining a specific growth rate over a designated period (A. Coad et al. 2014).

Utilizing data from the Orbis database, complemented by data from LinkedIn and Crunchbase, the researchers systematically contacted the founders via email, outlining the study's objectives and soliciting their participation in a structured Qualtrics survey. The survey, written in English, was disseminated to 840 HGFs, yielding 169 completed responses, corresponding to a response rate of 20.12%. No patterns were identified in the missing values; thus, the observations were deleted. While the final sample includes firms from diverse industries and countries, it is essential to consider how closely this sample mirrors the overall population of high-growth firms across Europe. To assess representativeness, we compared the distribution of our respondents to publicly available industry and geographic data on HGFs, ensuring that our sample reflects the broader landscape. Although minor discrepancies were identified, particularly in specific countries where it was not possible to obtain answers, these differences are unlikely to introduce significant bias, given the diversity and spread of the overall sample. The final sample included firms from eight distinct industries across 12 countries, ensuring a diverse and representative cross-section of the scale-up firm landscape.

This rigorous sampling methodology ensures the reliability and validity of our findings, providing a solid foundation for analysing the configurations of growth-enabling activities within high-growth firms. Table 6.1. illustrates the distribution of companies by firm age, industry, and location of headquarter, HGF Typology (Jansen et al. 2023) and whether they have pursued any acquisition or not.

Table 6.1. – Respondent Information

		N Frequency	Share of Total (percent)
Firm Age			
	1-5 y	21	12.4%
	6-9y	78	46.2%
	10-14y	50	29.6%
	15y more	20	11.8%
	Total	169	100.0%
Industry			
	Consumer Internet	11	6.5%
	Energy	15	8.9%
	Financial	21	12.4%
	Healthcare	30	17.8%
	Industrial Technology	10	5.9%
	Manufacturing	25	14.8%
	Services	14	8.3%
	Software	43	25.4%
	Total	169	100.0%
HQ Country			
	Austria	6	3.6%
	Belgium	19	11.2%
	France	21	12.4%
	Germany	15	8.9%
	Italy	4	2.4%
	Netherlands	6	3.6%
	Norway	5	3.0%
	Poland	7	4.1%
	Portugal	17	10.1%
	Spain	15	8.9%
	Sweden	31	18.3%
	UK	23	13.6%
	Total	169	100.0%
HGF Typology			
	Gazelles	63	37.3%
	Scale-ups	36	21.3%
	Superstar	19	11.2%
	Mature HGF	51	30.2%
	Total	169	100.0%
Made at least 1 Acquisition			
	Yes	26	15.4%
	No	143	84.6%
	Total	169	100.0%

6.3.2. Variables and measures

Informal Institutional Factors. Drawing from institutional theory (North 1990), the first variable in our study, labelled "Informal Factors" encompasses five key items that address various social and cultural factors influencing the scaling-up process. The first item, Inf1_FoF (Informal 1 - Fear of Failure in Scaling-Up), measures the extent to which fear of failure impacts firms' efforts to scale up. It captures the psychological barriers and risk aversion that entrepreneurs and managers might experience during the scaling process. The second item, Inf2_Exp (Informal 2 - Expectations from Society about Scaling-Up), assesses the societal expectations placed on firms regarding their growth and scaling activities. It reflects how societal pressures and norms can influence the ambitions and strategies of scaling firms. The third item, Inf3_Soci (Informal 3 - Social & Cultural Norms), examines the influence of social and cultural norms, including traditions, customs, moral values, and religious beliefs, on the scaling process. This item highlights how deeply ingrained societal values can affect business practices and growth trajectories. The fourth item, Inf4_Corru (Informal 4 - Corruption Level), evaluates the perceived level of corruption within the business environment, considering how corruption can pose significant challenges to firms' scaling efforts by affecting their operational efficiency and ethical standards. Finally, the fifth item, Inf5_RoleM (Informal 5 - Existence of Role Models), measures the presence and influence of role models within the entrepreneurial ecosystem. It explores how the success of established entrepreneurs can inspire and guide new firms in their scaling endeavours. Collectively, these items provide a comprehensive understanding of the informal factors aligned with previous research (Urbano, Felix, and Aparicio 2021; Urbano, Aparicio, and Audretsch 2019b; Krasniqi and Desai 2016; Bruton, Ahlstrom, and Li 2010). In H1, informal factors refer to distinct social, cultural, and psychological elements that influence a firm's scaling process. These include fear of failure (Inf1_FoF), societal expectations (Inf2_Exp), social and cultural norms (Inf3_Soci), perceived corruption (Inf4_Corru), and the existence of role models (Inf5_RoleM). Each of these factors affects scaling in unique ways, such as influencing decision-making, resource mobilization, and strategic risk-taking. For instance, high levels of perceived corruption may act as a barrier to scaling by discouraging investment or creating inefficiencies, while the presence of role models can positively inspire firms to pursue aggressive growth.

Formal Institutional Factors. The second variable in our study, labelled "Formal Factors," consists of five crucial items that explore various institutional and regulatory elements affecting the scaling-up process. The first item, For1_Gov (Formal 1 - Government Policy), evaluates the impact of government policies, including taxes, bureaucracy, and incentives, on firms' scaling efforts. This item assesses how supportive or restrictive government actions can influence business growth. The second item, For2_Lab (Formal 2 - Labour Laws & Labour Mobility), examines the effects of labour laws and the mobility of the labour force on scaling activities. It considers how regulatory frameworks governing employment can facilitate or hinder a firm's ability to grow. The third item, For3_Acapi (Formal 3 - Access to Capital), focuses on the availability of capital and the development of entrepreneurial finance, evaluating how access to financial resources impacts the scaling process. This item highlights the importance of financial infrastructure in supporting business expansion. The fourth item, For4_Edu (Formal 4 - Entrepreneurship Education), assesses the role of entrepreneurship education in scaling activities. It explores how educational programs and initiatives designed to foster entrepreneurial skills and knowledge can influence a firm's growth trajectory. Lastly, the fifth item, For5_Ease (Formal 5 - Ease of Entry), measures the ease of entering the market, considering factors such as legal contracts, governance, and the cost of compliance. This item evaluates how regulatory conditions, and administrative barriers can affect new firms' ability to scale.

HGF Boards is the third latent variable in our study, and it is measured by three items, each assessed on a seven-point Likert scale (1 signifying complete disagreement, and 7 signifying complete agreement). The first item, *BoD_Dyna* (BoD_Dynamic Capabilities), evaluates the importance of the Board's role in guiding the scaling-up process (Wilden et al. 2013). This includes aspects such as dynamic capabilities for expansion - geographic, product or user base, developing a playbook for replicability, that is spreading excellence and knowledge across different domains, and synchronization through coordination across domains to foster collaboration and reduce conflicts (Teece, Pisano, and Shuen 1997; Teece 2007). The second item, *BoD_Stage*, investigates how board composition impacts growth at various stages of the firm's development (Bruneel, Gaeremynck, and Weemaes 2022; Garg and Furr 2017; Gompers et al. 2020). The third item, *BoD_Charac*, measures the importance of board composition characteristics. This includes factors such as previous operational management experience, cultural fit, industry knowledge, business model knowledge, product/technology expertise, and the influence of having board members with a background as former operators on improving growth odds (Pucheta-Martínez and Gallego-Álvarez 2020). Collectively, these items provide a comprehensive evaluation of the role and configuration of BoD in high-growth firms.

High-Growth Intention (HGI). To assess high-growth intention, we utilized a two-item, seven-point Likert scale (1 signifying complete disagreement, and 7 signifying complete agreement). This scale included two questions designed to gauge: (a) the intentionality and influence of high growth, and (b) the importance of high growth over the next five years.

The measurement of growth intentions has been approached in various ways in prior research, with employment and revenue intentions being the most commonly used indicators. Wiklund, Davidsson, and Delmar (2003) emphasize the necessity of defining a specific growth amount over a set period when evaluating growth intentions. By employing a two-item measure with proven reliability, we follow a tradition established in numerous studies examining growth intentions (Rasmussen, Ladegård, and Korhonen-Sande 2018; Wiklund and Shepherd 2005; Delmar, Davidsson, and Gartner 2003).

Control variables. Businesses of varying ages may exhibit different organizational and environmental characteristics, which in turn can influence their performance. The same variability applies to firms across different industries and countries. Therefore, we included several control variables in our analysis to account for these differences.

To determine the industry and the location of the headquarters, respondents were asked to identify the firm's main business and the location of its headquarters. Additionally, we inquired whether the firms had engaged in acquisitions.

Respondents were also asked to provide the year their firms were founded, which was used to calculate the firm age. Furthermore, respondents were asked to report the number of individuals working in the firm both at the present time and over the past three years. To validate these estimates, we cross-referenced the data with information available on LinkedIn and Crunchbase to determine the full-time equivalent number of employees and its growth rate. The variable "HGF Typology," as defined by Jansen et al. (2023), classifies firms into four types based on a matrix of age (more or less than 10 years) and growth pace (20% to 40% growth, and hypergrowth above 40%). Typology was also used as a control variable to account for differences with firms considered one of possible types: Gazelles, Scale-Ups, SuperScalers or Mature HGF.

6.3.3. Data Analysis

For our data analysis, we employed Structural Equation Modelling (SEM), a statistical method that facilitates the examination of complex relationships between multiple variables, including both direct and indirect effects (Manley et al. 2021). SEM has been extensively utilized in behavioural sciences over the past decade due to its robust capability to analyse sets of relationships among independent and dependent variables, whether continuous or discrete (Guerrero, Heaton, and Urbano 2021; Dennis Cook and Forzani 2023). This technique enables the observation of each variable's weight, thus elucidating their direct and indirect contributions to the relationships among constructs (Cheung and Lau 2008; Petter and Hadavi 2023).

To perform the SEM, we first corroborated the correlations, reliability, and validity of the constructs through confirmatory factor analysis and Cronbach's alpha with acceptable parameters. Furthermore, we examined the correlation between determinant constructs and found no significant covariance, ensuring the robustness of our model. Our approach allowed us to thoroughly test the proposed hypotheses. The means, standard deviations, and correlations for all the variables are presented in Table 6.2. Furthermore, we used the *plsplm* package in RStudio 4.4.1 to perform all calculations (Hair, Howard, and Nitzl 2020).

Table 6.2 – Means, Standard Deviations, and Correlations among the examined Variables for HGF

		Mean	Standard Deviation	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Inf1_FoF	3.22	1.58	1													
2	Inf2_Exp	3.29	1.71	0.46	1												
3	Inf3_Soci	3.73	1.99	0.25	0.55	1											
4	Inf4_Corru	3.67	2.3	0.20	0.23	0.52	1										
5	Inf5_RoleM	4.26	1.79	0.31	0.37	0.50	0.44	1									
6	For1_Gov	4.82	1.75	0.19	0.31	0.39	0.45	0.43	1								
7	For2_Lab	4.57	1.69	0.22	0.21	0.31	0.46	0.30	0.50	1							
8	For3_Acapi	5.74	1.16	-0.06	-0.11	-0.12	-0.23	-0.14	-0.06	0.01	1						
9	For4_Edu	4.56	1.71	0.15	0.23	0.38	0.42	0.32	0.29	0.41	0.10	1					
10	For5_Ease	5.01	1.33	0.19	0.28	0.36	0.40	0.28	0.36	0.42	0.11	0.52	1				
11	BoD_Dyna	5	1.35	0.25	0.20	0.19	0.35	0.12	0.17	0.19	-0.06	0.17	0.28	1			
12	BoD_Stage	5.31	1.13	0.26	0.24	0.33	0.22	0.21	0.20	0.08	0.04	0.17	0.11	0.46	1		
13	BoD_Charac	5.53	0.87	0.09	0.24	0.29	0.09	0.19	0.27	0.18	0.20	0.26	0.26	0.08	0.34	1	
14	HGI_a	5.51	1.25	0.10	0.19	0.22	0.31	0.21	0.19	0.18	-0.06	0.18	0.20	0.28	0.32	0.22	1
15	HGI_b	4.76	1.55	0.27	0.30	0.42	0.51	0.36	0.24	0.31	0.02	0.36	0.41	0.23	0.20	0.15	0.18

N = 169

Subsequently, we tested the conceptual model using the entire sample (Model I) and then split the sample by Typology (Model II). This approach allowed us to examine the robustness of our findings across different firm types, providing a more nuanced understanding of how various factors impact across different typologies of HGFs. By comparing these models, we were able to identify any variations in the relationships among the variables that may arise due to differences in firm typology, thereby enhancing the generalizability and depth of our analysis.

6.4. Findings

To test our hypotheses, we first performed Partial Least Squares Structural Equation Modelling (PLS SEM) on the full sample. The results are presented in Table 6.3, Table 6.4 and Figure 6.2.

Table 6.3 – Constructs and PLS SEM Model I Results

OUTER MODEL

		weight	loading
LV1			
	Inf1_FoF	0.208	0.519
	Inf2_Exp	0.252	0.626
	Inf3_Soci	0.206	0.756
	Inf4_Corru	0.638	0.865
	Inf5_RoleM	0.046	0.589
LV2			
	For1_Gov	0.304	0.662
	For2_Lab	0.139	0.646
	For3_Acapi	0.007	0.066
	For4_Edu	0.328	0.750
	For5_Ease	0.532	0.870
LV3			
	BoD_Dyna	0.661	0.802

	BoD_Stage	0.218	0.694
	BoD_Charac	0.504	0.633
LV4			
	HGI_a	0.542	0.679
	HGI_b	0.747	0.846

Table 6.4. – Structural Model I Evaluation

Relationships	Hypothesis Description	Weight (Path Coefficient)	p-value	Mean.Boot	Std.Error	Conclusion
LV1->LV3	H1 Informal Factors have a positive effect on HGF Boards	0.289	0.0011	0.305	0.098	Significant p<0.01
LV2->LV3	H2 Formal Factors have a positive effect on HGF Boards	0.218	0.0135	0.239	0.097	Significant p<0.05
LV1->LV4	H3 Informal Factors have a positive effect on HGI	0.445	0.0000	0.446	0.078	Significant p<0.01
LV2->LV4	H4 Formal Factors have a positive effect on HGI	0.138	0.0798	0.161	0.090	Not Significant (p>0.05)
LV3->LV4	H5 HGF Boards positively affect HGI	0.154	0.0255	0.141	0.082	Significant p<0.05

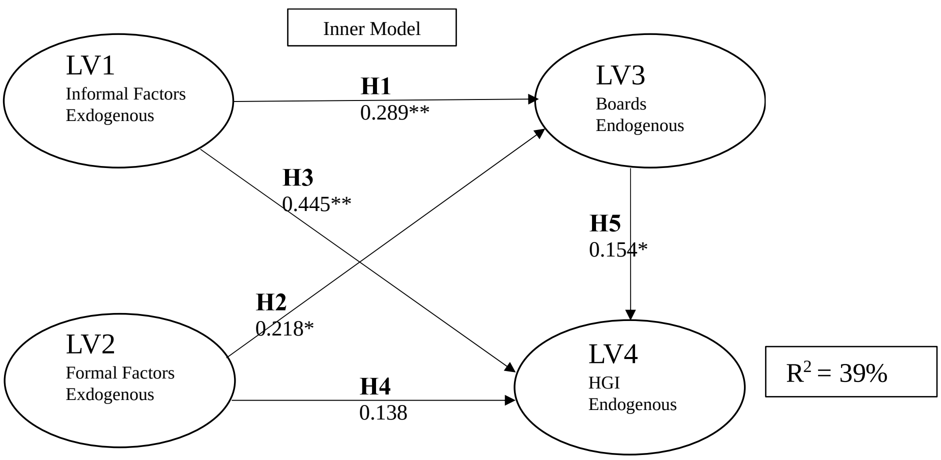


Figure 6.2: Visualization of Model I Results with the validated hypotheses.

The analysis of the Partial Least Squares Path Modelling (PLS-PM) has yielded several important insights regarding the relationships between the latent variables (LV1, LV2, LV3, and LV4) and their indicators.

The path coefficient from LV1 to LV3 is 0.289, with a significant p-value of 0.00114, indicating that LV1 (Informal Institutional Factors) has a significant positive impact on LV3 (Board Characteristics). Similarly, the path coefficient from LV2 to LV3 is 0.218, with a significant p-value of 0.01348, demonstrating that LV2 (Formal Institutional Factors) significantly influences LV3. The path coefficient from LV1 to LV4 is 0.445, with a highly significant p-value of 0.0000, suggesting that LV1 strongly influences LV4 (High Growth Indicators). Additionally, the path coefficient from LV3 to LV4 is 0.154, with a significant p-value of 0.0255, indicating that LV3 positively impacts LV4. The path coefficient from LV2 to LV4 is 0.138, with a non-significant p-value of 0.0798, suggesting a less robust potential influence of LV2 on LV4.

The R-squared value for LV3 (Board Characteristics) is 0.208, meaning that 20.8% of the variance in LV3 is explained by LV1 and LV2. For LV4 (High Growth Indicators), the R-squared value is 0.39, indicating that 39.0% of the variance in LV4 is explained by LV1, LV2, and LV3.

The Goodness-of-Fit (GoF) value is 0.3792, indicating a good overall fit for the model. This value is considered adequate for PLS-PM, showing that the model reasonably represents the data. Bootstrap confidence intervals confirm the significance of the paths, with confidence intervals not crossing zero for most paths, adding robustness to the findings.

In the detailed outer model findings, LV1 (Informal Institutional Factors) is well-represented by Inf1_FoF, Inf2_Exp, Inf3_Soci, Inf4_Corru, and Inf5_RoleM, all of which have significant loadings. Inf5_Corru has the highest weight and loading, suggesting it is the most influential indicator of LV1. LV2 (Formal Institutional Factors) is significantly indicated by For1_Gov, For2_Lab, For4_Acapi, For5_Edu, and For6_Ease, with For6_Ease having the highest weight and loading, indicating its prominence. For LV3 (Board Characteristics), BoD_Dyna, BoD_Stage, and BoD_Charac are significant indicators, with BoD_Dyna showing the highest weight and loading, suggesting its critical role. Lastly, LV4 (High Growth Indicators) is significantly indicated by HGI_a and HGI_b, with HGI_b having a higher loading compared to HGI_a, indicating its greater influence on LV4.

Table 6.5. presents the results of splitting the sample by HGF Typology (Model II).

Hypothesis	Relationships	Gazelle (N=63)	MatureHGF (N=51)	ScaleUp (N=36)	SuperStar (N=19)
H1 Informal Factors have a positive effect on HGF Boards	LV1 -> LV3	**β = 0.554, p < 0.05**	**β = 0.314, p < 0.05**	β = 0.192, p > 0.05	β = 0.478, p > 0.05
H2 Formal Factors have a positive effect on HGF Boards	LV2 -> LV3	β = 0.171, p > 0.05	β = 0.221, p > 0.05	β = 0.261, p > 0.05	β = 0.246, p > 0.05
H3 Informal Factors have a positive effect on HGI	LV1 -> LV4	**β = 0.467, p < 0.05**	β = 0.249, p > 0.05	**β = 0.434, p < 0.05**	β = 0.471, p > 0.05
H4 Formal Factors have a positive effect on HGI	LV2 -> LV4	β = 0.136, p > 0.05	**β = 0.385, p < 0.05**	**β = 0.380, p < 0.05**	β = 0.384, p > 0.05
H5 HGF Boards positively affect HGI	LV3 -> LV4	β = 0.138, p > 0.05	**β = 0.254, p < 0.05**	β = -0.148, p > 0.05	β = -0.014, p > 0.05

Table 6.5. – Structural Model II Evaluation by HGF Typology

The evaluation of the structural model by HGF typology reveals nuanced insights into the differential impacts of institutional factors on HGF boards and high growth intentions (HGI) across various firm types: *Gazelles, Mature HGFs, ScaleUps,* and *SuperStars*. The analysis supports the significance of informal and formal institutional factors, as well as the capabilities of HGF boards, in shaping growth intentions, albeit with varying degrees of influence depending on the firm type. An important limitation to consider is the small sample size of the *SuperStar* typology.

For *Gazelles*, the results indicate a strong and significant impact of informal institutional factors on HGF boards (path coefficient = 0.554, p < 0.05), underscoring the importance of social norms, cultural values, and entrepreneurial networks in shaping board composition and functionality. However, the formal institutional factors did not show a significant effect on HGF boards (path coefficient = 0.171, p > 0.05). Informal factors also positively influenced HGI (path coefficient = 0.467, p < 0.05), while formal factors did not (path coefficient = 0.136, p > 0.05). The direct effect of HGF boards on HGI was not significant (path coefficient = 0.138, p > 0.05).

In *Mature HGFs*, informal institutional factors again significantly impacted HGF boards (path coefficient = 0.314, p < 0.05), but formal factors remained non-significant (path coefficient = 0.221, p > 0.05). Interestingly, both informal (path coefficient = 0.249, p > 0.05) and formal (path coefficient = 0.385, p < 0.05) factors influenced HGI, with formal factors having a more robust effect. The capabilities of HGF boards also significantly affected HGI (path coefficient = 0.254, $p < 0.05$).

For *ScaleUps*, the informal institutional factors did not significantly impact HGF boards (path coefficient = 0.192, $p > 0.05$), whereas formal factors did not either (path coefficient = 0.261, $p > 0.05$). Both informal (path coefficient = 0.434, $p < 0.05$) and formal (path coefficient = 0.380, $p < 0.05$) factors significantly influenced HGI, highlighting the role of both regulatory and socio-cultural environments in driving growth intentions. However, the direct effect of HGF boards on HGI was not significant (path coefficient = -0.148, $p > 0.05$).

Finally, in *SuperStars*, informal institutional factors had a non-significant impact on HGF boards (path coefficient = 0.478, $p > 0.05$), and formal factors also remained non-significant (path coefficient = 0.246, $p > 0.05$). The impact of informal factors on HGI was significant (path coefficient = 0.471, $p > 0.05$), while formal factors did not significantly influence HGI (path coefficient = 0.384, $p > 0.05$). The capabilities of HGF boards showed a negative and non-significant effect on HGI (path coefficient = -0.014, $p > 0.05$).

6.5. Discussion

In this chapter, we have examined how informal and formal factors affect boards in high-growth firms and how they affect High-Growth intentions (HGI). We have argued that HGI are influenced by boards as well as by institutional informal and formal factors (Bruton, Ahlstrom, and Li 2010; Chowdhury, Audretsch, and Belitski 2019). First, both informal (LV1) and formal (LV2) institutional factors have significant effects on Boards (LV3), as our H1 and H2 were found significant. Then we found that institutional factors play a significant role in shaping HGI corroborating existing theories (Krasniqi and Desai 2016; Urbano, Aparicio, and Audretsch 2019b) but more specifically, informal factors as H3 was significant but H4 (formal factors) was not significant. H5 was found significant with BoD proven to have a positive influence on HGI (LV4). This finding underscores the importance of the broader institutional environment in fostering a firm's growth ambitions. Informal factors, such as the presence of corruption and the role of media, showed a strong influence on the board's characteristics and dynamics, indicating that the socio-political environment can directly impact how boards function and strategize for growth. These results shed light on how institutions affect entrepreneurial governance through HGF Boards and some marginal significance that can be a catalyst for high-growth intentions. The direct path from board characteristics (LV3) to HGIs (LV4) suggests that boards are not just passive actors but active drivers of a firm's growth intentions. This finding extends the work of Rasmussen et al. (2018), who emphasized the strategic role of boards in high-growth firms. Our study increases their findings by showing that different board characteristics, have a direct impact on a firm’s growth intentions (Knockaert and Ucbasaran 2013; Garg and Furr 2017). The interaction between the board characteristics and both informal and formal institutional factors further suggests the interplay that while institutional factors set the stage for growth, it is the boards that harness these conditions and translate them into strategic growth intentions. The significant path coefficients from LV1 to LV3 (0.32) and from LV2 to LV3 (0.19) reinforce this role, showing that both types of institutional factors significantly impact board characteristics. Wasserman (2003) revealed that successful CEO-founders are more likely to be replaced by professional managers, as success often involves securing funds from external investors who typically advocate for this transition. Drawing upon insights from Kaplan and Strömberg (2001), we enhance our comprehension of what factors empower boards leading HGFs across Europe.

The results from Model II underscore the critical role of both informal and formal institutional factors in shaping the effectiveness of HGF boards and fostering high growth intentions (HGI) across various typologies of high-growth firms (HGFs). The differential impacts observed across *Gazelles, Mature HGFs, ScaleUps,* and *SuperStars* reveal the nuanced ways in which typology is defined. We acknowledge the concerns raised by Coviello et al. (2024) regarding the definition and typology of high-growth firms (HGFs). Specifically, authors highlight the ambiguities in defining what constitutes 'high' growth, whether the growth is organic, acquisitive, or a combination of both, and the limitations of using minimum benchmarks which may not account for firm-specific or sector-specific idiosyncrasies. Still, the findings of our Model II underscore the complexity and heterogeneity in the drivers of high growth intentions across different types of high-growth firms with various hypothesis being non-significant. Despite with variability most results still hold the strong influence of informal institutional factors. Consequently, a more fine-grained analysis may be needed to establish solid theories regarding the various typologies of HGF and how institutional factors may affect each different type can constitute an interesting avenue for further research.

6.6. Theoretical and Practical Implications, Limitations and Future Research

Our study should be considered a preliminary attempt to analyse the effects of institutional factors on a specific subset of firms: high-growth firms (HGFs). The use of different definitions necessitates further validation in a broader context, such as incorporating data from other types of scaling firms (Coviello et al. 2024).

The chapter makes contributions to theory in three broad areas. First, the results add to the literature on the nature of and relative importance of institutional factors particularly in the HGF. Second this study contributes to the expanding body of research on scaling (DeSantola and Gulati, 2017; DeSantola, Gulati, and Zhelyazkov, 2023) and responds to the growing demand for deeper insights into this multifaceted topic (Jansen et al., 2023; Dushnitsky and Matusik, 2019). By utilizing institutional lenses (Tippmann et al., 2021; North, 1990, 2005), we found evidence supporting the effect of institutional factors on HGF boards as suggested by Chatterjee et al. (2021) and Schweitzer et al. (2022). This study thus adds to the theoretical understanding of how institutional environments shape the governance of Boards and contributes to a richer understanding of leadership and leaders in this context (Coviello et al. 2024) and how it influences high-growth intentions. Third, this study answers a call to measure the extent of the effects between institutional factors and entrepreneurship (Chowdhury, Audretsch, and Belitski 2019) explaining the role which formal and informal institutions play in HGFs.

Our findings carry significant managerial and practical implications. This study underscores the critical role that both informal and formal institutional factors play in shaping the characteristics of high-growth firm (HGF) boards. These board configurations, in turn, are pivotal in fostering High Growth Intentions (HGI) within firms. Understanding these dynamics can aid managers and policymakers in designing strategies that leverage institutional environments to cultivate effective board structures, ultimately driving firm growth and performance. This underscores the importance of a balanced approach in nurturing both types of institutions for organizational growth. Practitioners and policymakers should particularly focus on improving key indicators like corruption control (Inf4_Corru) and ease of doing business (For5_Ease), as these have the highest impact within their respective latent variables. From an HGF Board development perspective, firms should invest in developing strong board characteristics as these have a significant impact on achieving high growth (Rasmussen, Ladegård, and Korhonen-Sande 2018). We corroborate Eckhardt and Shane (2011) indication that policies supporting HGFs should be tailored to the specific conditions of different national economies and sectors, rather than being uniformly applied. For policymakers, our findings in particular from Model II suggest that authorities should avoid imposing uniform regulations for board composition across all types of companies (Jansen et al. 2023). The impact of board diversity on performance can vary significantly depending on a firm's stage in its life cycle and its strategic objectives. Corporate governance codes that are appropriate for large, mature firms may not provide effective guidance for managers in high-growth firms regarding the composition of efficient boards (Somaya and You 2024). Tailored governance frameworks are necessary to address the unique needs and challenges of high-growth firms.

The main limitation of our study is the challenging nature of data collection from high-growth firms, which represent an extremely difficult sample to access. Consequently, our sample size is relatively small, albeit unique and valuable within this context. Although the sample is diverse, the possibility of non-response bias and self-selection bias should be considered. Firms experiencing more positive growth outcomes may have been more likely to respond, which could affect the generalizability of the findings. Additionally, given the cross-sectional nature of the data, it is difficult to establish causal relationships between growth-enabling activities and firm performance. Future research could address these issues by employing longitudinal designs or exploring more robust causal inference techniques.

Future studies could delve deeper into the not significant relationship between formal factors and high growth intention to better understand the underlying dynamics. Additionally, scholars might explore other aspects that influence HGF boards by considering additional constructs at the CEO level, such as self-efficacy (Chen, G., Gully, S. M., & Eden, D., 2001), optimism (Nießen et al., 2022), need for achievement (Steers and Braunstein, 1976), or risk propensity. These avenues of research could provide a more comprehensive understanding of the factors that drive growth and effectiveness in high-growth firms. Lastly, future studies are encouraged to employ longitudinal designs and follow these HGFs for extended periods of time.

6.7. Conclusion

In this chapter, we seek to better understand to what extent institutional factors affect HGF Boards and their High growth intention. We survey 169 HGF in Europe and analysed data with

Structural Equation Modelling PLS. To our knowledge, this study is the first to establish a direct relationship between institutional factors, boards, and high-growth intentions in high-growth firms. The significance of institutions for leadership highlights a gap in research (Urbano, Felix, and Aparicio 2021), as the exploration of leadership from an institutional perspective remains limited (Meador & Skerratt, 2017; Wallman, 2009) and the importance of boards in influencing HGI cannot be overstated. Our findings align with the literature on scaling and high-growth firms (Autio et al. 2021; Coviello et al. 2024), and in particular the work of Norbäck, Persson, and Tåg (2024), who emphasize the strategic role of venture capital in promoting aggressive scaling and research strategies. This finding corroborates Rasmussen et al. (2018) assertion that board composition and governance structures are crucial for driving growth-oriented intentions in firms. However, the current research design does not permit the confirmation of moderating or mediating effects. This limitation opens a promising avenue for future research, inviting scholars to explore these potential influences in greater depth.

Finally, our results also are potentially relevant for practitioners, particularly policymakers that have been showing increased interest in the topic creating multiple initiatives like European Innovation Council's ScaleUp 100 initiative or ScaleUp USA and for the entrepreneurs who are interested in improving their Boards characteristics and develop their High Growth intentions.

CHAPTER 7. MAIN CONCLUSIONS

This dissertation has undertaken a comprehensive exploration of the dynamics of scaling-up in high-growth entrepreneurial ventures across Europe. Despite its importance there is a clear gap of research in this field (Jansen et al. 2023; DeSantola and Gulati 2017; Autio et al. 2021), starting with unclear definitions. First, we acknowledge that high growth and scaling are fundamentally distinct aligning with Coviello et al. (2024). High growth firms, measured according to outputs, namely by the revenue growth over a period of at least three years or employee growth (OECD 2007) have a vital role for economy (N. Lee 2014). Few firms achieve high growth and even fewer are able to persist it over time. A subset of these companies experience an organizational process labelled as Scaling - that involves not only expanding the customer base but also rapidly and synchronously building capacity. Simultaneously, firms must transform their internal processes, systems, structures, and resources to effectively support this accelerated growth. Through a systematic investigation into existing knowledge complemented with works on institutional factors, learning capabilities, scaling mindsets, and serendipity, this work contributes to the existing literature on entrepreneurship, high-growth firms and scaling. The insights derived from this study offer a nuanced understanding of the multifaceted nature of high growth and scaling, providing both theoretical advancements and practical implications. Several research techniques have been applied throughout the thesis including systematic literature review using bibliometrics, inductive qualitative using Gioia methodology, and Partial Least Squares with Structural Equation modelling. Table 7.1. summarizes the main findings of this thesis.

Table 7.1. Dissertation Main Findings

Chapter	Research Focus	Key Findings
Two	SLR of High-Growth Firms and Scaling Research Question: What do we know about HGF?	Using bibliometrics author has identified research gaps, and bridged gaps in theory. Proposed a future research agenda, and a cohesive framework to guide future studies in the HGF field.
Three	Learning Processes during Scaling Research Question: How do HGF evolve their learning processes while scaling up?	Highlighted the importance of Learning processes and observed their evolution during the scaling process. Diverse knowledge and social learning processes are critical for successful scaling. Understanding of how learning capabilities are leveraged within high-growth firms
Four	Scaling Mindset Research Question: What are the key components that constitute a scaling mindset?	In this conceptual chapter author introduces the 'Pillars for Fostering a Scaling Mindset' framework, emphasizing the critical role of cognitive orientations and strategic imperatives in navigating growth. Highlighted the influence of institutional factors and the importance of balancing scaling paradoxes.
Five	Serendipity, Improvisation, and Scaling Research Question: How HGF firms capitalize on chance events for exponential growth?	Through a multiple case study observed the role of flexibility and responsiveness to Serendipitous opportunities and improvisation, crucial in unlocking scaling episodes. The findings underscore the importance of fostering receptivity to the unforeseen and readiness for spontaneous action as key enablers for harnessing unplanned prospects.
Six	Institutional Factors, Governance, and Ecosystem Dynamics in High-Growth Firms Research Question: To what extent institutional factors affect HGF and their scaling-up process?	Using data from a survey (169 complete answers) author explored the how various institutional factors and governance structures influence the scaling process and impact on High growth intention (HGI). Findings indicate that certain formal and informal factors have significant positive impact on Boards and HGI.

7.1. Key Findings and Contributions

In the second chapter of this dissertation, a comprehensive and systematic literature review was conducted through a bibliometric analysis of articles from the Web of Science database, providing state-of-the-art insights into the current trends and future directions of High-Growth Firms (HGFs) and scaling. This foundational effort clarified definitions, highlighted critical issues, and traced the evolution of key concepts over the past 25 years through detailed content analysis of predominant topics and their trajectories. By synthesizing the fragmented research and diverse theoretical perspectives, the chapter identified significant gaps in the existing literature and proposed a comprehensive future research agenda. This work effectively set the stage for a more cohesive and integrated understanding of HGFs, contributing to the unravelling of their complexities and elucidating their profound impact on the broader economic landscape.

The third chapter delved deeply into the role of entrepreneurial learning during the scaling process, with a particular focus on the importance of diverse knowledge resources. By empirically examining both learning and unlearning mechanisms within high-growth firms, this chapter emphasized the necessity of maintaining agile and effective learning processes that can adapt and evolve alongside the firm's growth. The analysis highlighted the critical role that entrepreneurial resources play in scaling, enhancing our theoretical understanding of how these resources impact a firm's ability to scale successfully. The findings suggest that maintaining small, iterative learning loops is essential for fostering the flexibility and adaptability required in dynamic scaling environments. Moreover, chapter 3 explored the key social learning processes across various high-growth firms, including gazelles, scale-ups, superstars, and mature HGFs. By investigating ten high-growth firms in Europe within diverse institutional contexts, this chapter developed an emergent theoretical framework that captures the evolution of learning processes during the scaling-up phases. The research uncovered a progressive learning trajectory within these firms, highlighting a transition from individual trial-and-error approaches to sophisticated global team-of-teams social learning practices. This progression encapsulates stages ranging from experiential learning and social problem-solving to collective knowledge creation and strategic learning adaptation. By responding to recent scholarly calls, this work significantly enriches the understanding of learning processes within high-growth firms, offering a nuanced perspective on how these processes drive successful scaling.

Building upon the exploration of learning processes in Chapter 3, the fourth chapter shifts focus to the psychological and strategic dimensions of scaling, specifically examining the scaling mindset within entrepreneurial teams. This chapter reveals how the attitudes and approaches of these teams play a pivotal role in shaping the growth trajectory of high-growth firms. By linking the importance of learning from the previous chapter with the necessity of a strong, growth-oriented mindset, this analysis underscores how cognitive orientations, alongside learning mechanisms, are essential in navigating the complexities of scaling. The findings emphasize that a positive and strategic mindset is not merely an internal cognitive tool but a critical external driver that influences how firms adapt to and capitalize on opportunities during rapid expansion. Chapter 4 delves deeper into the concept of the scaling mindset, a crucial yet often overlooked factor in the success of high-growth companies. Characterized by a growth-focused entrepreneurial attitude, the scaling mindset serves as a strategic compass, guiding firms through the challenges of swift expansion and transformation. The chapter introduces a comprehensive theoretical framework that contrasts the scaling mindset with the broader entrepreneurial mindset, highlighting its unique role in enhancing a firm's scalability. By exploring the defining traits of the scaling mindset and its significance in business scalability, the analysis provides a nuanced understanding of the challenges it presents. Additionally, the chapter examines the dynamic nature of learning within this mindset, the influence of contextual and institutional factors, and proposes a practical, actionable model. This model aims to bridge the gap between theory and practice, offering valuable insights for both academics and practitioners in the field of entrepreneurship and high-growth ventures.

Building on the insights from the previous chapters, which explored the cognitive and strategic dimensions of scaling, Chapter 5 shifts the focus to the less conventional yet equally critical factors of serendipity and improvisation in the scaling process. Through in-depth interviews with scale-up founders, this qualitative study delves into how these elements contribute to successful scaling, particularly in high-growth firms. By recognizing serendipity as more than just fortuitous occurrences, but as an organizational competence intertwined with the ability to improvise, this chapter adds a novel dimension to the understanding of entrepreneurial growth. The connection between learning, mindset, and adaptive strategies established in earlier chapters is further expanded here, emphasizing how high-growth firms can effectively harness the unexpected to fuel their expansion. Chapter 5 offers a detailed analysis of how serendipity and improvisation are pivotal in scaling up, reframing serendipity from mere chance to a strategic organizational capability. Through a multi-case study involving fourteen European scaleups, the research examines the synergy between unforeseen opportunities and agile responses, revealing how these dynamics shape strategic direction and expansion. The findings underscore the necessity of cultivating an openness to unplanned events and the ability to act spontaneously as crucial enablers of scaling. Serendipity and improvisation emerge as strategic scaling capabilities, broadening the understanding of how firms can embrace unpredictability and leverage adaptive mechanisms to achieve sustained high growth. This chapter contributes significantly to the literature on scaling by providing substantive strategies for leaders to enhance their organizations' potential, thus enriching the ongoing discourse on effectuation, bricolage, and the broader scaling process.

Following the exploration of cognitive, strategic, and adaptive mechanisms in the earlier chapters, the sixth chapter shifts to an empirical investigation of the institutional factors that influence the governance and growth intentions of high-growth firms (HGFs). Using Structural Equation Modelling (SEM) with Partial Least Squares (PLS), this chapter analyses data from a comprehensive survey of 169 European HGFs. The findings highlight the crucial role that supportive institutional frameworks and robust governance structures play in facilitating the scaling process. This chapter deepens our understanding of how both informal and formal institutional factors interact with board characteristics to shape growth intentions, thereby connecting the broader institutional environment to the internal governance dynamics of scaling firms.

Chapter 6 specifically investigates the impact of various informal and formal factors on the boards of HGFs and their subsequent influence on growth intentions. The study hypothesizes that informal factors—such as fear of failure, social networks, perceived corruption, and role models—along with formal factors—including government policies, access to capital, and ease of doing business—significantly affect the governance structures of HGFs. The analysis reveals that access to capital and ease of doing business are particularly significant predictors of positive growth intentions. Furthermore, board characteristics, such as decision-making efficiency and industry expertise, are found to be critical in fostering high growth intentions. These findings underscore the interplay between institutional factors and board composition in driving the growth trajectories of HGFs. The chapter's contribution lies in its empirical validation of how institutional environments, coupled with effective governance, are essential for realizing the growth potential of high-growth firms.

7.2. Implications for Practice and Policy

The insights derived from this dissertation carry significant implications for both practice and policy, offering actionable guidance for entrepreneurs, managers, and policymakers striving to enhance the growth trajectories of high-growth firms (HGFs).

The findings underscore the critical importance of fostering a learning-oriented culture within organizations. Entrepreneurs and managers should prioritize the development of a scaling mindset that integrates strategic foresight with a deep understanding of the dynamic environment in which their firms operate. By embracing a learning orientation, firms can more effectively harness diverse knowledge resources and continuously adapt their strategies to changing circumstances. This is particularly crucial in high-growth contexts, where the ability to learn and unlearn rapidly can be a decisive factor in sustaining growth. Moreover, cultivating a strategic scaling mindset is essential. This involves not only setting ambitious growth targets but also building the cognitive and organizational capacities required to achieve them. Managers should focus on nurturing the psychological resilience and strategic agility of their teams, enabling them to navigate the complexities of scaling. The research also highlights the value of being open to serendipitous opportunities—unexpected events that can catalyse growth if recognized and leveraged appropriately. Managers should foster an organizational culture that is receptive to such opportunities, encouraging teams to remain flexible and innovative in their approach to challenges.

In addition, the study emphasizes the need for building adaptive and resilient organizational structures. High-growth firms should invest in governance frameworks and decision-making processes that can support sustained expansion. This includes developing dynamic capabilities that allow firms to respond swiftly to market shifts, institutional changes, and other external factors. Managers should also focus on enhancing the efficiency and expertise of their boards, ensuring that governance structures are aligned with the firm's growth objectives and are capable of steering the organization through periods of rapid expansion.

The implications for policymakers are equally profound. To support the growth of HGFs, it is imperative to create and nurture ecosystems that facilitate high growth. This involves developing policies that enhance access to diverse knowledge resources, such as by fostering collaborations between firms and academic institutions or by supporting the development of industry clusters that encourage knowledge exchange and innovation. Policymakers should also consider initiatives that promote effective governance practices, recognizing the critical role that well-structured boards and decision-making processes play in the success of high-growth firms.

Furthermore, the integration of entrepreneurial ventures into broader economic frameworks is crucial for sustaining high growth. Policymakers should focus on reducing barriers to entry and scaling, such as by simplifying regulatory requirements, improving access to capital, and ensuring that labour market conditions are conducive to growth. Additionally, policies that enhance intellectual property protections, ease of doing business, and education levels can significantly contribute to the scaling potential of firms. By creating a supportive institutional environment, policymakers can help high-growth firms realize their full potential, driving broader economic development and innovation.

The practical and policy-oriented implications of this dissertation provide a roadmap for fostering high-growth firms. By focusing on learning, strategic scaling, adaptability, and supportive ecosystems, entrepreneurs, managers, and policymakers can collectively contribute to the sustained success and expansion of these vital economic actors.

7.3. Limitations and Future Research Directions

While this dissertation provides valuable insights into the dynamics of high-growth firms (HGFs) and scaling processes, it is not without its limitations. One significant limitation lies in the reliance on data from European high-growth firms, which, while offering rich contextual insights, may limit the generalizability of the findings to other regions with different institutional and economic environments (Urbano, Felix, and Aparicio 2021). The focus on European contexts might not fully capture the nuances of scaling in regions with distinct cultural, regulatory, or market conditions, such as in emerging economies or markets with less developed entrepreneurial ecosystems. Future research could address this limitation by examining similar dynamics in diverse geographical and economic contexts, thereby enhancing the global applicability of the findings.

Another limitation relates to the methodological approaches employed, particularly the use of surveys, qualitative interviews, and case studies. While these methods provide in-depth insights and allow for a nuanced understanding of the phenomena under study, they also come with inherent limitations, such as the potential for respondent bias and the challenges associated with self-reported data. Additionally, the cross-sectional nature of the data collected may not fully capture the temporal evolution of high-growth firms and their scaling processes. Longitudinal studies (Coviello et al. 2024) would be beneficial to observe how these firms evolve over time, providing a more comprehensive understanding of the sustained growth trajectories and the long-term impact of the identified factors. Despite these limitations, the findings of this dissertation offer a robust foundation for future research and practical application.

While this dissertation has made significant contributions, it also opens avenues for future research. Further studies could explore the long-term impact of scaling strategies on firm performance and sustainability. Additionally, comparative studies across different regions and industries could provide deeper insights into the contextual factors influencing scaling dynamics. Investigating the interplay between governance, human capital and scaling in high-growth firms presents another promising area for future research.

This dissertation stands out in its holistic approach to understanding scaling-up dynamics. By simultaneously examining institutional factors, learning capabilities, scaling mindsets, and the role of serendipity, this research offers a uniquely comprehensive perspective on high-growth entrepreneurship. This multi-faceted approach allows for a more nuanced understanding of the complex interplay between various factors influencing scaling success, providing a more complete picture than previous studies that often focused on isolated aspects.

The findings of this dissertation have implications that extend beyond the field of entrepreneurship. For organizational psychologists, our insights into scaling mindsets offer new perspectives on leadership and team dynamics in rapidly growing organizations. Strategic management scholars may find value in our analysis of how firms balance structured growth strategies with opportunistic adaptability. Innovation studies could benefit from our exploration of how high-growth firms integrate diverse knowledge resources to fuel continuous innovation. One key outcome of this research is the development of a "Scaling Readiness Assessment" framework. This tool, derived from our findings on learning capabilities and scaling mindsets, allows entrepreneurial teams to evaluate their preparedness for rapid growth. Additionally, we propose a Serendipity view that offers practical strategies for firms to remain open to and capitalize on unexpected opportunities during the scaling process.

The implications of this research extend beyond individual firms to broader societal impacts. Successful scaling of high-growth firms has the potential to significantly contribute to job creation, particularly in high-skill sectors. These firms often drive innovation, potentially leading to spillover effects that benefit entire industries or regions. Furthermore, understanding how to better support high-growth firms could inform more effective economic development policies, potentially reducing regional economic disparities across Europe.

This dissertation makes several methodological contributions to the field. The mixed-methods approach, combining qualitative interviews, large-scale surveys, and advanced statistical modelling (SEM-PLS), provides a template for future studies seeking to capture both rich, context-specific insights and broader, generalizable patterns. Our novel approach to measuring serendipity in entrepreneurial contexts also opens new avenues for quantifying and analysing this previously elusive concept.

This dissertation has significantly enriched the understanding of scaling-up dynamics in high-growth firms, offering valuable theoretical and practical contributions. By bridging critical gaps in the literature and providing new insights into the processes and factors that drive successful scaling, this work lays a robust foundation for future research and practice in the fields of entrepreneurship, scaling, and high-growth firms. The investigation into scaling has not only clarified the distinction between mere growth and true scaling — highlighting that scaling involves profound internal organizational transformations (Giustiziero et al. 2021; Van Lancker et al. 2023) and strategic coherence —but has also introduced novel frameworks that capture the complexity and nuances of this process.

The conceptual advancements presented in this dissertation, particularly the integration of the scaling mindset, serendipity, and governance dynamics, provide a richer understanding of how firms can achieve and sustain exponential growth. Furthermore, by linking these internal processes with external institutional factors, the research underscores the critical importance of aligning organizational capabilities with broader market conditions and regulatory environments. This dual focus on internal and external factors offers a comprehensive view of scaling, which is crucial for both academics seeking to expand the theoretical discourse and practitioners aiming to implement effective scaling strategies. As we move forward, these insights will serve as a cornerstone for ongoing exploration into the paradoxes and drivers of scaling, guiding both scholarly inquiry and practical application in this dynamic and increasingly vital area of study.

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APPENDIX 1 - Interview Script – HGF Learning

Initial Protocol – Questions on HGF and participant background

1. Company/ high-growth firm - Can you give me a brief description of your company and your specific role?
2. Start up processes and motivations - When you started your project, what was your main motivation? Any personal motivations?
3. Previous Background and Experience – In which way your particular skills or professional experience influenced the development of the business
4. Decisions and important moments – Can you tell me some important moments of your company's development so far? Proud moments? Main challenges ahead?

Questions on knowledge and learning

5. You have mentioned some key important moments – in those moments did you feel that you were learning? How?
6. Were there moments where what you knew – based on previous experience didn't work? What did you do?
7. Do you have any funny stories about success and failures from previous learning?
8. When did learning stopped happening? What did you do?
9. Do you have any learning dedicated structures? People responsible for understanding and thinking about how the organization learns as a whole and continues to learn in the future?
10. Who are the important people in this learning journey? What has the company learned from them?

Final Questions: Reflections on learning

11. Do you feel that the way you organize formal and informal learning at the company works? Are there Rituals in place?
12. What does success mean to you? Is it possible to learn how to be successful? Is it possible to learn that desire to grow very fast?
13. Do you have any role models that you follow closely?

APPENDIX 2 - Learning representative quotations organized by Phases and Transitions

1. Founder's Learning
#1.1. Trial and Error – "and then there's business learning that will happen by doing over time but you need to be very curious about." (Lovys); "Most of the people grew up with the company and learned by doing, by trial/error, testing solutions and see what did work and what did not. " (IndieCampers); "A lot of trial and error, together with the belief that I'll be able to do it."(Rows); "A big part of my learning was me facing the problems and the need to solve them." (Stream); "Trial/error, you have to learn on the job. Then, there are people with more ease and others with more difficulty." (Sensei); "There's a funny story about a marketing campaign we launched in the early days. We were convinced it was going to be a game-changer based on our previous experiences. Unfortunately, it flopped, and we quickly realized our customers were looking for something different. The silver lining was that this failure forced us to rethink our approach and ultimately led us to develop a more effective marketing strategy." (W) **#1.2. Learning through addressing challenges – "**For me learning is almost multi-dimensional: there's structured learning, almost academic, let's say of study and factorial analysis, (…)"(Lovys); "At first it was just by showing up and force myself to sweat. Smile on my face, 12 hours here and to produce, to produce, to produce." (Rows); "In the first stage I had to learn about motivating the small team while discovering the product." (T); "Main focus of learning was on expanding into new markets and addressing different type of customers at scale. At the same time as a founder, I was used to making all the decisions and needed to learn how to delegate and empower others" (T);

#1.3. Vicarious learning and knowledge – "A lot of knowledge can be found online, and there is also the sourcing of our credentials and our past experiences that we internally share." (Lovys);

"To discover something I go to Google. If I'm not understanding something, maybe I can look for references within the company. "(Saltpay);

"at beginning much reading and research, more direct to solving specific problems such as go to market strategies, … Reading can be done in books, blog posts or competitors websites In the beginning you don't bother at all to implement any type of process. " (Rows);

"Experiences from another industries might also been useful in this context." (Indiecampers);

"Personally, I read a lot of books on start-ups and management. Every time I travel I buy a lot of technical books and for me it is one of the main tools. But that works for me, right? It does not mean it works for everybody." (Sensei);

#1.4. Social Learning within their immediate entrepreneurial network – "And can we go to Linkedin to see who are the people who are responsible for these types of roles and how many people they have" (Lovys);

"Targeted readings in books and/or blogs and conversations with my closer network." (stream);

#1-2.1. Enacting a culture of empowering towards learning - "With my team I used to do One-on-one and daily stand-up meetings, without laptops or notebooks, just to better understand the challenges and goals of each person for the day and maybe share some insights" (Lovys);

"In my opinion there is always a need to have that balance between that, right? I mean, the scaling process has a certain limit in a market such as ours (…) So, in parallel we need that agility culture to test and try new ways to do the things. "(Lovys);

"Everything you see today is the result of thousands of failures. You fail several times to reduce the scope of possibilities, until you reduce it so much that you get it right." (Sensei);

"the biggest predictor of success is how fast you iterate on the product and on the market and what we learned from it" (Rows);

"We then were moving to an organization that is really Engineering and Design Lab where there are small teams with High autonomy. People working on these projects often think they are more impactful." (Rows);

#1-2.2. Implementing social learning activities – "There was a lot of knowledge transfer through conversation" (IndieCampers);

"Something that I've always done and liked, it's a learning method for me. Is speaking to people who know about something." (Rows);

"I also feel that I learn a bit from seeing the processes of the people around me and talking to them during coffee but at a smaller scale. I think the things I was involved myself was the ones that taught me the most" (Stream);

2. Entrepreneurial team

#2.1. Learning through collectively overcoming challenges – “then there’s other dimension that is field-learning, talking with sales teams about their experiences and sensibilities (…)”(Lovys);

“We set a board meeting each trimester to discuss the company’s strategy on those cycles.” (Lovys);

“It was by trial/error, hands-on with an unusual optimism. We throw ourselves into new products and new markets and we would figure it out.”(Outsystems);

“ the biggest learning at this stage was ‘Do these people want the product that you're building or do they want just a subset of the experience. Building a product like rows, unless the UX is simple enough that a million people can use it it's going to be a useless experience.” (Rows);

“(…) those key moments were significant learning opportunities for me and the entire team. We learned through direct experience, making decisions, implementing them, and observing the outcomes. Each success or failure, each obstacle or triumph, offered valuable insights that we used to refine our strategies and operations.”(Rows);

“It was a mix of trial and error with our own experience of what has already worked. Maybe around 20% trial/error, 80% of what you already know.” (Indiecampers);

“It may sound naïve but it’s a matter of being in the frontline, you learn during that chaos” (Outsystems);

“To give the freedom to each team to do the work but to force them to find solutions when they were not able to deliver to the expectations” (Rows);

“I think me being a high demanding and annoying for a specific outcome stimulates the team to make faster decisions and bring the workbook heavily prepared for the meeting” (Rows);

“The feeling of guilt is a very good way of learning, so if the outcome is not too tragic for the company we let them fail, we discuss the reasons behind it and they won’t forget about it” (Stream);

#2.2. Within team shadowing – “Most of time by shadowing and by moving people with ability and motivation to work on a given topic (…) Then a lot of the times let’s find out together.” (Indiecampers);

“Surround ourselves with intelligent and genuinely interested People” (Rows);

#2.3. Social learning with strangers to the start up world – "Sometimes we recruit people with more senior profiles and that already happened in France, for instance, we recruited a former CEO from one of the insurance companies and we brought that know-how for the company. "(Lovys);

"To read a lot of books on product management because I thought my role was the most important for the company" (Rows);

"To recruit more experienced people for managing roles to bring the baggage that you may not have" (Stream);" how new joiners being very experienced managers integrate and liaise with founders. How competitive is to acquire talent, it's very hard to get the right person." (F); "

"Importance of having people different from us in the senior leadership team." (F); "

#2-3.1. Learning about essential and accessory dimensions is codified – "and we have also looked at industries that are comparable to us, for example we see ourselves as a business with insurance subscription. So it interests us to know how Spotify or Netflix do payment management or manage features that are similar."(Lovys);

"That is, if you do so a recap, I think online information, information from our network or advisors and our own past experience, and competing information."(Lovys);

#2-3.2 Enacting learning rituals to include larger teams –; **"**There have been instances when prior experience did not provide the solution we needed. In those moments, we leaned into the discomfort of not knowing, revisited our assumptions, and sought new perspectives. This often meant seeking external expertise, conducting additional research, or experimenting with innovative solutions." (W);

"The challenge then was discover how to manage a larger team, keep developing new products and services, and raising capital as each round is different." (T);

"Importance of hiring for the next stage of growth, it can't be three stages ahead or won't work. How difficult is to strike the right balance between promoting internally and hiring from outside the company." (F);

3. Team of teams

#3.1. Collectively devised codified learning - "Confluence is a tool that works as our own Wikipedia. "(Saltpay);

"We started to implement certain things as documentation on our own wiki on Confluence. Each team as their space and document know-how, policies, meeting guidelines, whatever they want to stay organized" (Indiecampers);

"Also we started using Jira for project management and deadline tracking" (Indiecampers);

"Building community is actually a great way to learn." (Outsystems);

"I think we could learn a lot from open group discussions, where a given area can tease the other area, let's say, because in fact there is dependencies and relations between areas." (Stream)

"To register the knowledge of the organization, so that when some people leave and some people enter the company they learn from past mistakes of others." (Stream);

#3.2. Micro Unit Learning – "It's important to promote autonomy and accountability between the different teams" (Stream); "I promote one-to-one meetings within my team every week" (Sensei);

"that's really the biggest learning on organizational design: speed of iteration with small teams, low overhead." (Rows);

"My strategy is to keep teams small and focused on specific objectives, giving them the freedom to learn and operating on their own but promote clear and identical communication processes between them." (Stream);

"The focus of managerial learning is increasingly shifting towards behavioral skills, aimed at enhancing teamwork and resolving conflicts more effectively." (T);

"When you grow you see increasing churn in your employees. Some solutions we applied at "T" were control (project managers) and keeping teams small and focused. Those were the areas that performed the best. " (F);

#3.3. Internal mobility as a mechanism to continuous learning - " To give big responsibilities, bigger and bigger to people who had the energy and the will to do the stuff and they will learn a lot with hands-on and trial/error approaches, much more than in the books." (Saltpay);

"Great people, who we believe in, are constantly being rotated, 180 degrees and taking challenges with different positions and roles" (Saltpay);

"People need to have their conversations and to understand the context. Maybe at the beginning we didn't do this well, but when we give a new challenge to someone we should also do a clear citing of expectations and what defines success on that specific role." (Saltpay);

"I also did some rotation between team members to promote personal discomfort but also knowledge sharing and collaboration between the teams" (Stream)

#3.4. Learning with trusted advisors or investors – ""Start to recruit people with the knowledge you need" (Stream);
"We asked questions to advisors, board members or senior levels" (Indiecampers);
"The board introduce me to other founders and people that can help me to develop. I try to surround myself with and to recruit more experienced people, which I had not done until this stage." (Sensei);
"Ability to summarize the information is key to get the attention and obtain advice from the board/VC." (Rows);
"There are many things that I to learn from other founders" (Rows);
"Talk regularly with mentors or sounding board. Inside our company several people look for mentors other than the people they report to directly. " (Saltpay)

#3.5. Learning about new trends – "For tendencies the best way is to recruit junior talent and to be close to universities. That's our number one source of update on how the new generation and future clients think and they bring a lot of good insights." (Indiecampers);
"I try to inform myself as much as I can with scaleups 2.0, that are in a more advanced stage that we do."(Sensei);
"Enrol in communities specialized on the topic you need to learn and discuss it with more experienced members of the community (e.g. Sales) " (Rows);
"Whilst facing a significant change in the macro environment we had this silly expression for boring work – we must eat the broccoli – meaning we sometimes listened to 200 client recordings to learn what we are doing wrong and what can we improve" (Outsystems);
"in those moments, we leaned into the discomfort of not knowing, revisited our assumptions, and sought new perspectives. This often meant seeking external expertise, conducting additional research, or experimenting with innovative solutions".(W)

#3-4.1. Re-thinking the essence of learning in the organization **“**What changes over time is that you learn more from your team, as you develop more of an organization.” (Rows);
“Trust the people to do their job by previous successful experiences and founded companies” (Outsystems);
“Sometimes learning is a mix between really learning and reinforce your believe that you already know how to do that” (Stream);
“I wouldn't say learning ever stopped happening; it just evolved. There were times when progress seemed to plateau, but we recognized that as a signal to challenge our existing knowledge and seek new learning opportunities. This could involve initiating new projects, entering new markets, or investing in training and development for our team.” (W);
“You need to think ahead, but then the company is growing so fast that sometimes you take decisions, but you quickly realize that things have changed already and you have trouble coping with... In Scaleups everything is constantly changing. You want to do what great looks like. But if you are leading your industry, how do you know what that is?” (F);

#3-4.2. Communities’ learning

“I'm deeply invested in the concept of community learning.

It's about bringing people together to share knowledge and experiences. Whether through online platforms or meetups, it's a dynamic way to learn.

Key points? First, it's collaborative. Everyone contributes, enriching the learning experience. Second, there's a strong element of peer support. People motivate each other, making complex topics more approachable. Third, it's incredibly accessible. Online platforms break down geographical barriers, allowing flexibility in learning. And importantly, it's practical. We're solving real-world problems, making the learning immediately applicable. Plus, it's a great networking opportunity, connecting learners with industry professionals.” (Stream)

4. Global team of teams

#4.1. Employment of learning tools across the organization – "Rank and prioritize the tasks and difficulties instead of just list, for the people to be forced to think about each subject on a deeper level" (outsystems);
"We have our own wiki, with our own documentation set that facilitates some processes. We don't have a lot there yet, but we are building it." (Sensei);
"To make the errors visible. All the procedures and meetings, including with the board are visible and able to be consulted, to be easily learn from them and past mistakes" (Rows);
Importance of processes and tools in place: in tech companies people are typically very data driven. However, because of the fast pace many times it's very difficult to have those things working well. Nothing is ever ready or completely done." (F);
"We have indeed instituted structures dedicated to learning. We have a Learning & Development team tasked with understanding how we learn as an organization and ensuring continuous learning into the future. They implement various initiatives, from regular training programs to knowledge sharing sessions, and they foster a culture that encourages learning from both our successes and failures." (W);
"you must have processes all around. Otherwise, it's impossible to manage hiring over 600 employees a month!" (F);

#4.2. Decoding the essence of learning across the global organization – "Always ask why" (Outsystems);
"Constant reminder from our founder and CEO to go back to basics and to the first principles. " (Outsystems);
"…by evolving our way of learning we are able to change the mindset matrix of our employees preparing them for growth and change." (Rows);
"Take ownership of the outcome but try to delegate the process instead of holding hands in one million things at a time. Hold people accountable instead of trying to be a super-hero." (Saltpay);
"Everyone in our organization plays an important role in this learning journey. From our newest hires bringing fresh perspectives, to our managers who ensure we're learning from our daily operations to our board members who provide strategic insights based on their vast experience. Each person's unique contributions have helped shape the company's learning culture, promoting continuous improvement and adaptability in our ever-evolving industry." (W)

#4.3. Learning through books and podcasts – "Our company encourages reading as part of our culture by exchange of book recommendations" (Saltpay);
"By reading, I always carry books around with me." (Saltpay);
"We provide an annual voucher for training, that can be spent on books, courses, whatever, as long as it brings benefits." (stream);
"I also gave books that I think are nice target fits for specific needs of the People" (Sensei);

#4.4. Enacting global learning initiatives – "More than learn about the business and economics we also need to learn about best practices in management and about tendencies and what society is looking for. We try to surround ourselves with good advisors, not about our business in specific but about managing, governance, best practices and administration (board) for close talking, each two weeks or so" (Indiecampers)
"Annual two-days event with everyone from the company including operations, for teambuilding and workshops" (Indiecampers);
"We started organizing kind of a group, a cluster on specific topics and then discuss the ones that are our most important. This for me has also become an important part of learning. I created that concept because I didn't learn much anymore from all-hands like when we were a small company." (Rows);
"Encouraging for people to use *coursera* as a learning tool for specific challenges they are facing within their role. Remaining founders had specific C-levels specialized coaches indicated by VCs." (F)

Appendix 3. – Serendipity Interview Protocol and Script

The protocol for interviewing participants followed a six-step process:
Step 1: The participant observer explained in detail the purpose of the interview and issues related to confidentiality.
Step 2: The interviews followed a semi-structured format, using a predesigned interview guide:
Step 3: All interviews were recorded and transcribed.
Step 4: The participant observer carefully reviewed interview notes within 24 hours to ensure accuracy.
Step 5: The participant observer documented impressions and patterns, based on interview outcomes, in separate research diary notebooks.
Step 6: The participant observer used a review of the interview notes as an opportunity to document new and follow-up questions for future meetings with the interviewee.

Interview script
Welcome and Introduction. Brief explanation of the purpose of the interview. Confidentiality Assurance. Verbal Consent to proceed with the recording of the interview.

Introduction & Background Questions
- Can you briefly describe your role and responsibilities at the company? How long have you been with the company? Could you describe the journey your firm has undertaken to be growing at such high pace and its key milestones?
- What ws the initial vision of the company? How has it evolved over time?

Flexibility, Adaptation and Improvisation
- How much have you relied on detailed strategic planning versus being flexible? Could you give examples?
- Can you provide instances where your firm had to drastically adapt its strategy or operations? What prompted these changes?
- In what ways has the company demonstrated agility in adapting to unexpected industry changes or unpredictable events?
- How does your firm approach strategic planning? Is there improvisation in the process?

Role of Peripheral Vision
- How often do you actively look for opportunities, ideas or insights from outside the company's core industry or domain?

- Could you share an example of an unexpected opportunity that your firm capitalized on? How was it identified and integrated into your operations?
- Can you think of any chance observations or discoveries from your peripheral vision that led to new directions or initiatives for the company? How do you encourage it within your organization to spot opportunities or threats early?

Attitude Towards Errors
- Can you share a significant error or unexpected event that occurred within your firm? What was learned?
- How does the company culture treat mistakes or errors that happen during experimentation and rapid scaling?
- In retrospect, were there any perceived "errors" or accidents that actually led to beneficial outcomes or growth opportunities for the company?

Unexpected Events
- Looking back on major milestones or growth leaps, to what extent would you attribute them to specific planning versus unexpected events, luck or serendipity?
- How has the company dealt with and capitalized on major chance events or surprises that impacted the industry or market?

Leadership and Strategies for Leveraging Serendipity
- What strategies, processes or leadership approaches do you feel have allowed the company to capitalize on chance events, unexpected opportunities and unplanned discoveries?
- How can organizations better cultivate serendipity during growth and scaling?
- As a leader, how do you personally foster an environment where serendipity is likely to occur?

Strategy and Growth
- What have been the key strategies for maintaining high growth within your firm?

Reflection and Projection
Reflective Insights: Looking back, what would you say are the critical elements that contributed to your firm's high growth?
Future Prospects: How do you see the role of serendipity evolving in your company’s future?

Conclusion
Final Thoughts: Is there anything else you believe is important to understand about the role of serendipity or unexpected events in high-growth firms?