

Lean Startup Risk Management

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*** The research articles and the book chapter mentioned above are reproduced in this thesis with minor adjustments and consecutive chapter numbering in the appendix. To build a logically consistent structure, the articles and the book chapter in the dissertation are listed according to their content relevance and not in chronological order in which they were written. The structure of the dissertation is presented in the introductory chapter. ***

Abstract (English)

Various opportunities characterize startups, but also fundamental risks. This dissertation analyzes how startups address these opportunities and risks and whether they approach them strategically. It further discusses the extent to which components of the Lean Startup Methodology can help to design a lean Risk Management for startups through iterative learning processes and customer-oriented development of Risk Management mechanisms. The research project identifies key factors to consider when developing Lean Startup Risk Management and proposes practical approaches for implementation.

Methodologically, the dissertation draws on established theories and findings from the Risk Management literature, the resource-oriented perspective, and Lean Startup literature. Empirical material was obtained and evaluated in the context of an interview study. Building on this foundation, the study develops models that demonstrate the influence of active customer communication and the main concepts of Lean Startup Risk Management. Finally, the dissertation outlines the overall integration of Risk Management into governance structures.

Fundamentally, traditional Risk Management provides a solid foundation for developing lean Risk Management for startups. Nevertheless, adjustments and simplifications are needed to make it suitable for startups that are usually resource-constrained. In addition, lean Risk Management must grow with the startup and be flexible enough to meet its specific requirements. Then, lean Risk Management can increase a startup's survival chances. At the same time, however, the resources required for this are often difficult for founders to estimate, which poses an obstacle to the cost-benefit analysis. A lack of practical examples could further reinforce this assessment. Research in this area also offers great potential for further empirical validation.

Incorporating customer feedback into the development process is essential for effective Risk Management. A conceptual example of active customer communication via social media illustrates this potential as a part of this dissertation. The interviews demonstrate that the early introduction of Risk Management practices is fundamental, as the founders generate substantial potential for lean Risk Management in the pre-startup phase and during business model design. In this phase, founders thoroughly examine potential opportunities and the risks of the business idea, evaluate and weigh them. However, they tend to neglect continuing this in the early startup phase.

Overall, the results confirm that Lean Startup Risk Management that grows with the company can have significant advantages for startups. Even with limited resources, organizations can implement lean Risk Management practices. Founders need to know what to look out for and, above all, start an active identification process right away. Starting with a simple strategy and first identification procedures creates the opportunity to recognize the potential of Lean Startup Risk Management and gain greater acceptance as a management tool, both internally and among investors.

Abstract (Deutsch)

Startups zeichnen sich durch vielseitige Chancen, aber auch elementare Risiken aus. Die vorliegende Dissertation analysiert, wie Startups mit diesen Chancen und Risiken umgehen und untersucht, ob sie dabei strategisch vorgehen. Weiterführend thematisiert sie inwiefern Bausteine der Lean Startup Methode durch iterative Lernprozesse und eine kundennahe Entwicklung von Risikomanagementmechanismen dabei helfen können, ein schlankes Risikomanagement für Startups auszugestalten. Dabei wird gezeigt, auf welche Faktoren sich bei der Entwicklung eines Lean Startup Risk Managements konzentriert werden sollte und wie eine Implementierung erfolgen kann.

Methodisch stützt sich die Arbeit auf etablierte Theorien und Erkenntnisse aus der Risikomanagementliteratur, der ressourcenorientierten Perspektive sowie der Lean Startup Literatur. Empirisches Material konnte im Rahmen einer Interviewstudie gewonnen und ausgewertet werden. Aufbauend auf diesem Fundament, lassen sich angepasste Modelle entwickeln, die den aktiven Kommunikationsgedanken mit Kund:innen, schlanke Risikomanagementstrukturen und die Einordnung in Governance-Strukturen in Startups aufzeigen.

Grundsätzlich bietet das traditionelle Risikomanagement eine solide Grundlage für die Entwicklung eines schlanken Risikomanagements für Startups. Dennoch bedarf es Anpassungen und Vereinfachungen, um für ressourcenknappen Startups geeignet zu sein. Darüber hinaus muss ein schlankes Risikomanagement mit dem Startup wachsen und flexibel genug sein, dessen spezifischen Anforderungen zu erfüllen. Hervorzuheben ist, dass die Überlebenschancen von Startups durch schlankes Risikomanagement erhöht werden können. Zeitgleich besteht jedoch das Problem, dass die Ressourcen, welche dafür benötigt werden, oftmals für Gründer:innen schwer abschätzbar sind und die Kosten-Nutzen-Bewertung somit eine Hürde darstellt. Diese subjektive Bewertung könnte durch fehlende praktische Beispiele für eine Abwägung fälschlicherweise weiter bestärkt werden. Auch die Forschung in diesem Themenbereich bietet viel Potential für weitere empirische Validierung.

Es wird deutlich, dass etablierte Praktiken, wie die aktive Integration von Kundenfeedback in den Entwicklungsprozess, einen Zugang bieten, auf dessen Grundlage ein wirkungsvolles Risikomanagement aufgebaut werden kann. Das Potenzial wird anhand eines konzeptionellen Beispiels zu aktiver Kundenkommunikation via Social Media skizziert. Vor allem durch die Interviews wird deutlich, dass die Bedeutung der frühzeitigen Einführung von Risikomanagementpraktiken elementar ist. Dies liegt daran, dass in der Vorgründungsphase und durch das Ausgestalten des Business Modells, oftmals viel Potential für ein Risikomanagement vorhanden ist. So setzen sich Gründer:innen in der Vorgründungsphase und bei der Erstellung des Business Plans intensiv mit den möglichen Chancen, aber auch Risiken der Geschäftsidee auseinander, bewerten diese und wägen sie ab.

Insgesamt bestätigen die Ergebnisse, dass ein mitwachsendes Lean Startup Risk Management erhebliche Vorteile für Startups bieten kann. Zudem wird deutlich, dass schlanke Risikomanagementpraktiken auch mit geringem Ressourcenaufwand implementiert werden können. Gründer:innen müssen nur Kenntnis darüber haben, wie sie strategisch vorgehen wollen und wie sie möglichst frühzeitig in einen aktiven Identifizierungsprozess starten. Dadurch besteht die Chance, dass ganz automatisch das Potential von Lean Startup Risk Management erkannt wird und als Managementtool intern sowie gegenüber Investor:innen größeren Anklang findet.

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List of Abbreviations

CD	Customer Development
CDM	Customer Development Method
CI	Customer Involvement
COSO	Committee of Sponsoring Organizations of the Treadway Commission
ISO	The International Organization for Standardization
LSM	Lean Startup Methodology
LSRM	Lean Startup Risk Management
RBV	Resource-Based View
RDT	Resource Dependence Theory
RQ	Research Question
RM	Opportunity and Risk Management
SLR	Systematic Literature Review
SMEs	Small and Medium-sized Enterprises

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1. Introduction

Startups face numerous opportunities and risks at every stage of their development. Both in practice and in theory, there is debate as to why some startups successfully counteract existential risks such as market or financial risks, thereby developing robust business models that make them more resilient, while others fail to do so (P. L. Costa et al., 2023; Galindo-Martín et al., 2023; van Gelderen et al., 2006). Startups often do not actively manage opportunities and risks because they fail to allocate the time needed to do so. They frequently place more emphasis on establishing and improving their core business and less on methods such as strategic potential analysis or risk analysis that could support them during their early growth phases.

This dissertation focuses on Opportunity and Risk Management (RM) as part of a systematic identification and analysis process and as a managerial guidance system, not just for larger companies. Smaller companies, especially startups, are at the core of this discussion. This research gap is particularly interesting because RM is currently often considered unfeasible or unprofitable for startups (e.g., Baptista et al., 2020; Brustbauer, 2016; Venczel et al., 2024; Verbano & Venturini, 2013).

However, this impression might not be accurate, as the potential of RM and practical implementation concepts are often unknown. For instance, it can be advantageous for attracting investors or providing guidance to management (Crovini, Ossola, et al., 2021; Falkner & Hiebl, 2015). RM serves to secure the company's core resources (Andersen, 2008; Bromiley et al., 2015; Gleißner, 2017). It can help reduce the likelihood of insolvency, thereby positively affecting investor confidence and, in turn, capital procurement costs and company value (Bromiley et al., 2015). Above all, it leads to improved decision-making (Crovini, Santoro, et al., 2021). Making more strategic decisions is particularly true when decisions are fact-based, i.e., based on the results of a prior analysis of the opportunities and risks associated with the available options for action.

The literature shows that most startups are unable to assess the potential of systematic RM (Crovini, Ossola, et al., 2021; Gao et al., 2013; Schulte & Wagenknecht, 2022; Silva et al., 2013). The unawareness of the potential is not surprising, as the question of how RM can help young companies in their development phase and which key factors can improve their willingness to focus on early RM remains unanswered. Studies in recent years have examined the benefits and possibilities of targeted RM and, broadly, the potential that this offers (e.g., Bielialov, 2022; Braun et al., 2022; Crovini, Ossola, et al., 2021; Hock-Doepgen et al., 2021; Zhang et al., 2023). However, concepts outlining the basic features of a comprehensive RM specifically for startups have not yet been developed with the necessary depth.

Looking at the broader research environment, there are studies on Small and Medium-sized Enterprises (SMEs). Despite differences in their innovative strength, growth potential, and size resulting from the inclusion of medium-sized companies, these studies offer a possible approach to the startup field (e.g., Brustbauer, 2016; Civelek et al., 2024; Falkner & Hiebl, 2015; Verbano & Venturini, 2013). They allow for transfer to a certain extent, showing that companies can build a more robust business model by focusing on key opportunities and risks (Brustbauer, 2016; Civelek et al., 2024; Todeschini et al., 2017). However, the empirical findings and the core literature (e.g., Brustbauer, 2016; Falkner & Hiebl, 2015; Gao et al., 2013; Verbano & Venturini, 2013; Zhang et al., 2023) indicate the potential of adapted RM for more targeted strategic and risk-adjusted decision-making.

Also, external standards, frameworks, or government regulations can provide guidelines for an efficient implementation process. Many larger companies and auditing firms utilize external standards. The advantages of consistent RM have led to banks and other large companies, for example, being required by law to embed RM structures within their organizations. The key question is whether actors must first face an emerging risk before they become motivated to act. These advantages provide additional support for considering a transfer of established RM

concepts to smaller businesses. However, the limited resources that startups typically have at their disposal, especially in the early stages, already prevent a direct transfer. When doing so, it is important to remember that the individual needs of startups can vary significantly, as well as their willingness to invest in such structures. The dissertation highlights a significant difference in perspectives on whether intrinsic or extrinsic motivators are more crucial for initial implementation. The aim is to identify strategies, challenges, and implementation levels derived from RM and tailor and utilize them to the needs of startups (e.g., Bromiley et al., 2015; Gleißner, 2017; Hoseini et al., 2021; Verbano & Venturini, 2011). The first research item provides an overview of the current discussions surrounding a startup RM.

The other three research items of this dissertation show that RM, in conjunction with customer-centric development methods, appears particularly promising. As many startups adopt a customer-centric approach to their business models, this dissertation will emphasize a lean, customer-oriented focus in the context of the Lean Startup Methodology (LSM) (Bieraugel, 2015; Felin et al., 2020; Ries, 2017) and the Customer Development Method (CDM). The dissertation demonstrates that focusing on core business and key customers while simultaneously applying RM strategies can be challenging, especially when resources to implement RM are scarce. However, the findings provide concrete direction and clarify which key components of Lean Startup Risk Management (LSRM) are necessary for an appropriate implementation. At the same time, the results highlight that most founders (at least in Germany) need more proof of concept to promote the intrinsic motivation to implement RM strategies.

Three main research questions (RQ) guide the four research items:

RQ1: What is the current level of acceptance and implementation of Risk Management in startups?

RQ2: How can the Lean Startup Methodology, which places the customer at the center of corporate development, be used to develop Risk Management for startups?

RQ3: How can startups develop tailored Risk Management, and what obstacles hinder its implementation?

The following chapter explains the epistemological perspectives and ontological assumptions that underpin this dissertation. Next, this framework paper focuses on the most important theoretical frameworks to prepare readers for the main content of the individual research items. The elementary descriptions help the reader understand how the study addresses the identified research gaps, presents the key findings, and justifies the chosen methods across the four research items. Chapter four presents the four research items and highlights their theoretical foundations and main conceptual connections. It emphasizes the research objectives and the interrelationships among the individual research contributions. The final chapter of the dissertation outlines the overall results and contributions. Additionally, it addresses practical implications, future research streams, and limitations, thereby finalizing the framework paper.

2. Philosophical Approach to Research

To better understand the dissertation's results and the author's scientific orientation, it is important to present the epistemological perspective and ontological assumptions.

This dissertation belongs to the school of realism in terms of its underlying research philosophy. It demonstrates that researchers should not simply extend existing theories but instead understand the interactions that shape and influence the theories currently under discussion. Critical realism focuses on generative mechanisms at the ontological level (Blundel, 2007; Grossmann-Hensel & Seidl, 2021). It is important to understand that, epistemologically speaking, knowledge can never be fully grasped. This lack of a single

transparent theoretical background is an important insight, especially in the world of startups, where diversity and the pace of change are high. For example, concepts that currently apply only to large companies can also be applied, at least to a certain extent, to smaller ones. The scope and depth of this knowledge transfer must be defined and further elaborated. Only then can the potential and critical differences be identified. On a semantic level, the goal of this dissertation can only be approximated, as it is impossible to capture the whole picture of a holistic RM for startups conceptually (Blundel, 2007; Grossmann-Hensel & Seidl, 2021; Ramoglou & Tsang, 2016).

At the core, this dissertation aims to discuss theoretical transfer possibilities and to empirically validate them simultaneously. A central challenge in developing lean RM lies in the limited applicability of management theories designed for established companies to the context of startups. According to Bunge (1996), realism means that the external world can exist independently of our conclusions and explanations. On an ontological level, reality exists as a multi-layered system in which various mechanisms interact (Grossmann-Hensel & Seidl, 2021). These mechanisms can be synthesized through targeted analysis of existing knowledge, such as studies, but can also be developed through personal observations and empirical evidence. Based on the principles of critical realism, continuous comparison with empirical data is essential. In terms of the approach, the overall research project uses the theoretical findings from the first two research items of this dissertation to determine specific empirical content through systematic analyses. This deeper analysis of current research debates provides a solid foundation for the two subsequent research items, each addressing a different issue.

A central tenet of critical realism is that scientific theories never fully reflect reality. However, a better approximation of reality can be achieved through critical review, falsification, and theory development (Grossmann-Hensel & Seidl, 2021; Ramoglou & Tsang, 2016).

The central challenge of the research project is to link existing theory with the dynamic developments of a startup. Existing management approaches and theories derived from traditional RM for banks and established companies need to be critically assessed and adapted. This adaptation should consider practical findings and assumptions to better reflect the dynamic conditions of startups, which experience significantly faster growth and often face limited resources.

3. Conceptual Framework

This chapter outlines the dissertation's framework, drawing on widely accepted theories and concepts from both theory and practice. Furthermore, it shows how opportunities and risks in the context of startups are perceived and demonstrates to the reader how the dissertation's conceptual direction changed over the course of its development.

3.1 Key Theories and Concepts

The first major theory states that most startups have limited resources. From this perspective, the Resource-Based View (RBV) (Wernerfelt, 1984) allows us to investigate how efficient internal resource management can help companies to grow more sustainably. Sustainable competitive advantage that leads to growth stems from a company's internal resources and capabilities rather than its industry position (Wernerfelt, 1984). Even though RBV research lacks a sound understanding of the development of competitive advantage (Freiling, 2008), it still helps manage resources efficiently. This dissertation builds on the idea of managing risks and effectively exploiting opportunities to develop core competitive advantages. It is therefore important to monitor the scope of resources as well as the quality and combination of resources (Baptista et al., 2020). The underlying idea is that not only the quantity of resources matters, but also their strategic orientation, bundling, and further development. The scope of LSRM is

defined by the limited available resources that must be exploited sensibly. The strategic allocation of resources requires a clear strategy to reduce uncertainty and increase business model robustness.

The Resource Dependence Theory (RDT) is the second theory that explains why companies form external relationships, such as partnerships and customer integration, to secure essential resources (Hillman et al., 2009; Nienhiiser, 2008). RDT posits that organizations rely on externally controlled resources. Three key factors influence the extent to which an organization relies on external resources: (1) the proportion of this resource in the organization's inputs, (2) the organization's outputs, and (3) the level of independence of the resource controller, as well as the market position of that controlling entity (Hillman et al., 2009; Pfeffer & Salancik, 2003). This approach takes a more external perspective compared to the RBV, making it easier to classify the effects of external factors, such as the direct influence of customers.

The third concept is based on the LSM's key insights. In this context, the LSM is a combination of various methods and principles designed to promote the targeted development of a startup (Blank, 2013). As a result, there is no single standardized description, and various concepts within the LSM are prevalent (Mansoori & Lackéus, 2020; Yang et al., 2019). The primary focus is on iterative, validated learning and hypothesis-driven development within the business model's build-measure-learn feedback loop (Eisenmann et al., 2011; Felin et al., 2020; Ries, 2017). The LSM is presented in greater detail in the third research item and includes several elements that can support the development of a lean RM.

Research highlights that many successful startups prioritize customers in their product and service development processes. This approach to Customer Involvement (CI) is further explored in the CDM (Blank & Dorf, 2015; Chang et al., 2022; Chen et al., 2021). Embedded in the LSM, targeted CI (Eisenmann et al., 2011; Ries, 2017) offers valuable opportunities to leverage established practices, making it easier to integrate RM into startups. Focusing on customers in building a LSM provides two main advantages. First, it utilizes a wealth of existing content based on the LSM that many startups already employ. Second, it defines the scope within the set boundaries, taking limited resources into account, leading to a resource-adjusted CI strategy. The close connection to RDT arises here from the fact that customer feedback becomes a valuable external resource.

3.2 Startups in the Context of Opportunities and Risks

There are numerous definitions in the literature, but none is universally accepted as the definitive meaning of "startup". For this dissertation, a startup is a form of business creation characterized by its youth and an innovative business idea or novel business model. Unlike imitative young companies, startups focus on innovation through new products, services, or business structures (Schulte, 2006; Todeschini et al., 2017). They often occur in high-risk, not yet fully developed markets with no or only complex transferable ideas for a functioning business model (Hyytinen et al., 2015). The constant pursuit of improvement creates significant growth potential. However, it requires considerable investment, thereby increasing the need for external capital (Fuertes-Callén et al., 2022). As a result, many startups require several staggered financing rounds to develop, scale, and successfully enter the market (Freiling & Harima, 2019, pp. 312–314). Self-financing, or bootstrapping, is another way to finance a startup. In both scenarios, the decisive factor is the strategic use of financial resources. Here, the ability to exploit potential opportunities and reduce risks is a great advantage.

Opportunities and risks are structurally intertwined. Both arise from uncertainty about future outcomes. Similar uncertain events can present both downside risk (risk) and upside potential (opportunity), depending on how they unfold and how the company responds (Gleißner, 2017; Verbano & Venturini, 2011). To manage one effectively, it is necessary to manage the other simultaneously.

The Use of Opportunities

When thinking about RM, most people initially think about risks and their effects on the business. However, a holistic RM also includes identifying and managing opportunities (Backes-Gellner & Werner, 2007; Gleißner, 2017). The process, therefore, begins with developing an initial strategy and identifying relevant opportunities and risks.

The literature describes many ways in which startups can identify potential opportunities systematically (Ramoglou & Tsang, 2016; Todeschini et al., 2017). Startups can only be innovative or survive longer in the market if they exploit these opportunities as efficiently as possible. Calculating the benefits and risks of opportunities is often complex. Also, internal factors such as the founders' personalities (McCarthy et al., 2023) and external factors such as the market environment (Carayannis et al., 2016; Kim et al., 2018; van Gelderen et al., 2006) exert a strong influence. Assessing valuable opportunities while dismissing less worthwhile ones is increasingly challenging. The question is how to overcome these challenges while making the most use of opportunities in a strategic way.

The Influence of Risks

In theory and in practice, there are numerous ways to categorize risks. A common approach is to classify them into four main categories: strategic, operational, financial, and compliance risks (Gleißner, 2017). The issue concerns the likelihood of occurrence and the potential magnitude of the resulting damage.

In this regard, startups are particularly exposed to high financial risks (Fuertes-Callén et al., 2022), which in turn increase market-exit risks, as they often have limited financial resources and are heavily influenced by external operational factors, such as general market conditions (van Gelderen et al., 2006). In addition, market acceptance of innovative products or services offered by startups is often not sufficiently validated, especially in the early stages of their development. The lack of knowledge and experience often leads to unexpectedly low demand and an increased risk of being forced out of the market. High market-exit risks stem from the fact that startups often compete directly with established companies that have more experience and resources (P. L. Costa et al., 2023; Szathmári et al., 2024). At the same time, challenges in scaling or management mistakes can undermine sustainable growth.

These are just a few examples of significant risks startups face, illustrating their enormous impact on a startup's survival. The negative consequences of not addressing risks adequately become particularly clear when considering the extensive literature on startup failures and the fact that most startups fail (C. J. Costa, 2010; Czakon et al., 2024; D'Andrea et al., 2023; Galindo-Martín et al., 2023; Szathmári et al., 2024). The reasons for failure are diverse, but individual risks such as liquidity bottlenecks or product and service quality problems often trigger failure. Careful analysis and monitoring of these risks appear highly relevant for startups to respond appropriately.

3.3 Risk Management and the Potential of Strategic Implementation

RM, as described in the literature and developed in practice, was primarily designed for medium-sized and, above all, large companies. Their size, networking, and global activities expose these types of companies to higher risk potential (Gleißner, 2017). It enables the early identification, assessment, and control of risks that could jeopardize business operations. Effective RM is essential to a company's long-term success (Bromiley et al., 2015; Gleißner, 2017). It is essential due to complex supply chains, regulatory requirements, and financial risks, which require structured risk identification and control to support complex decision-making. For instance, fundamental ISO standards such as ISO 9000 and 9001, which cover quality management systems, and the even more specific ISO 31000, the international standard for RM, are broadly accepted across almost all fields. They are often required by law or by standards-setting bodies, such as COSO, which provide helpful guidance. In principle,

this should also apply to startups, albeit in a scaled-down version in terms of the scope of the RM.

Figure 1 shows a traditional holistic RM process. Within existing literature, the presentation of the RM process depends on the author's focus. While some authors use more steps, others use fewer steps to describe it (Gleißner, 2017; Todeschini et al., 2017; Verbano & Venturini, 2011). Regarding the dissertation, a more intricate multi-step framework was utilized to gain a thorough understanding of RM. The key takeaway of Figure 1 is that holistic RM can be quite complex. Traditional RM frameworks typically refer to risks within their core structure. For this reason, the following figure is presented in the same way. Chapter 5 of this framework paper presents an expanded model, more suitable for startups, that includes opportunities, as shown in Figure 3.

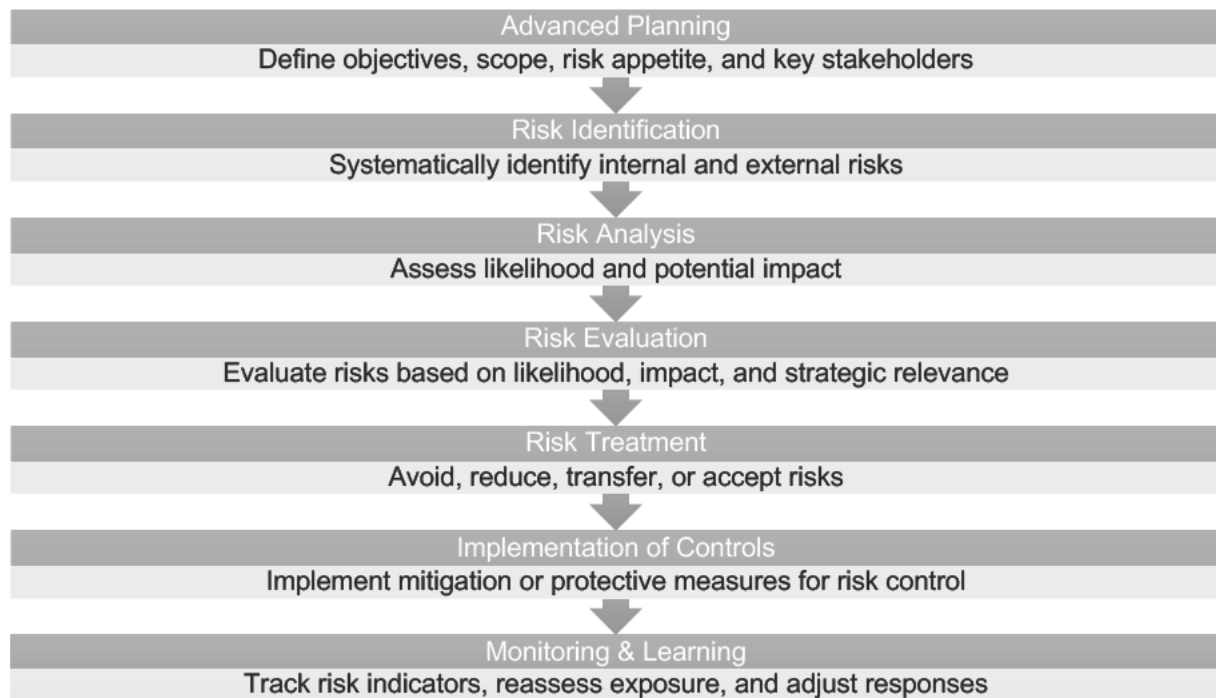


Figure 1: Adjusted Traditional Risk Management Process (Source: own figure based on Gleißner, 2017 and Verbano & Venturini, 2011)

A suitable upstream component is advanced planning, which resembles the risk strategy and culture. Companies must clearly define their risk appetite and establish a corporate culture that promotes risk awareness. Planning includes clear responsibilities, transparent decision-making processes, and the integration of RM into the corporate strategy (*Advanced Planning*).

Another important step is the identification of risks (*Risk Identification*). Established companies must systematically record potential internal and external risks. With analysis methods such as SWOT analyses, PESTEL models, or scenario techniques, strategic, financial, and operational risks are identified before they materialize. Once identified, the risks are assessed and analyzed (*Risk Analysis*) (Bromiley et al., 2015; Gleißner, 2017). Each risk is assessed based on its probability of occurrence and the potential extent of damage. Qualitative and quantitative methods, such as risk matrices or Monte Carlo Simulations, can be used to prioritize risks and analyze their interactions (*Risk Evaluation*). Another key component is to find the right way to deal with risks (*Risk Treatment*). Companies can use various strategies to minimize or control risks. These include risk avoidance (e.g., process adjustments), risk reduction (e.g., contingency plans or safety precautions), risk transfer (e.g., insurance or outsourcing), or risk acceptance (Brustbauer, 2016; Gleißner, 2017; Verbano & Venturini, 2011). Finally, the company should establish controls (*Implementation of Controls*), monitor risks, and learn how to manage them going forward (*Monitoring & Learning*). This systematic

approach enables a company to manage risks, avoid financial losses, and strengthen its long-term resilience. The described risk analysis concepts require significant resource investment, making them suitable for startups only if applied in a simplified, adapted manner.

3.4 Finding the right Approach for developing Lean Startup Risk Management

The original idea for developing a suitable RM framework for startups was to build on the theoretical foundation of the LSM and extend it with concepts and practical insights from traditional RM. First, the LSM appeared to be an effective basis, as startups commonly use it. This means they directly influence their development from the customer's perspective through an iterative process. The LSM and especially its well-known build-measure-learn feedback loop could then have been supplemented with RM approaches suitable for startups.

However, the initial results revealed that the LSM's points of reference are difficult to interpret and that it provides only a limited, insufficiently developed theoretical framework. Some of these concepts are widely accepted, and some are still in the developmental phase. Although the term LSM implies a single method, it combines several methods, including iterative product development, rapid experimentation, and validated learning (Melander, 2019). This combination of methods leads to a correspondingly high number of underlying concepts. The absence of reliable data on the optimal points for expanding the LSM limited the ability to conduct a thorough assessment in the research project.

Nevertheless, understanding the LSM and, by extension, CI can help startups develop a more robust business model (Blank, 2015; Melander, 2019). Brown and Eisenhard (1995), for example, have shown that involving customers can improve the effectiveness of product concepts. Organizations must develop RM with the same customer focus. The LSM serves as an excellent example of a risk mitigator, as CI enables the business model to develop more targeted. In terms of the study's direction, the dissertation treats customer focus and the LSM elements as instruments for streamlining RM. The rationale for focusing this research project on LSM and on CI is straightforward. Many scholars highlight the significance of a customer-centric approach and the potential negative consequences of neglecting it.

The goal of this dissertation is to develop a strategic and efficient RM approach. Given its outlined advantages, this approach must be grounded in fundamental RM concepts and practices while also being tailored to startups. To achieve this, it is essential to adapt existing RM strategies and practices and to make RM the starting point for LSRM development. The LSM and its underlying concepts will serve as tools to structure this process and enhance practical applicability. Here, it is crucial to emphasize that startups cannot simply adopt the RM strategies of established companies (Todeschini et al., 2017). Instead, they must address their specific challenges using appropriate methods such as CDM or CI (Blank, 2013; Picken, 2017).

4. Research Objectives and Structured Synthesis of Research Contribution

Due to the novelty of the research area, this dissertation explores multiple approaches to provide targeted answers to the three RQs. The four distinct but interconnected research items focus on different topics. Figure 2 provides an overview of how the individual research focus, in combination with the underlying approaches, helps generate new insights for LSRM.

Research Item	Research Item 1: Journal Article Risk Management in Startups	Research Item 2: Journal Article Management of Opportunities and Risks Associated with Customer Involvement in Young Companies	Research Item 3: Book Chapter Lean Social Media Communication Strategies for SMEs	Research Item 4: Journal Article The Path to Lean Startup Risk Management
Focus	RM & LSM Outlining the current state of research for Risk Management within startups	RM & RDT & CI Managing opportunities and risks with a focus on customer-centric development	LSM & CD Digital communication strategies that are lean and adjusted for risk	RM & RBV & LSM Emphasizing founders and their strategic methods for managing opportunities and risks
Approach	The analysis adopts a deductive, theory-driven approach, developing conceptual propositions grounded in established theory	The analysis is deductive and theory-driven, systematically synthesizing and integrating established theoretical perspectives	The analysis adopts a deductive logic, deriving conceptual propositions from a systematic literature review	An abductive qualitative design was employed, integrating managerial perspectives with theoretical concepts through iterative analysis

Figure 2: Conceptualization of the four Research Items (Source: own figure)¹

The following four subsections introduce each research item and briefly present the key findings.

4.1 Research Item 1 – Risk Management in Startups

Overview

The first research item, “Risk Management in Startups” (journal article; original title: “Risikomanagement bei Startups”), examines the fundamentals of RM in startups, drawing on a literature review and a broader analysis of current debates. The authors emphasize that the standardized RM process, from the identification of opportunities and risks through analysis and evaluation to the implementation of measures, provides an initial framework for adapting RM to the needs of startups. However, the authors recommend critically examining and adapting the initial implementation, its specific design, and its strategic execution to lean principles.

Theoretical Foundations

The article discusses theoretical considerations regarding the dynamics of growth within the context of startup development theories. These include, for example, the risk of market exit resulting from characteristics typical of young companies, such as their novelty, small size, and the transformations they undergo during development. Moreover, it applies fundamental concepts from traditional RM to illustrate how startups can address the negative consequences of these characteristics, particularly in the LSM context. This study thus contributes to the development of a more differentiated theoretical foundation for RM in startups.

¹ The research items one, two, and three are already published. Research item four is currently under review at the Strategic Change journal: 1st Major Revision: 08-2025, 2nd Minor Revision: 03-2026, Next step: Publication: date still open.

Research Design

The study adopts a deductive, theory-driven methodology grounded in an analysis of the existing literature and current debates. It aims to review and systematize existing theoretical approaches to RM and identify connections with the principles of the LSM to reduce startup failure. It also focuses on current debates and examines them in relation to the three key liabilities: the Liability of Newness, the Liability of Smallness, and the Liability of Adolescence.

Results and Discussion

The article highlights that opportunities and risks are managed differently in startups compared to larger companies. The different management approaches apply across several areas, including resource allocation, decision-making structures, development dynamics, risk tolerance, external regulations, and more. Validated learning and pivoting help startups limit uncertainties in their business models, while minimizing product versions enables low-risk development. The focus on customers and iterative learning processes connects to the LSM and points the way toward LSRM.

Four key findings are at the center of the article. First, startups face an increased risk of market exit due to limited resources and the need to reduce failure risk. Second, the article provides specific recommendations to improve startups' survival chances through effective RM. Third, the basic principles of traditional RM can provide initial guidance, especially when adapted in a lean manner. Finally, the development of RM is also linked to the startup's overall growth. Thus, the value of RM also increases steadily as the startup continues to grow, exploiting more opportunities and facing more risks.

Embedding in the Overall Project

The first article points the way toward LSRM tailored to the needs of young, growth-oriented companies, given that their resources are generally limited and rapid business development is often a top priority. The significant research gap regarding a broadly accepted design of a systematic RM for startups becomes striking.

4.2 Research Item 2 – Management of Opportunities and Risks associated with Customer Involvement in Young Companies

Overview

The second research item, "Management of Opportunities and Risks Associated with Customer Involvement in Young Companies" (journal article; original title: "Management der Chancen und Risiken des Customer Involvement in jungen Unternehmen"), provides a closer examination of the opportunities and risks associated with customer-centric business model development. Since CI is considered fundamental to product and service development in the current research landscape for startups (Blank & Dorf, 2015; Brockhoff, 2003; Chang et al., 2022; Melander, 2019), it is crucial to understand the opportunities and risks associated with it. A combined analysis indicates that CI should be a central element of LSRM. More specifically, this article examines the importance of CI, particularly in strengthening customer relationships in product and service development, to minimize risks through the evaluation of customer responses.

Theoretical Foundations

The article builds on the theoretical foundations of LSM, CI, and RDT. This combined theoretical perspective assumes that organizations depend heavily on external resources over which they exercise only limited control. At the same time, however, startups can strategically leverage their available resources due to their high flexibility and company structure. Companies can implement RM mechanisms by utilizing LSM principles, thereby enabling more effective resource control within startups.

Research Design

The methodological approach involves a systematic analysis of the LSM elements and their interaction with established CI measures described in the primary literature. By integrating various theories from the literature, the objective is to establish a more robust theoretical foundation for implementing and accepting RM within startups.

Results and Discussion

Firstly, CI places the customer at the center of the strategic course, enabling young companies to leverage customer information as a valuable resource. Viewing information as an intangible resource can lead to a more robust and sustainable business model. Recent studies have shown that actively involving customers in development processes can refine business models and enhance product and service quality, thereby reducing the overall risk of startup failure (Brockhoff, 2003; Chang et al., 2022; Melander, 2019).

Secondly, the article presents a theoretical examination of customer participation as a central knowledge resource. It highlights the associated opportunities and risks of CI that should be considered when designing RM strategies for startups. Particularly in the later stages of the traditional RM process, when addressing risks, this is a good opportunity to develop targeted measures and control mechanisms tailored to customers' needs. The overarching goal is to reduce risks, i.e., by introducing sensible risk control and mitigation measures. The key is to understand RM not as a static control instrument but as an integral part of a learning-and-development-oriented business process. Using it as a strategic tool is particularly relevant for early-stage startups operating in an uncertain, rapidly changing environment.

Embedding in the Overall Project

The article builds on the findings of the first article. Young companies constantly need up-to-date information to make informed, proactive decisions. The need for clear information is particularly relevant when it comes to reducing risks or identifying opportunities. In the context of the dissertation, the sooner customer information is available and processed, the faster companies can respond and adapt their strategies. The integration of CI into RM makes it an active and important decision-making tool for founders. A closer look at CI reveals that startups using CI are already applying RM to some extent, possibly without even realizing it. In this regard, both concepts share the same goal: securing the company's continued existence.

In relation to the development of a LSRM, the article helps better understand how startups can simultaneously focus on developing their business model based on customer feedback while strategically safeguarding their processes against risks. Constant information gathering also ties into an early warning system, a fundamental part of effective RM. For these reasons, small businesses should actively develop the basic principles of risk and opportunity management based on direct customer feedback. This article lays the foundation for this and highlights relevant development opportunities.

4.3 Research Item 3 – Lean Social Media Communication Strategies for SMEs

Overview

Research Item three, "Lean Social Media Communication Strategies for SMEs" (book chapter), demonstrates how elements of the LSM can be utilized to develop a lean and targeted communication strategy through social media. It also focuses on how the LSM can be used in a risk-adjusted manner to exploit its potential fully. It focuses on two RQs:

RQ1: What key factors derived from the Lean Startup Method can be applied to communication via social media platforms for SMEs?

RQ2: How can these identified key factors of lean communication be implemented in a risk-adjusted social media strategy for targeted customer communication?

These two RQs lead to a specific analysis of risk mitigation through Customer Development (CD) in social media for SMEs. In this context, the book chapter complements the discussion on customer-oriented, risk-adjusted RM for startups by providing a specific example. Social media serves as the interface between CD, iterative learning, and strategic RM. The combination of lean principles with digital communication thus extends the application of lean startup logic beyond product development to a holistic, resource-efficient RM strategy.

Theoretical Foundations

The book chapter builds on the theoretical premise that a lack of systematic structure frequently characterizes digital communication practices in SMEs. Initially, the book chapter discusses the theoretical context of digital communication in SMEs, emphasizing various risks, such as communication failures stemming from inappropriate language or the critical decision of selecting an appropriate channel. For a better systematization, the concepts validated learning, lean structures, CD, and persevere or pivot serve as the theoretical foundation for classification and subsequent model development. These four fundamentals are the key elements in the LSM literature and provide promising starting points for digital communication strategies (Eisenmann et al., 2011; Ries, 2017).

Research Design

Methodologically, a systematic literature review (SLR) and a content analysis provided valuable insights for the research project. The study adopts a multi-stage approach for the SLR. First, a broad database search was conducted in a total of 412 scientific databases using defined search terms related to communication risks, digital communication, startups, etc. In an initial screening, 122 articles were classified as relevant. The study then subjected these to an in-depth analysis and selected 21 primary articles based on content and methodological criteria. These served as the theoretical foundation and conceptual framework for the book chapter. The procedure followed established SLR guidelines, ensuring a transparent, comprehensible, and theory-driven selection of relevant literature.

Results and Discussion

The findings indicate that companies must continually adapt and update their social media presence to facilitate effective customer interaction and reap long-term benefits. Outdated or irrelevant content can lead to a loss of customer interest and, ultimately, a decline in customer numbers. That is why lean strategies can help reduce costs in the market environment and strengthen customer loyalty, thereby enhancing the customer experience. The connection to lean principles can enhance the company's online appeal and, in turn, positively influence RM and the acquisition of new customers and opportunities. Social media is not only seen as a marketing tool but also as an active tool for interacting with core customers, which must be continuously evaluated and adapted.

Regarding potential opportunities, numerous tools and a wide range of individual customization options already exist. At the same time, several risks exist, including the high costs of campaigns that fail to reach the intended target group effectively. Young companies often lack knowledge and experience in this area. Another risk identified is that excessive CD can lead to unwanted transparency about the competition. By strategically utilizing CD, companies can manage risks more effectively. The most significant internal and external risks have been identified within the framework (See Figure 10.9 within the book chapter) and serve as the strategic foundation for lean validated learning in the campaign and the subsequent development of lean customer relationships.

Embedding in the Overall Project

Digital communication with customers is crucial for many startups to refine their business models. It is essential to identify and capitalize on potential opportunities early while minimizing risks as much as possible.

Connecting it to the overall research project, this book chapter delves deeper into the opportunities and risks of CD raised in research item two, particularly in communication, using the example of social media. The study confirms the positive aspects of LSM while also highlighting the risks it poses to startups and SMEs in communication. To prevent these risks from leading to market exit for startups, this article emphasizes that companies must be aware of the risks to develop a successful communication strategy. The potential to connect CD and customer focus to risk-controlling mechanisms indirectly supports the use of LSM principles to better embed RM in startups. RM also allows LSM's advantages to be better exploited.

4.4 Research Item 4 – The Path to Lean Startup Risk Management

Overview

The fourth research item, "The Path to Lean Startup Risk Management" (journal article), uses empirical interviews to shed light on how German startup founders assess opportunities and risks, the benefits of RM derived from these assessments, and how they address them. First, the study describes RM in the context of customer-centric product and service development. Building on this, the study analyzes customer relationships as a foundation for processing customer feedback to mitigate risks and leverage opportunities. The article then discusses the advantages of improved financial structures resulting from strategic planning and investor communication enabled by effective RM mechanisms. The results offer insights into how the founders of the surveyed startups manage opportunities and risks, as well as their views on the necessity of RM in startups. The interview study has three main objectives, which correspond to three RQs:

RQ1: What is the general perception of opportunities and risks among founders?

RQ2: How do founders assess the potential and necessity of Risk Management as an internal controlling system?

RQ3: How do founders envision an effective and tailored Risk Management system for the strategic development of startups?

Theoretical Foundations

The article, particularly the interview guideline (see Figures 4, 5, and 6 in the appendix), builds on the fundamentals of traditional RM to identify the founders' perceptions and the current level of RM implementation. The traditional RM approaches are simplified and further adapted throughout the work using LSM building blocks, reducing them to only the central components. From a theoretical perspective, the content is grounded in the RBV (internal resource perspective). RM can evolve within the RBV into a strategically embedded capability that can ultimately be regarded as a dynamic capability.

Research Design

To gain insights from the founders' perspective, the study employed a qualitative, cross-sectional research design and an abductive analysis approach. The study supplemented the approach with deductive techniques to gain a more comprehensive understanding.

A total of 24 semi-structured interviews were conducted with founders to obtain targeted information on the selected research areas. Figures 7-12 in the appendix provide a clear overview of the key characteristics of the interviewed founders and their startups. To establish a solid foundation for developing the interview guide, an SLR was conducted. This research comprises 31 primary and 42 secondary articles from research conducted between 2004 and

2025. The article presents an interview guide that outlines individual topics, three of which the study uses to generate results and facilitate discussion.

Results and Discussion

Although founders develop their startups in a highly opportunity-oriented manner, they often fail to establish transparent strategic processes for systematically identifying opportunities and risks. Although initial considerations regarding opportunities and risks are often incorporated into business plans or business models, there is a lack of integrated, strategically managed implementation, particularly in the early stages of company development.

According to the interview findings, there is considerable potential to implement lean, strategically oriented RM, particularly in key areas such as product and service development, customer relationships, and financing structures. This finding aligns directly with previous considerations from the other research items that view RM in startups not as an isolated control mechanism but as part of a learning-oriented, iterative development process – as exemplified by the LSM.

It is crucial to secure the key resources of startups for long-term success without developing a complex governance structure. When implementing a LSRM, governance mechanisms serve as bridge elements that connect fast product and service development, active customer relationships, and a resource-efficient finance structure. RM serves as the primary framework, ensuring governance structures remain as streamlined as possible.

Embedding in the Overall Project

The interview study forms the core of the dissertation and provides answers to all three guiding RQs of the overall project. The study confirms the book chapter's findings that a strategic approach is essential and that managing LSRM at the governance level makes perfect sense, even for startups. The two figures of the article show the key development areas of LSRM and a first attempt at a Multi-level Lean Startup Risk Governance concept. The underlying governance mechanisms naturally arise alongside the development of LSRM. Keeping these governance mechanisms manageable is crucial, as the goal is always to minimize RM's complexity, even when embedded in a governance structure. The dissertation provides in-depth answers, particularly in the top two areas (product and service development and customer relationships). The author outlines the main features of the financial component below, but did not include them in the publication.

Further Results not covered in the Study regarding a Resource-efficient Finance Structure

As the article outlines, the study deliberately excludes the external startup RM perspective on founders because the presented content had already reached its maximum information density. Instead, the article briefly touches on this perspective within the main framework, leaving out a deeper analysis.

In section C of the interview guide, the goal is to discuss the **(I) advantages and disadvantages of active risk communication** with investors. Although the results are heterogeneous, the interviewees quantitatively listed approximately twice as many advantages as disadvantages of active communication (22 to 12). They emphasized the importance of actively engaging in a communication strategy with investors, as many of them demand regular communication at specific intervals. However, it is rare for startups to set specific time intervals to actively discuss opportunities and risks with their investors.

The next objective of the interview section is to explore the **(II) differences between communication with equity and debt capital providers**. As expected, the interviewees contributed significantly more to the discussion on communication with equity capital providers. Very few of the startup founders surveyed were in close contact with debt capital providers. Nevertheless, as the amount of capital provided by debt capital providers increases, more in-depth communication with them is also necessary. This is primarily because investors become more engaged as they invest more capital in the startup.

In the third step, the **(III) core topics of targeted opportunity and risk communication** mentioned by the interviewees were discussed. Many of them referred to their business plan or model. The question to be clarified was whether the intensity of communication between the two actors changed after capital was provided. Surprisingly, founders noted that communication intensity was often lower after raising capital, i.e., after financing had been obtained. These insights are interesting, given that companies must regularly provide their debt capital providers, if these are credit institutions, with information about their business and economic situation. The extent of active risk communication needed is still unclear and requires further clarification.

The interview insights suggest that startups should prioritize active communication with investors, as this offers significant potential to build trust. Lean RM tailored to the needs of startups can be beneficial here when implemented strategically. The understanding gained of both opportunities and risks explains the strategic approach's advantages. Unfortunately, it is not possible to say conclusively whether regular exchanges between startups and investors are feasible, because founders perceive it as too time-consuming.

Many startups are unable or unwilling to collect the necessary data on an ongoing basis. The lack of data collection is incomprehensible, as founders should have a vested interest in keeping up to date by regularly collecting and analyzing data at specific intervals to assess the company's current business standing. The strategic method is the only way to identify any undesirable developments and take timely, appropriate countermeasures.

5. Concluding Remarks

The last section highlights the most important findings regarding the three RQs and their specific implications for startups. Finally, the potential for further theoretical research is presented, along with the limitations of the entire research project.

Currently, in many cases, startups do not systematically identify and analyze opportunities and risks beyond the business plan stage. However, research based on current literature suggests that effective RM can significantly improve the success and resilience of startups (Gao et al., 2013; Schulte & Wagenknecht, 2022; Silva et al., 2013; Todeschini et al., 2017). The lack of implementation is strongly confirmed by the interview study (research item four) and by the core literature. The main reason is that the effort involved in RM is considered too high compared to the benefits it can bring to the company. Amid the ongoing economic crisis and increasingly complex legal regulations, startups are expected to undergo a significant shift in strategic RM. It has also become clear that assessing RM's potential is challenging because founders often lack a clear understanding of its value to their startup.

The first research item shows that transferring findings from established RM practices in large companies to startups is only possible to a limited extent. However, the dissertation shows that general RM principles offer strong potential as a foundation for developing LSRM and provide a suitable basis for further refinement. Especially, the wide range of regulations, frameworks, and literature provides valuable starting points if implemented in a lean adjusted way (Brustbauer, 2016; Crovini, Ossola, et al., 2021; Crovini, Santoro, et al., 2021; Gao et al., 2013; Todeschini et al., 2017). Therefore, it is important to identify the key starting points and the appropriate level of development needed for these companies.

The knowledge gap is one of the most significant obstacles to be addressed. The lack of knowledge about RM's strategic management tools is likely due to the different requirements and conditions of startups, as well as the less stringent regulatory requirements for smaller companies. Startups require external support and motivation for implementation. Only when there are sufficient examples of best practices or higher regulatory requirements will startups be encouraged to engage more deeply with RM. Currently, the overall level of active RM is

considered very low. However, there is significant potential, primarily because the initial steps are quite easy to take.

Shaping startup RM through the LSM means applying LSM concepts, i.e., CD and CI, to streamline and adapt established RM practices. The adaptation process starts with building acceptance for LSRM and continues by developing the startup's core strategy and identifying initial measures for straightforward implementation. Research item four further analyzes this and explains how implementation is possible without establishing an overly complex governance structure.

The LSM concepts help identify the optimal timing for implementing LSRM, as foundational structures should be considered from the company's inception. Based on the knowledge gained from this dissertation, LSRM should address both opportunities and risks equally and build on the main ideas and key performance indicators outlined in the initial business plan. Furthermore, the straightforward implementation bridges the gap between developing the business plan and scaling the operational business, while emphasizing a strategic identification of opportunities and risks from the beginning. As shown in research item four, it is not the term "Risk Management" that discourages startups from implementing RM. Rather, it is the expected effort and the unpredictable benefits. However, the founders stress that assessing the relevance and potential of RM is challenging.

It is, therefore, equally important to remove obstacles in the context of research and economic development and to provide concrete, practical implementation options. The interviews revealed, for example, a need for simple templates or frameworks. Simple checklists or startup consulting focused on implementing easy-to-use practices would be useful. A successful approach also involves determining how founders can envision LSRM and establish it based on their specific needs, while considering regular resource constraints and established fundamentals, such as the preliminary work involved in drafting a business plan or developing a business model.

5.1 Practical Implications

Many entrepreneurs rely on heuristics and rules of thumb when starting a business, but successful entrepreneurs actively switch between heuristic and systematic decision-making depending on the situation. They evaluate their expertise and the uncertainty of each decision on the most reliable basis possible and adapt their approach as necessary to effectively minimize risks (Murmman & Sardana, 2013). The dissertation's insights aim to help founders recognize RM as a strategic tool within the systematic decision-making process. Accordingly, this chapter outlines concrete proposals for practical implementation.

The first practical recommendation for startups is to consider implementing RM during the early startup phase. This consideration should be an active process. While shifting from scratch development to real market situations, startups should not develop RM in isolation from the core product or service but integrate it into the overall business venture, as outlined in the business plan or business model. Research item four highlights three development building blocks for LSRM: The first building block relates to product and service development. The second is customer relationships, and the third is the startup's financial structure. These three building blocks could serve as an initial framework for startups to build a LSRM.

Second, startups should view RM as a holistic process but implement it step by step; otherwise, the complexity could hinder implementation. Startups should determine the way of implementation based on their specific capabilities and requirements, while ensuring they meet the minimum legal standards and their own strategy. The difficulty lies in determining these minimum requirements that founders must adhere to when implementing LSRM. From this foundation, startups can identify strategic opportunities and potential risks. Figure 3 illustrates all steps startups face when implementing RM while keeping an eye on opportunities and risks:

Implementing a holistic RM process is crucial for long-term success, but the first step is to get started.

Third, an early start to strategic, yet lean, RM development, aligned with the business model development, enables startups to recognize potential more quickly. The gray area (first two boxes) in Figure 3 represents the starting point, which should be the core focus for startups. While further steps are necessary to maximize RM's effectiveness, this focus lowers the initial hurdle to engaging with RM. The first step should be to establish a coherent RM strategy that defines objectives, scope, risk appetite, and identifies initial opportunities and risks. In this context, an iterative approach such as the build-measure-learn cycle within the LSM could provide a suitable framework, as it repeatedly iterates and adjusts. The idea behind this focus on just the first two steps is that the barriers to the other steps will be lower after startups understand the potential of strategic RM.

Fourth, research item four shows that startups should avoid creating unnecessary governance structures. Instead of introducing compliance departments, audit units, or similar functions, they should leverage LSM's potential to establish simple, lean governance mechanisms from the outset. RM thus offers excellent, simple governance mechanisms to support the further scaling of startups. Overall, strategic planning and decision-making authority for the RM always rest with the founder.



Figure 3: Adjusted Opportunity and Risk Management Process for Startups (Source: own figure based on Gleißner, 2017 and Verbano & Venturini, 2011)

The fifth practical implication emphasizes developing RM with a focus on core customers. The main learning from the LSM is to put the customer at the center of the business venture. Putting the customer at the center means that LSM directly connects the opportunity and risk procedures to them. Regarding strategic product and service development guided by RM, research already provides numerous concrete indications, e.g., for direct testing. These tests generate valuable knowledge for RM, especially when active testing is combined with thorough evaluation of the results and a comprehensive analysis. However, startups often fail to strategically utilize the knowledge they gain during the business development phase, as this requires time and human resources that they believe would be better invested elsewhere.

Sixth, an established RM structure is beneficial for decision-making processes. In the event of risks, startups can respond more quickly by leveraging knowledge generated through strategic

engagement with their processes and the associated opportunities and risks. RM allows countermeasures to be initiated promptly, particularly when deviations are detrimental to the company, thereby ensuring its continued existence. The use of the core LSM building blocks provides a solid foundation for improving the identification process of opportunities and risks from the customer inwards.

Finally, as a seventh recommendation, startups should adopt a coherent communication strategy grounded in reliable RM data. A data-based communication can strengthen financial management and enhance investors' trust. In this regard, a proactive communication with the company's financial backers can assure long-term financial support. Overall, it is about ensuring liquidity and identifying deviations from the business plan as early as possible. On the one hand, coherent communication increases collaboration between the founders and external stakeholders, and on the other hand, it prevents avoidable additional financing needs. In this context, it is crucial to maintain an overview of the startup's key performance indicators to communicate effectively with the stakeholders and build additional trust.

A lean and valuable implementation of RM is challenging to achieve, given that startups' requirements are highly individual, and many founders may not fully grasp LSRM's potential at the outset. It is important to start with the first steps, particularly in the early stages of business development. Even if RM structures are not yet fully developed, it is worth examining the startup's core opportunities and risks strategically. This approach aligns with the LSM's fundamental philosophy, provides useful initial guidance, and allows the RM system to evolve.

5.2 Future Research Streams

Extensive research and empirical validation are still needed to further develop these ideas and frameworks. This dissertation presents, on the one hand, insights into an initial LSRM framework. Further, it provides guidance for implementing and developing LSRM. On the other hand, the dissertation highlights the advantages of a highly iterative approach to RM by emphasizing the greater integration of customer feedback as a valuable resource also for RM. Future research in this field is essential, as the studies reveal that research on startup RM is still in its infancy.

It has become clear that neither research nor startups themselves have yet adequately assessed the relationship between resource use and the benefits of implementing RM to improve resource efficiency. The theoretical foundations of the RBV (internal) and RDT (external) have proven effective for this project. It is advisable to analyze the impact of RM measures separately (internal and external).

Internally, a detailed case study focusing on selected startups could illustrate how a customer-oriented approach to identifying opportunities and risks helps develop RM and integrate it into the startup's core strategy. The influence of direct customer interaction and continuous learning as a dynamic tool for risk identification should be investigated in greater depth, particularly regarding real-time feedback and business model development. Future studies could further explore the development of the framework "Development Areas of Lean Startup Risk Management" outlined in the fourth research item. Such a specific framework could serve as an initial development guideline for startups and could increase the intrinsic motivation to implement RM strategies. At present, the model can serve only as an overview and must be tested and evaluated before a broader implementation is possible. Doing so, future research projects should focus on developing scientifically validated frameworks, checklists, and practical, digitally approved applications that startups can easily apply.

Externally, organizations can leverage the newly gained outputs of RM, particularly to communicate more effectively with investors. It would also make sense to survey investors directly and compare their views with those of the founders. Empirical studies are recommended here, as the research landscape still offers very few insights into this.

Overall, further research should examine whether and how factors such as industry, the startup ecosystem, culture, or team structure influence the design of RM strategies. An international comparison would be particularly valuable, as the empirical data in this study come exclusively from German startups.

5.3 Limitations

Each of the four research items has its own limitations arising from the defined research scope and the analytical methods employed. The results of this dissertation are promising; however, further empirical and quantitative validation would help verify the knowledge gained and test the assumptions. The broad approach has yielded mixed results, as no specific startup industry, size, or region was targeted. Although the dissertation provides valuable empirical insights into German startups, its strong focus on this context could limit consideration of cultural and contextual differences in other regions. To provide a broader picture and gain multiple culturally influenced insights, calls for research in other countries and comparative studies.

Furthermore, the dissertation focused on startups in their early stages, as this is where the most promising approach for initial implementation lies. However, this means that transferability to the long-term development of LSRM is limited.

The key findings of this dissertation are based on a conceptual approach that integrates various theories and concepts, including LSM, RBV, RDT, elements of risk-adjusted communication, and CI. These concepts are often analyzed in relation to one another to gain a clearer understanding of their mutual influences. By empirically validating the individual impacts on LSRM, the understanding of how these factors interact can be improved.

Finally, the analyzed literature reflects the state of knowledge at a specific point in time. In contrast, startup environments evolve rapidly, and RM is becoming increasingly important for companies of all sizes. The COVID-19 pandemic and multiple global conflicts have clearly demonstrated the need for systems that can adapt quickly to changing conditions. Consequently, the applicability of the findings to future startups may vary depending on their specific contexts and environmental conditions. This means that there cannot be a universal blueprint for LSRM. However, concepts that support startups' resilience within the LSRM framework offer promising opportunities. The results show that LSRM already accounts for this, as it must be highly flexible and adaptable due to the constant growth and evolution of startups.

6. Literature

- Andersen, T. J. (2008). The Performance Relationship of Effective Risk Management: Exploring the Firm-Specific Investment Rationale. *Long Range Planning*, 41(2), 155–176. <https://doi.org/10.1016/j.lrp.2008.01.002>
- Backes-Gellner, U., & Werner, A. (2007). Entrepreneurial Signaling via Education: A Success Factor in Innovative Start-Ups. *Small Business Economics*, 29(1–2), 173–190. <https://doi.org/10.1007/s11187-006-0016-9>
- Baptista, R., Karaöz, M., & Leitão, J. C. (2020). Diversification by young, small firms: The role of pre-entry resources and entry mistakes. *Small Business Economics*, 55(1), 103–122. <https://doi.org/10.1007/s11187-019-00142-z>
- Bielialov, T. (2022). Risk Management of Startups of Innovative Products. *Journal of Risk and Financial Management*, 15(5), 202. <https://doi.org/10.3390/jrfm15050202>
- Bieraugel, M. (2015). Managing library innovation using the lean startup method. *Library Management*, 36(4/5), 351–361. <https://doi.org/10.1108/LM-10-2014-0131>
- Blank, S. G. (2013). Why the Lean Start-Up Changes Everything. *Harvard Business Review*.
- Blank, S. G., & Dorf, B. (2015). The Path to the Epiphany: The Customer Development Model. *Revista Cuatrimestral de Las Facultades de Derecho y Ciencias Económicas y Empresariales*, 94, 119–142.
- Blundel, R. (2007). Critical Realism: A Suitable Vehicle for Entrepreneurship Research? In H. Neergaard & J. Ulhøi, *Handbook of Qualitative Research Methods in Entrepreneurship* (p. 3448). Edward Elgar Publishing. <https://doi.org/10.4337/9781847204387.00010>

- Braun, M., Cannatelli, B., & Molteni, M. (2022). Risk-managing the business model: Locating tripwires at the start. *Journal of Business Strategy*, 43(2), 115–121. <https://doi.org/10.1108/JBS-08-2020-0172>
- Brockhoff, K. (2003). Customers' perspectives of involvement in new product development. *International Journal of Technology Management*, 26(5/6), 464–481. <https://doi.org/10.1504/IJTM.2003.003418>
- Bromiley, P., McShane, M., Nair, A., & Rustambekov, E. (2015). Enterprise Risk Management: Review, Critique, and Research Directions. *Long Range Planning*, 48(4), 265–276. <https://doi.org/10.1016/j.lrp.2014.07.005>
- Brustbauer, J. (2016). Enterprise risk management in SMEs: Towards a structural model. *International Small Business Journal: Researching Entrepreneurship*, 34(1), 70–85. <https://doi.org/10.1177/0266242614542853>
- Bunge, M. (1996). *Finding philosophy in social science* (1st ed.). Yale University Press. <http://www.jstor.org/stable/10.2307/j.ctt32br4n>
- Carayannis, E. G., Provance, M., & Grigoroudis, E. (2016). Entrepreneurship ecosystems: An agent-based simulation approach. *The Journal of Technology Transfer*, 41(3), 631–653. <https://doi.org/10.1007/s10961-016-9466-7>
- Chang, Wen-Hong Chiu, Jian-Hang Wang, & Teng, M.-J. (2022). Customer involvement in the new process innovation: Antecedents, mediation and performance. *European Journal of Innovation Management*, 25(4), 1115–1141. <https://doi.org/10.1108/EJIM-09-2019-0268>
- Chen, Y.-C., Arnold, T., & Tsai, H.-T. (2021). Customer involvement, business capabilities and new product performance. *European Journal of Marketing*, 55(10), 2769–2793. <https://doi.org/10.1108/EJM-01-2020-0034>

- Civelek, M., Erben, M., Kuděj, M., Vincúrová, Z., & Wan Hussain, W. M. H. (2024). Exploring the influence of risk management capabilities on SMEs' export intentions: A cross-country analysis. *International Entrepreneurship and Management Journal*, 20(3), 2369–2396. <https://doi.org/10.1007/s11365-024-00978-2>
- Costa, C. J. (2010). Testing usability of ERP open source systems. *ACM SIGDOC European Chapter/ Eurosigdoc Workshop on Open Source and Design of Communication - OSDOC '10*, 25. <https://doi.org/10.1145/1936755.1936763>
- Costa, P. L., Ferreira, J. J., & Torres De Oliveira, R. (2023). From entrepreneurial failure to re-entry. *Journal of Business Research*, 158, 113699. <https://doi.org/10.1016/j.jbusres.2023.113699>
- Crovini, C., Ossola, G., & Britzelmaier, B. (2021). How to reconsider risk management in SMEs? An Advanced, Reasoned and Organised Literature Review. *European Management Journal*, 39(1), 118–134. <https://doi.org/10.1016/j.emj.2020.11.002>
- Crovini, C., Santoro, G., & Ossola, G. (2021). Rethinking risk management in entrepreneurial SMEs: Towards the integration with the decision-making process. *Management Decision*, 59(5), 1085–1113. <https://doi.org/10.1108/MD-10-2019-1402>
- Czakon, W., Klimas, P., Tiberius, V., Ferreira, J., Veiga, P. M., & Kraus, S. (2024). Entrepreneurial Failure: Structuring a Widely Overlooked Field of Research. *Entrepreneurship Research Journal*, 14(3), 951–984. <https://doi.org/10.1515/erj-2021-0328>
- D'Andrea, F. A. M. C., Santos, D. A. G. D., Costa, C. V. P., & Zen, A. C. (2023). Why startups fail in emerging entrepreneurial ecosystems? (F. A. M. C. D'Andrea, Trans.). *REGEPE Entrepreneurship and Small Business Journal*, e2055. <https://doi.org/10.14211/regepe.esbj.e2055>

- Eisenmann, T., Ries, E., & Dillard, S. (2011). Hypothesis-Driven Entrepreneurship: The Lean Startup. *Harvard Business School Entrepreneurial Management Case*, 812–095.
- Falkner, E. M., & Hiebl, M. R. W. (2015). Risk management in SMEs: A systematic review of available evidence. *Journal of Risk Finance*, 16(2), 122–144. <https://doi.org/10.1108/JRF-06-2014-0079>
- Felin, T., Gambardella, A., Stern, S., & Zenger, T. (2020). Lean startup and the business model: Experimentation revisited. *Long Range Planning*, 53(4), 101889. <https://doi.org/10.1016/j.lrp.2019.06.002>
- Freiling, J. (2008). RBV and the Road to the Control of External Organizations. *Management Revue*, 19(1/2), 33–52.
- Freiling, J., & Harima, J. (2019). *Entrepreneurship: Gründung und Skalierung von Startups*. Springer Fachmedien Wiesbaden. <https://doi.org/10.1007/978-3-658-26117-7>
- Fuertes-Callén, Y., Cuellar-Fernández, B., & Serrano-Cinca, C. (2022). Predicting startup survival using first years financial statements. *Journal of Small Business Management*, 60(6), 1314–1350. <https://doi.org/10.1080/00472778.2020.1750302>
- Galindo-Martín, M.-A., Castaño-Martínez, M.-S., & Méndez-Picazo, M.-T. (2023). Fear of failure, entrepreneurial passion and entrepreneurial motivation. *International Entrepreneurship and Management Journal*, 19(4), 1835–1853. <https://doi.org/10.1007/s11365-023-00908-8>
- Gao, S. S., Sung, M. C., & Zhang, J. (2013). Risk management capability building in SMEs: A social capital perspective. *International Small Business Journal: Researching Entrepreneurship*, 31(6), 677–700. <https://doi.org/10.1177/0266242611431094>
- Gleißner, W. (2017). *Grundlagen des Risikomanagements Mit fundierten Informationen zu besseren Entscheidungen* (3rd ed.). Vahlen.

- Grossmann-Hensel, B., & Seidl, D. (2021). Problematizing the Relation Between Management Research and Practice. In C. Neesham, M. Reihlen, & D. Schoeneborn (Eds.), *Handbook of Philosophy of Management* (pp. 1–21). Springer International Publishing. https://doi.org/10.1007/978-3-319-48352-8_57-1
- Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). Resource Dependence Theory: A Review. *Journal of Management*, 35(6), 1404–1427. <https://doi.org/10.1177/0149206309343469>
- Hock-Doepgen, M., Clauss, T., Kraus, S., & Cheng, C.-F. (2021). Knowledge management capabilities and organizational risk-taking for business model innovation in SMEs. *Journal of Business Research*, 130, 683–697. <https://doi.org/10.1016/j.jbusres.2019.12.001>
- Hoseini, E., Hertogh, M., & Bosch-Rekveltdt, M. (2021). Developing a generic risk maturity model (GRMM) for evaluating risk management in construction projects. *Journal of Risk Research*, 24(7), 889–908. <https://doi.org/10.1080/13669877.2019.1646309>
- Hyytinen, A., Pajarinen, M., & Rouvinen, P. (2015). Does innovativeness reduce startup survival rates? *Journal of Business Venturing*, 30(4), 564–581. <https://doi.org/10.1016/j.jbusvent.2014.10.001>
- Kim, B., Kim, H., & Jeon, Y. (2018). Critical Success Factors of a Design Startup Business. *Sustainability*, 10(9). <https://doi.org/10.3390/su10092981>
- Mansoori, Y., & Lackéus, M. (2020). Comparing effectuation to discovery-driven planning, prescriptive entrepreneurship, business planning, lean startup, and design thinking. *Small Business Economics*, 54(3), 791–818. <https://doi.org/10.1007/s11187-019-00153-w>

- McCarthy, P. X., Gong, X., Braesemann, F., Stephany, F., Rizoiu, M.-A., & Kern, M. L. (2023). The impact of founder personalities on startup success. *Scientific Reports*, 13(1), 17200. <https://doi.org/10.1038/s41598-023-41980-y>
- Melander, L. (2019). Customer involvement in product development: Using Voice of the Customer for innovation and marketing. *Benchmarking: An International Journal*, 27(1), 215–231. <https://doi.org/10.1108/BIJ-04-2018-0112>
- Murmann, J. P., & Sardana, D. (2013). Successful entrepreneurs minimize risk. *Australian Journal of Management*, 38(1), 191–215. <https://doi.org/10.1177/0312896212444114>
- Nienhiiser, W. (2008). Resource Dependence Theory—How Well Does It Explain Behavior of Organizations? *Management Revue*, 19(1/2), 25.
- Pfeffer, J., & Salancik, G. R. (2003). *The external control of organizations: A resource dependence perspective*. Stanford Business Books.
- Picken, J. C. (2017). From startup to scalable enterprise: Laying the foundation. *Business Horizons*, 60(5), 587–595. <https://doi.org/10.1016/j.bushor.2017.05.002>
- Ramoglou, S., & Tsang, E. W. K. (2016). A Realist Perspective of Entrepreneurship: Opportunities As Propensities. *Academy of Management Review*, 41(3), 410–434. <https://doi.org/10.5465/amr.2014.0281>
- Ries, E. (2017). *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses* (Currency international edition). Currency.
- Schulte, R. (2006). Innovative Gründungen. *Wirtschaftswissenschaftliches Studium*, 35(11), 637.

- Schulte, R., & Wagenknecht, M. (2022). Risikomanagement bei Startups. *ZfKE – Zeitschrift für KMU und Entrepreneurship*, 70(3–4), 243–252. <https://doi.org/10.3790/zfke.70.3-4.243>
- Silva, E. S., Wu, Y., & Ojiako, U. (2013). Developing Risk Management as a Competitive Capability: Risk Management Capability. *Strategic Change*, 22(5–6), 281–294. <https://doi.org/10.1002/jsc.1940>
- Szathmári, E., Varga, Z., Molnár, A., Németh, G., Szabó, Z. P., & Kiss, O. E. (2024). Why do startups fail? A core competency deficit model. *Frontiers in Psychology*, 15, 1299135. <https://doi.org/10.3389/fpsyg.2024.1299135>
- Todeschini, B. V., Boelter, A. S., Souza, J. S. D., & Cortimiglia, M. N. (2017). Risk Management from the Perspective of Startups. *European Journal of Applied Business Management*, 3(3), 40–54.
- van Gelderen, M., Thurik, R., & Bosma, N. (2006). Success and Risk Factors in the Pre-Startup Phase. *Small Business Economics*, 26(4), 319–335. <https://doi.org/10.1007/s11187-004-6837-5>
- Venczel, T. B., Berényi, L., & Hriczó, K. (2024). The Project and Risk Management Challenges of Start-ups. *Acta Polytechnica Hungarica*, 21(2), 151–166. <https://doi.org/10.12700/APH.21.2.2024.2.8>
- Verbano, C., & Venturini, K. (2011). Development paths of risk management: Approaches, methods and fields of application. *Journal of Risk Research*, 14(5), 519–550. <https://doi.org/10.1080/13669877.2010.541562>
- Verbano, C., & Venturini, K. (2013). Managing Risks in SMEs: A Literature Review and Research Agenda. *Journal of Technology Management & Innovation*, 8(3), 186–197. <https://doi.org/10.4067/S0718-27242013000400017>

- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180. <https://doi.org/10.1002/smj.4250050207>
- Yang, X., Sun, S. L., & Zhao, X. (2019). Search and execution: Examining the entrepreneurial cognitions behind the lean startup model. *Small Business Economics*, 52(3), 667–679. <https://doi.org/10.1007/s11187-017-9978-z>
- Zhang, J. A., Bai, T., & O’Kane, C. (2023). How political connections affect entrepreneurial risk-taking in SMEs: A symmetric assessment and a configurational approach. *International Small Business Journal: Researching Entrepreneurship*, 41(7), 685–713. <https://doi.org/10.1177/02662426221122845>

Appendix

I. Additional Material

Interviewleitfaden					
Unternehmen:					
Person:					
Alter:					
Geschlecht:					
Ort:					
Datum:					
Länge:					
Vielen Dank - Als Bestandteil meiner Promotion und Forschung ist eine Interviewstudie mit Gründern und Gründerinnen von Startups zu den Themen Chancen und Risiken für Startups vorgesehen.					
Gliederung	Rubrik	Art	Fragen	Erledigt	Prio
Einleitung (3 Minuten)	Willkommen	Input	Begrüßung und Danksagung.		1
	Vorstellung des Projekts	Input	Kurze thematische Einführung: - Leuphana, Lehrstuhl - Interview mit Personen aus der Praxis - Chancen und Risiko bei Gründer:innen - Rückblick auf die eigene Gründung		1
	Datenschutz	Input	Datenschutzhinweise: Alle Daten werden anonymisiert und nur im Rahmen dieser Forschung verwendet. Keine Rückschlüsse auf Unternehmen möglich.		1
	Aufzeichnung Starten	Action	Starten der Aufzeichnung		1
	Einverständniserklärung	Input	Sind Sie damit einverstanden, dass dieses Interview aufgezeichnet wird?		1
Quantitativer Teil (5 Minuten)	Gründungsjahr	I-1 Year of foundation	Wann wurde Ihr Unternehmen gegründet?		1
	Unternehmererfahrung	I-2 Entrepreneurial experience	Wie viele Jahre schon als Unternehmer:in tätig?		1
	Rechtsform	I-3 Legal form	Welche Rechtsform hat Ihr Unternehmen?		1
	Produkt oder Dienstleistung	I-4 Product or Service	Handelt es sich um ein Produkt oder eine Dienstleistung?		1
	Branche	I-5 Industry	Welcher Branche ist Ihr Unternehmen angehörig? Branchen nach GICS: Energie, Rohstoffe, Industrie, zyklische Konsumgüter, Basiskonsum, Gesundheitswesen, Finanzen, Informationstechnologie, Kommunikationsdienstleistung, Versorgungsunternehmen, Immobilien.		1
	Zielmarkt	I-6 Target market	Welches Land ist euer Absatzmarkt?		1
	Standort	I-7 Location	In welchem Land / Stadt ist der Hauptsitz von Ihrem Unternehmen?		1
	Anzahl Gründer:innen?	I-8 Number of founders	Mit wie vielen Personen haben Sie gegründet?		1
	Anzahl Mitarbeiter:innen	I-9 Number of employees	Wie viele Mitarbeiter:innen hat Ihr Unternehmen? (1, 2-4; 5-9; 10-19; 20-29; 30-49; mehr als 50).		1
	Umsatzvolumen	I-10 Sales volume	Wie hoch ist Ihre Umsatzvolumenspanne im letzten Jahr Ihres Unternehmens? (<50k,51-100k,101-150k,151-200k-,201-250k,251-300k,>300k)		1
	Kund:innen	I-11 Type of customer	Bedienen Sie B2B, B2C oder B2A?		1

Figure 4: Research Item 4 – Interview Guideline (Part 1)

Beschäftigen wir uns nun im ersten Block mit den Chancen und Risiken für Ihr Unternehmen					
Qualitativer Teil (35 Minuten)	Leitfrage A: Verständnis von Chancen & Risiken Wie ist das allgemeine Verständnis von Chancen und Risiken von Gründern von Kapitalgesellschaften während des Gründungsprozesses?	A-1 Understanding of opportunities and risks	Was verstehen Sie unter Chancen und Risiken für Ihr Unternehmen?		1
		A-2 Opportunity identification	Wie identifizieren Sie Chancen für ihr Unternehmen? --> Was für eine Strategie haben Sie? --> Werden die Chancen laufend identifiziert? --> Wer ist bei Ihnen für die Chancenidentifizierung zuständig?		1
		A-3 Risk identification	Wie identifizieren Sie Risiken für ihr Unternehmen? --> Was für eine Strategie haben Sie? --> Werden die Risiken laufend identifiziert? --> Wer ist bei Ihnen für die Risikoidentifizierung zuständig?		1
		A-4 Opportunity and risk analysis	Können Sie mir Beispiele nennen, wie die Analyse von Chancen und Risiken abläuft? --> Nutzen Sie bestimmte Analysemethoden? --> Wer ist bei Ihnen für die Analyse von Chancen und Risiken zuständig?		1
		A-5 Opportunity and risk evaluation	Können Sie mir Beispiele nennen, wie die Bewertung von Chancen und Risiken abläuft? --> Klassifizierung der Chancen und Risiken sowie die Abschätzung der Auswirkungen. --> Wer ist bei Ihnen für die Bewertung von Chancen und Risiken zuständig?		1
		A-6 Templates for the RM process	Nutzen Sie Vorlagen bei der Identifikation / Analyse und Bewertung von Chancen und Risiken? --> Wenn ja, welche? --> Lehrbücher, Matrizen von Unternehmensberatungen / Internet?		2
	Im zweiten Block konzentrieren wir uns auf essentielle Risiken für das Unternehmen selbst - also interne Perspektive				
	Leitfrage B: Risikomanagements als internes Informations- und Steuerungssystem Wie bewerten Gründer das Potential der Nutzung eines Risikomanagements als Informations- und Steuerungssystem für die interne Unternehmensausrichtung?	B-1 Measures before risks occur	Welche Maßnahmen haben Sie schonmal ergriffen, bevor ein essentielles Risiko eingetreten ist? --> (Bsp. 1.) Mehr Eigenkapital vorsorglich vorgehalten? --> (Bsp. 2.) Vorsorglich mehr Mitarbeiter:innen oder mehr Ausbildung? --> (Bsp. 3.) Verbesserung von Prozessen? --> Sind diese Lehren Bestandteil des Informations- und Steuerungssystem für die Unternehmensentwicklung?		1
		B-2 Measures after risks occur	Welche Maßnahmen haben Sie schonmal ergriffen, nachdem ein essentielles Risiko eingetreten ist? --> (Bsp. 1.) Mehr Eigenkapital in das Unternehmen einbringen? --> (Bsp. 2.) Vorsorglich mehr Mitarbeiter:innen oder mehr Ausbildung? --> (Bsp. 3.) Verbesserung von Prozessen? --> Sind diese Lehren Bestandteil des Informations- und Steuerungssystem für die Unternehmensentwicklung?		1
		B-3 Information policy in the company	Wie sorgen Sie dafür, dass ihre Mitarbeiter:innen über allgemeine oder für sie relevante Risiken informiert sind? --> Inwiefern ist dies mit der Unternehmenskultur verknüpft? --> Gibt es eine Kultur der Risikobereitschaft? --> Wie wird mit eingetretenen Risiken umgegangen? --> Externe Beratung?		1

Figure 5: Research Item 4 – Interview Guideline (Part 2)

Qualitativer Teil (35 Minuten)	Im dritten Block konzentrieren wir uns auf die Risikokommunikation von essentielle Risiken gegenüber Kapitalgeber:innen - also externe Perspektive				
	Leitfrage C: Risikomanagements als externes Informations- und Steuerungssystem <i>In welchem Umfang nutzen Startups die Möglichkeiten eines Risikomanagements als Informations- und Steuerungssystem gegenüber Kapitalgebern:innen? Wird ein Risikomanagement von Kapitalgebern:innen erwartet? Gibt es einen Unterschied zwischen Eigenkapitalgeber:innen und Fremdkapitalgeber:innen?</i>	C-1 Advantages and disadvantages of risk communication	Welche Vor- und Nachteile sehen Sie, wenn sie gegenüber Kapitalgeber:innen kommunizieren, dass Sie sich bewusst mit Risiken auseinandersetzen? -> Bis zu welchem Ausmaße ist dies für Sie ratsam? -> Nutzen Sie dies Strategisch? -> Wurde bei der Gründung sich aktiv damit beschäftigt welche Risiken genannt werden?		1
		C-2 Current situation of risk communication	Wie läuft bei Ihnen die Risikokommunikation mit den Kapitalgeber:innen ab? -> Könnten Sie sich vorstellen, dass es standardisierte Pläne gibt? -> Hat die Bank aktiv etwas gefordert? Wenn ja was?		1
		C-3 Differences in risk communication between debt and equity providers	Gibt es einen Unterschied bei der Kommunikation mit Eigenkapitalgeber:innen und Fremdkapitalgeber:innen?		1
		C-4 Application of good risk communication in practice	Wie stellen Sie sicher, dass die Kapitalgeber:innen regelmäßig über Ihre Risiken informiert werden? -> Wünschen diese ein aktuelle Information? -> Wenn ja, welche Informationen sind das?		2
	Im vierten und letzten Block sprechen wir nun über die Erwartungen an ein Startup Risikomanagement				
	Leitfrage D: Erwartungen an ein Startup Riskmanagement <i>Wie stellen sich Gründer:innen die Ausgestaltung eines wirksames und angepasstes Risikomanagement für die strategische Entwicklung von Startups vor?</i> <i>Was sollte ein Startup Risikomanagement leisten?</i>	D-1 Use of the term RM	Wie verwenden Sie den Begriff Risikomanagement intern & extern?		1
		D-2 Success factors for RM	Was sind für Sie die wichtigsten Erfolgsfaktoren für ein schlankes Risikomanagement für Startups? -> Was sind die wichtigsten Bausteine? -> Könnte es dafür Vorlagen geben? -> Externe Beratung?		1
		D-3 Timing of the implementation of RM	Ab welcher Unternehmensgröße ist ein aktiven Risikomanagement notwendig?		1
		D-4 Use of key figures to monitor the effectiveness of RM	Nutzen Sie bereits Kennzahlen um den Erfolg des Risikomanagements zu messen, um daraus für zu die Zukunft zu lernen? -> Wenn ja, welche? -> Wie häufig? -> Warum benutzen Sie evtl. keine?		1
D-5 The term opportunity or risk management		Sollte man im Startup-Umfeld eher von Chancen- anstatt von Risikomanagement reden?		1	
Damit ist der Hauptteil abgeschlossen und wir kommen zum Abschluss des Interviews					
Schluss (3 Minuten)	Fehlt noch etwas?	Finish	Gibt es rückblickend etwas, worauf wir in dem Interview noch stärker hätten eingehen sollen?		1
	Wie geht es weiter?	Finish	Haben Sie konkrete Pläne für die Weiter- oder gar erste Entwicklung Ihres Risikomanagement?		1
	Ausblick zum weiterem Verlauf	Input	Erklärung wie Daten verarbeitet werden und wann voraussichtlich die Ergebnisse vorliegen.		1

Figure 6: Research Item 4 – Interview Guideline (Part 3)

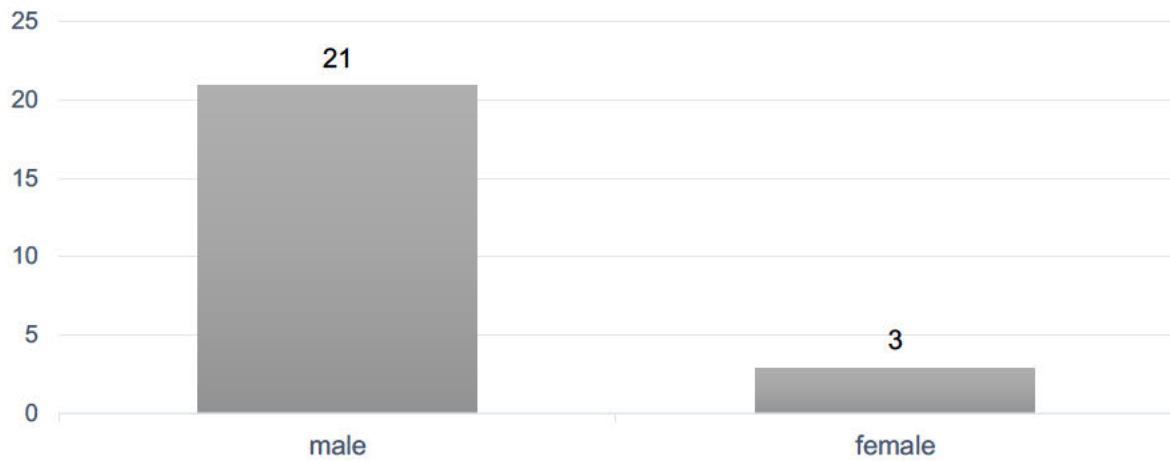


Figure 7: Research Item 4 – Gender Distribution of Study Participants (N = 24)

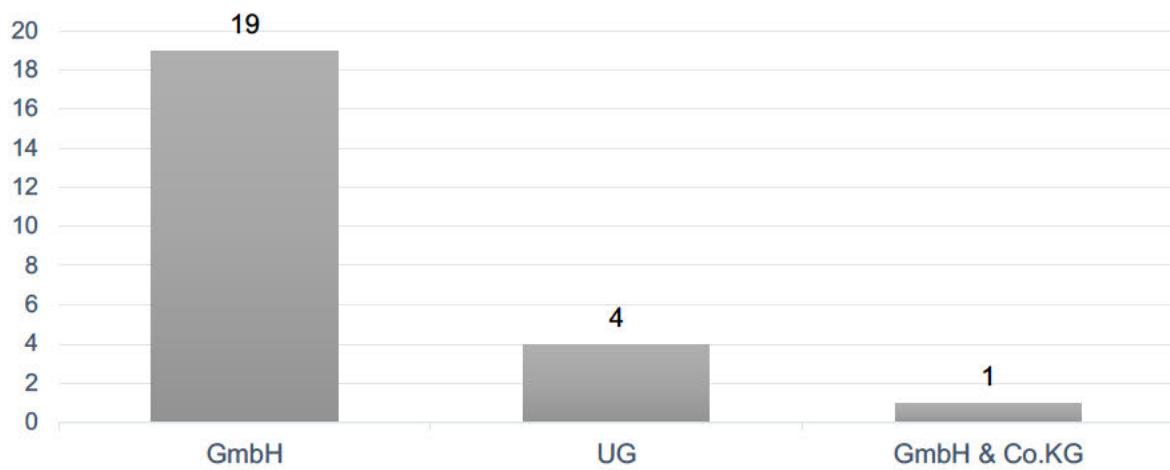


Figure 8: Research Item 4 – Distribution of Startup Legal Structures (N = 24)



Figure 9: Research Item 4 – Distribution of Startup's Market Offerings (N = 24)

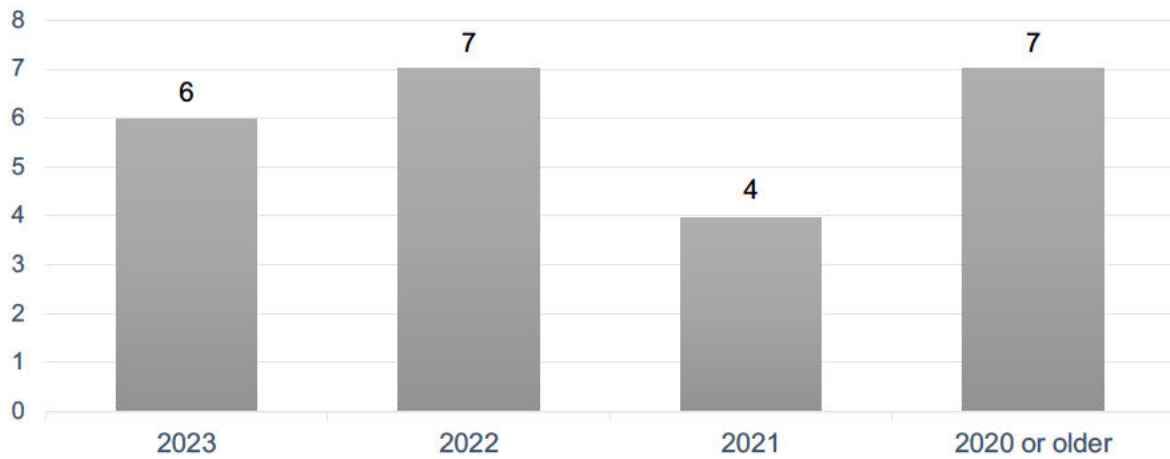


Figure 10: Research Item 4 – Distribution of Startup Founding Years (N = 24)

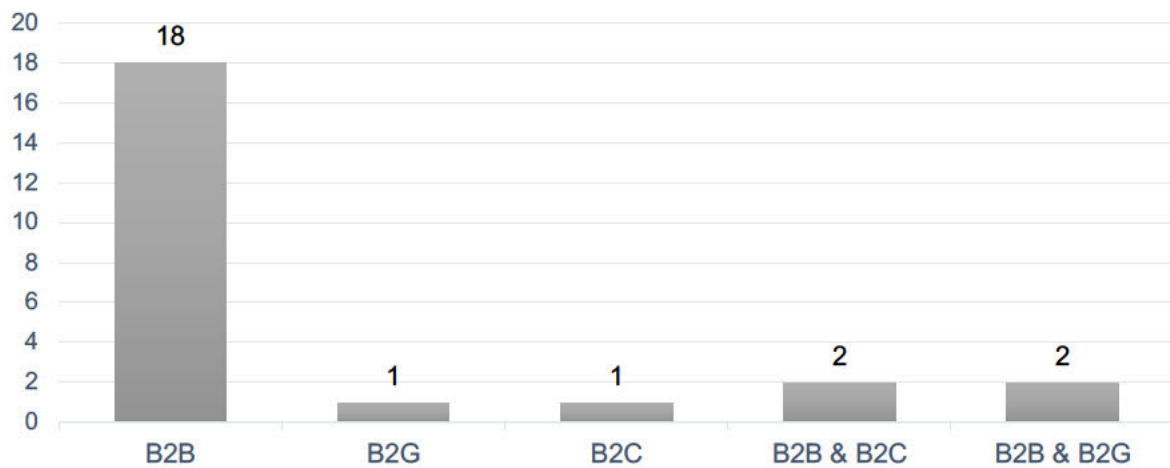


Figure 11: Research Item 4 – Distribution of the Startup's Customer Base (N = 24)

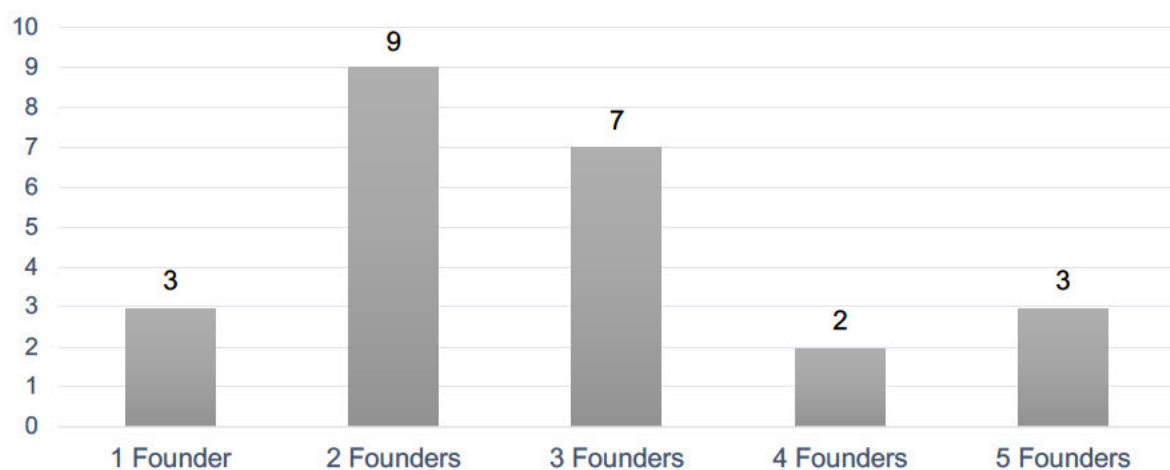


Figure 12: Research Item 4 – Distribution of the Number of Founders (N = 24)

*** Additional material for the dissertation, including research data and transcripts, are available in digital form on the data storage device or via the Leuphana online platform. ***

II. Research Item 1 – Risk Management in Startups

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Abstract: Risk management of startups is driven by special features of new ventures in terms of limited resources, coherence of influence and the entrepreneurial development and growth process. This article characterizes startups this way and derives conclusions for their risk management. Since risk management for startups cannot be separated from the planning and design of emergent growth processes, new venture growth dynamics are set in the respective context. Conventional planning as of established companies, aimed at increasing efficiency and optimizing processes, is less suitable for startups. Instead, customer-oriented product development with feedback loops is more appropriate for their risk management. Validated learning and pivoting help to limit uncertainties in the business model, minimal viable products enable low-risk development. This points the way towards lean risk management for startups based on the lean startup method.

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RISIKOMANAGEMENT BEI STARTUPS

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Abstract

Risk management of startups is driven by special features of new ventures in terms of limited resources, coherence of influence and the entrepreneurial development and growth process. This article characterizes startups this way and derives conclusions for their risk management.

Since risk management for startups cannot be separated from the planning and design of emergent growth processes, new venture growth dynamics are set in the respective context. Conventional planning as of established companies, aimed at increasing efficiency and optimizing processes, is less suitable for startups. Instead, customer-oriented product development with feedback loops is more appropriate for their risk management. Validated learning and pivoting help to limit uncertainties in the business model, minimal viable products enable low-risk development. This points the way towards lean risk management for startups based on the lean startup method.

Abstract

Startup Risk Management, Lean Startup Method, Liability of Newness, Liability of Smallness, Liability of Adolescence

Zusammenfassung

Besonderheiten bei der Ressourcenausstattung, der Einflusskohärenz und beim unternehmerischer Entwicklungs- und Wachstumsprozess prägen das Risikomanagement bei Startups. Der Artikel charakterisiert Startups in dieser Weise und leitet daraus Folgerungen für deren Risikomanagement ab.

Da das Risikomanagement für Startups nicht von der Planung und Gestaltung emergierender Wachstumsprozesse zu trennen ist, wird die Entwicklungsdynamik auch in den Kontext der Entwicklungstheorien junger Unternehmen gestellt. Daraus ergibt sich, dass sich die klassische, auf Effizienzsteigerung und Prozessoptimierung gerichtete Planung etablierter Unternehmen für Startups weniger eignet und die kundenzentrierte Produktentwicklung mit Rückkopplungsschleifen zweckmäßiger für deren Risikomanagement ist. Validiertes Lernen und Pivotierung helfen, Unsicherheiten des Geschäftsmodells zu begrenzen, minimierte Produktversionen ermöglichen eine risikoarme Entwicklung. Daraus ergeben sich Bezüge zur Lean Startup Methode und weisen den Weg in Richtung eines Lean Risk Management für Startups.

I. Begriffliche Grundlagen

Risiko kann grundsätzlich als die Gefahr bezeichnet werden, dass finanzwirtschaftliche Zielgrößen von einem vorgegebenen Referenzwert abweichen (Bitz 1993). Unter *Risikomanagement* versteht man ganz allgemein die systematische Erfassung und zielorientierte Gestaltung betrieblicher Risiken. Die Aufgaben des Risikomanagements sind nicht einzelnen Teilbereichen oder -funktionen eines Unternehmens zuzuordnen, sondern dessen Gesamtheit. Risikomanagement lässt sich in die Risikoanalyse und die Risikopolitik differenzieren. Während die Risikoanalyse dazu dient, Einzelrisiken zu identifizieren, zu quantifizieren und deren Wechselbeziehungen zu erfassen, um daraus aggregierte Risiken abzuschätzen, soll die Risikopolitik geeignete Maßnahmen aus solchen Analysen ableiten, diese umsetzen und ggf. überwachen.

Im unmittelbaren Kontext des Risikomanagements sind weitere risikobezogene Themenfelder zu verorten, so etwa die Risikokommunikation gegenüber Stakeholdern, Betrachtungen der Risikoneigung und Risikotoleranz, Konzepte zur organisatorischen Verankerung von entsprechenden Zuständigkeiten oder rechtliche Vorgaben zur Risikoerfassung sowie die Risikoberichterstattung hinsichtlich risikomindernder Maßnahmen. Diese sind jedoch nicht Gegenstand des unmittelbaren Risikomanagements und werden daher in diesem Beitrag ausgeklammert.

Als besonders wichtige und zentrale Unternehmensaufgabe wird das Risikomanagement bereits seit vielen Dekaden intensiv beforscht (Brustbauer 2016). Die Risikomanagementforschung verfügt heute über ein sehr umfassendes und ausdifferenziertes Spektrum an Erkenntnissen. Das betrifft nicht nur die Art und Struktur von Risiken, sondern auch deren Differenzierung beispielsweise nach Funktionen (*Beschaffungsrisiken*, *Absatzrisiken*, ...), Wirtschaftsbereichen (*Kreditrisiken*, *Versicherungsrisiken*, ...), Geschäftsmodellen (*Innovationsrisiken*, *Haftungsrisiken*, ...) oder Wertschöpfungsketten (*Produktionsrisiken*, *Lieferkettenrisiken*, *Prozessrisiken*, ...). Gleichwohl sind Betrachtungen des Risikomanagements neu gegründeter Unternehmen noch rar. So gibt es auch noch kein dezidiertes Journal zur Risikoforschung in diesem Bereich (Crovini et al. 2021). Das gilt ganz besonders für die dazu gehörige Unterkategorie, der so genannten Startups.

Die Unternehmensgründung ist sinnvollerweise nicht als zeitpunktbezogener Akt, sondern als Prozess zu verstehen. Denn ein soeben neu gegründetes Unternehmen ist i.d.R. noch nicht mit einem wirtschaftlich nachhaltig etablierten Unternehmen zu vergleichen. Es steht vielmehr am Beginn eines oft noch Jahre andauernden Entwicklungsprozesses. Zudem hat es vor dem rechtswirksamen Gründungsakt, durch den ein neuer wirtschaftlicher Akteur geschaffen wird, mitunter sogar mit eigener Rechtspersönlichkeit, häufig bereits wesentliche Entwicklungsschritte absolviert. Dies betrifft etwa die Recherche, die Planung oder die Beschaffung von Ressourcen. Junge Unternehmen zeichnen sich nicht nur durch eine noch geringe Bestandsdauer am Markt aus, sondern auch durch eine emergierende unternehmerische Entwicklung, an deren Ende eine Stabilisierung von inneren Strukturen und Prozessen, eine Beendigung des initialen Größenwachstums sowie im besten Falle eine weitgehend stabile Etablierung am Markt stehen soll (Todeschini et al. 2017, Sedláček und Sterk 2017).

Junge Unternehmen weisen dabei regelmäßig bestimmte Eigenheiten auf, die sie deutlich von etablierten unterscheiden (Schulte 2006a): Sie sind weder hinsichtlich ihrer inneren organisatorischen Strukturen und Prozesse gefestigt, noch extern auf den für sie relevanten Märkten etabliert. Ihre fehlende unternehmerische Historie bedingt eine relative Anonymität auf Märkten, speziell gegenüber Kapitalgebern. Sie sind typischerweise inhabergeführt und personenzentriert, sind organisatorisch und prozessbezogen wenig formalisiert und weisen bei geringer Arbeitsteilung eher flache Hierarchien auf. Durch die meist fehlende Trennung von Eigentum und Kontrolle bestehen kaum Anreizkonflikte. Kurze und direkte Entscheidungswege ermöglichen eine große Entscheidungs- und Handlungsflexibilität. Eingefahrene Routinen und Pfadabhängigkeiten bestehen noch nicht. Einer großen Markt- und Kundennähe steht eine geringe Marktmacht gegenüber. Angesichts ihrer tendenziellen Ressourcenarmut entbehren sie häufig angemessener Risikopuffer und Diversifikationsmöglichkeiten. Das bedingt nicht nur ein eher geringes Kostendegressionspotenzial, sondern ganz generell eine erheblicher Bestandsunsicherheit.

Dies alles bedeutet, dass Erkenntnisse über etablierte Unternehmen nicht einfach auf junge Unternehmen übertragbar sind. Das gilt auch für das Risikomanagement junger Unternehmen.

Als Startup wird eine besondere Form der Unternehmensgründung bzw. eines jungen Unternehmens bezeichnet. Einem so genannten Startup werden nämlich spezielle weitere Charakteristika zugeordnet, insbesondere Innovativität und Wachstumsorientierung (Schulte 2006b). Durch die Neuartigkeit ihrer Produkte, Leistungen oder Prozesse für oft neue, nicht entwickelte Märkte gibt es noch kein validiertes Geschäftsmodell (Todeschini et al. 2017, Hyytinen et al. 2015). Damit sind tendenziell größere Chancen und Risiken verbunden als bei imitativen Gründungen üblich. Daraus ergibt sich eine explizite Wachstumsorientierung, die wiederum einen großen Außenfinanzierungsbedarf mit sich bringt. Dieser kann angesichts der Risiken kaum über Kredite gedeckt werden, sondern erfordert Beteiligungsfinanzierungen. Solche Finanzierungen erfolgen im emergierenden Entwicklungsprozess häufig gestaffelt durch mehrere Finanzierungsrunden.

Aus dieser definitorischen Konstellation ergeben sich etliche Implikationen für das Risikomanagement. Sie sind Gegenstand des vorliegenden Beitrags. Er nähert sich dem Risikomanagement von Startups von zwei Seiten: Im zweiten Abschnitt wird die Idiosynkrasie von Startups im Hinblick auf ihre Bedeutung für das Risikomanagement erörtert. Der abschließende dritte Abschnitt greift den wichtigen Aspekt der typischen Entwicklungsdynamik von jungen Unternehmen, der bei Startups besonders ausgeprägt ist, anhand der Entwicklungstheorien junger Unternehmen auf. Ein kurzes Fazit schließt den Artikel ab.

II. Merkmale von Startups und ihre Bedeutung für das Risikomanagement

Die Merkmale von Startups können grob in drei Ebenen gegliedert werden: Ressourcenausstattung, Einflusskohärenz und unternehmerischer Entwicklungs- und Wachstumsprozess.

Die *Ressourcenausstattung* von Startups ist anfänglich vor allem geprägt durch begrenzte personelle Kapazitäten sowie finanzielle und sonstige Mittel. Folge der limitierten Ressourcenausstattung ist zunächst ein höheres Marktaustrittsrisiko (vgl. Abschnitt III). Daraus ergeben sich vielfältige Konsequenzen in verschiedenen Bereichen. Zu nennen sind hier:

- Der organisatorische Bereich: Eine ausgeprägte Personen- bzw. Unternehmerzentrierung von Strukturen, Prozessen und Entscheidungen prägt junge Unternehmen. Es gibt nur wenige oder keine etablierten Routinen. Flache Hierarchien und eine überschaubare Zahl an Entscheidungsträgern erleichtern die Koordination von Entscheidungen und machen das junge Unternehmen flexibel und schnell in seinen Reaktionen auf Veränderungen. Dieser Vorteil ist verbunden mit entsprechend geringer Arbeitsteiligkeit und Spezialisierung. Dies impliziert nicht nur Strategiedefizite, sondern führt zu mangelndem Spezialwissen in unterschiedlichsten Bereichen und betrifft typischerweise auch die Kompetenzen im Bereich des Risikomanagements.

Für ein systematisches Risikomanagement müssen Startups darum entweder selbst entsprechende Expertise aufbauen oder extern rekrutieren und zudem häufig erst auf den eigenen Bedarf angepasste, ggf. reduzierte Formen i.S.e. *Lean Startup Risk Management* entwickeln (vgl. Todeschini et al. 2017). Gleichzeitig erleichtern diese organisatorischen Merkmale eine bereichsübergreifende, simultane Sicht auf Teilrisiken und ermöglichen einen verschlankten Zugang zur gesamten Risikoanalyse und -politik.

- Der Finanzierungsbereich: Die Startups prägende Wachstumsorientierung bedingt einen tendenziell hohen und im Wachstumsprozess zunehmenden Finanzierungsbedarf. Daraus ergibt sich die Notwendigkeit einer (meist umfangreichen) Außenfinanzierung, denn schnelles Wachstum erfordert regelmäßig die großvolumige, rasche und ggf. mehrfach gestufte Finanzierung durch externe Kapitalgeber. Dabei bestehen ausgeprägte Agency Probleme (Trabelsi und Siyahhan 2021).

Für das Risikomanagement bei Startups bedeutet das eine begrenzte Fähigkeit zur Risikostreuung sowie eine Limitierung des möglichen Ausmaßes des Risikomanagements.

- Der Marktbereich: Die fehlende Marktmacht und die begrenzte Unabhängigkeit von Marktpartnern verengt Entscheidungsspielräume. Auf Beschaffungs- und Absatzmärkten sind Startups regelmäßig zur Akzeptanz vorgegebener Nebenbedingungen gezwungen. Sie können Rahmendaten und Konditionen kaum oder gar nicht beeinflussen. Beschaffungsmärkte gestalten sich für sie als Verkäufermärkte, Absatzmärkte als Käufermärkte. So erzwingt der beschränkte Zugang zu organisierten Kapitalmärkten die Finanzierung nach Verfügbarkeiten und verhindert die Separation von Investitions- und Finanzierungsentscheidungen (Trabelsi und Siyahhan 2021).

Etliche Instrumente des Risikomanagements können von Startups daher nicht oder nur begrenzt eingesetzt werden und beschränken insofern ihre risikopolitischen Gestaltungsoptionen.

Die Einheit von Eigentum und Kontrolle (*Einflusskohärenz*) reduziert zumindest anfänglich die Gefahr von Informations- und Delegationsproblemen zwischen Eigenkapitalgebern und Management bei Startups, da Eigentum und Kontrolle zunächst in den gleichen Händen

liegen. Regelungen zur Sicherung eines anreizkompatiblen Verhaltens des Managements (Dahlhaus 2009, S. 123–126) sind in dieser frühen Phase noch entbehrlich. Diese anfängliche Kohärenz nimmt allerdings mit jeder weiteren Finanzierungsrunde weiter ab und muss durch darauf gerichtete Vertragswerke reguliert werden (Chemmanur und Chen 2014; Kelly und Hay 2003). Insoweit ist der Aspekt der Einflusskohärenz bereits Gegenstand entwicklungs- und wachstumsbedingter Veränderungen.

Der während der frühen Entwicklung eines Unternehmens stattfindende *Entwicklungs- und Wachstumsprozess* ist mit raschen Veränderungen von Strukturen und Prozessen verbunden, speziell aber auch mit zunehmender Unternehmensgröße. Viele Geschäftsmodelle erfordern für einen profitablen Betrieb eine gewisse Mindestgröße, die durch frühes Wachstum erreicht werden muss. Da Startups schon per Definition eine Wachstumsorientierung zugeschrieben und von Beteiligungskapitalgebern erwartet wird, sind sie aber auch unabhängig von solchem initialen organischen Wachstum zum Wachsen gezwungen. Um möglichst rasch zu wachsen, wird die Skalierbarkeit ihres Geschäftsmodells erwartet.

Für das Risikomanagement von Startups ist dies besonders relevant, denn Momentaufnahmen der Risikolage ohne Berücksichtigung künftiger Entwicklungen bieten dadurch keine geeignete Basis für eine angemessene Risikopolitik. Hinzu kommt: Die Fortschreibung von Vergangenheits- und Gegenwartsdaten kann hier noch weit weniger als in etablierten Unternehmen zur vorausschauenden Planung herangezogen werden.

Dieser Entwicklungsaspekt wird im folgenden dritten Abschnitt vertiefend anhand der Risiken im Entwicklungsprozess junger Unternehmen diskutiert.

III. Risikomanagement und Entwicklungsprozess von Startups

Zentrale Aufgabe des auf ein Startup in seiner Gesamtheit gerichteten Risikomanagements ist die Sicherung seines Bestands und insofern des Überlebens am Markt. Theoretische Ansätze zur Erklärung der Überlebenswahrscheinlichkeit junger Unternehmen knüpfen daran an. Hierfür spielen drei theoretische Grundüberlegungen eine Rolle, nämlich die Gefahr des Marktaustritts aufgrund der für junge Unternehmen typischen Merkmale der Neuheit, der geringen Größe und ihrer Veränderung im (weiter oben dargestellten) Entwicklungsprozess.

- Das Risiko eines Marktaustritts ist umso größer, je geringer Größe und Ressourcenausstattung des jungen Unternehmens sind (sog. *Liability of Smallness*, vgl. Freeman et al. 1983). Begrenzte Ressourcen und Fähigkeiten bedeuten geringere Robustheit und Widerstandskraft gegenüber Umweltveränderungen. Mithin haben große Startups bessere Überlebenschancen als kleine. Die initiale Größe äußert sich insbesondere an der Höhe der finanziellen Mittel und der personellen Kapazitäten. Reichlich vorhandene finanzielle Ressourcen erhöhen die Chance, die kritische Anfangsphase zu überstehen und zufällige externe Schocks zu verdauen (Trabelsi und Siyahhan 2021). Überdies verschaffen sie mitunter Vorteile bei der Erlangung von Außenfinanzierungen, qualifizierten Arbeitskräften, der Akquise von Kunden oder eröffnen Spielräume bei der steuerlichen Gestaltung.

Für das Risikomanagement zur Verbesserung der Überlebenschancen bei Startups bedeutet das, dass bereits im Wege der initialen Ressourcenausstattung durch den Aufbau von finanziellen Risikopuffern risikopolitische Spielräume geschaffen werden können. Finanzierungs- und Risikopolitik sind daher nicht voneinander zu trennen.

- Das Risiko des Marktaustritts ist zu Beginn der Unternehmensentwicklung am größten und nimmt im Laufe der Zeit tendenziell ab (sog. *Liability of Newness*, vgl. Brüderl und Schüssler 1990). Zu erklären ist dieses Phänomen dadurch, dass Startups anfängliche operative Herausforderungen erst zu bewältigen erlernen müssen. Hinzu kommt, dass ihnen im Wettbewerb mit etablierten Unternehmen eine geringere Legitimität zugeschrieben wird. Startups müssen zunächst Beziehungen zu anderen Marktpartnern aufbauen, Erfahrungen im Umgang mit institutionellen Regeln und Gepflogenheiten sammeln und ihre anfängliche Anonymität gegenüber anderen Akteuren ausräumen. Dieser Legitimationsprozess erfordert den Einsatz von Zeit und verursacht erhebliche Transaktionskosten.

Für das Risikomanagement zur Verbesserung der Überlebenschancen bei Startups bedeutet das, dass schon im Vorfeld der Unternehmensgründung entsprechende risikomindernde Maßnahmen getroffen werden müssen. So können beispielsweise Bausteine der Lean Startup Methode (siehe weiter unten) genutzt werden, um Produktrisiken durch die frühe Integration von Kundenfeedback oder auch strategische Entwicklungsrisiken durch gezielte Pivotierung und kontinuierliche Anpassungen des Geschäftsmodell sinnvoll zu reduzieren (Bortolini et al. 2021, Todeschini et al. 2017).

- Das Risiko des Marktaustritts steigt mit zunehmendem Unternehmensalter bis zu einem bestimmten Zeitpunkt an und nimmt im weiteren Verlauf der Zeit allmählich wieder ab (sog. *Liability of Adolescence*, vgl. Brüderl und Schüssler 1990). Dieser besonders bestandsrisikobehaftete Zeitpunkt liegt etwa zwei Jahre nach der Gründung. Zu erklären ist dieses Phänomen mit Bezug auf die Liability of Newness-These: Ein ganz frühes Scheitern kann eher verhindert werden, weil das Startup von anfänglichen Ressourcenausstattungen und -puffern zehren kann. Dies betrifft finanzielle und sachliche Mittel, aber auch nichtmonetäre Ressourcen wie den Vertrauensvorschuss von Marktpartnern, das Innovationsinteresse der Zielgruppe oder die anfängliche emotionale Energie der handelnden Personen: Gründer geben ihr Vorhaben angesichts anfänglicher Probleme und Hindernisse selten gleich auf. Tatsächlich scheitern Startups regelmäßig erst später. Das kann dann sein, wenn die finanziellen oder emotionalen Ressourcen erschöpft sind, oder wenn sich zu viele ungelöste operative Probleme angehäuft haben und sich gegenseitig so verstärken, dass unter Zeitdruck kein Ausweg mehr gefunden werden kann. Exemplarisch sei hier auf das geradezu klassische Liquiditätsproblem im Zuge der Umsatzbesteuerung verwiesen, dass 2-3 Jahre nach Gründung leicht in die Zahlungsunfähigkeit führen kann. Werden diese Hürden aber überwunden, indem etwa Anschlussfinanzierungen beschafft oder operative Bedrohungen bewältigt werden konnten, so nimmt auch das Bestandsrisiko wieder ab.

Für das Risikomanagement bei Startups bedeutet das, dass eine vorausschauende, proaktive Planung des Startups auch die zu erwartende Genese des jungen Unternehmens berücksichtigen muss. Startup-Risikomanagement ist daher nicht zu trennen von der Planung und Gestaltung des emergierenden Wachstumsprozesses.

Die klassische, auf Effizienzsteigerung und Prozessoptimierung gerichtete Planung etablierter Unternehmen eignet sich dafür weniger. Denn während bestehende Unternehmen ein erprobtes, validiertes Geschäftsmodell ausführen, sind Startups noch auf der Suche danach. Für Startups im Entwicklungsprozess eignet sich also mehr eine stärker erkenntnisorientierte Planung in Form interaktiver Prozesse, bei denen das Lernen im Vordergrund steht, um Unsicherheiten des Geschäftsmodells zu begrenzen (*Validated Learning*). Angesichts der weiter oben beschriebenen Ressourcenknappheit ist dabei eine ressourcenschonende Herangehensweise wünschenswert. Das impliziert beispielsweise im Hinblick auf Produktrisiken die frühe und kontinuierliche Integration von Kundenfeedback schon bezogen auf minimale Produkt(vor)versionen (*Minimum Viable Products*). Bezüglich strategischer Entwicklungsrisiken bietet sich eine im Prozess mehrfach wiederholte, gezielte Infragestellung

(*Pivotierung*) des Geschäftsmodells an – als immer neuer Ausgangspunkt für dessen kontinuierliche Anpassung.

Damit sind die drei Kerngedanken der Lean Startup Methode (vgl. Bortolini et al. 2021) angesprochen: Validated Learning, Minimum Viable Products und Pivotierung. Tatsächlich korrespondieren die Überlegungen zum Risikomanagement bei Startups denn auch unmittelbar mit Lean Management-Ansätzen. Zentrales Ziel von Lean Management-Methoden ist es, die Vergeudung von Geld, Zeit und Arbeit zu vermeiden. Im Mittelpunkt stehen daher einerseits die Minimierung von Kosten und die Vermeidung von Verschwendung: Dies kommt der Startups eigenen Ressourcenbeschränkung entgegen. Sie wird erreicht durch eine schnelle Markt- und Kundenkonfrontation in Form des Minimum Viable Products, um sehr früh feststellen zu können, ob ein Mehrwert für den Kunden erzielt werden kann. Auf der Basis tatsächlicher Kundenanforderungen kann so auch eine laufende Optimierung von Ressourcen vorgenommen werden. Andererseits wird auf die Vermeidung von Fehlern fokussiert: Dies ist besonders wichtig, weil Startups in einem emergierenden Lernprozess sind und daher etliche Entscheidungen ohne Bezug auf Erfahrungswerte aus der Vergangenheit getroffen werden müssen. Ständige Lern- und Verbesserungsschleifen in Form der Formulierung und Validierung von Hypothesen (Validated Learning) sowie die wiederholte Infragestellung des Geschäftsmodells (Pivotierung) dienen der Fehlererkennung und -vermeidung. Sowohl prozess-, produkt- und leistungsbezogene Fehler, als auch geschäftsmodellbezogene Fehler werden so adressiert. Diese Überlegungen weisen also den Weg in Richtung eines Lean Risk Managements.

Die künftige Forschung wird beleuchten müssen, ob ein auf diese drei Kerngedanken der Lean Startup Methode ausgerichtetes Risikomanagement für Startups tragfähig sein kann.

Literatur

- Bitz, M. (1993). Grundlagen des finanzwirtschaftlich orientierten Risikomanagements. In G. Gebhardt, W. Gerke und M. Steiner (Hrsg.), *Handbuch des Finanzmanagements: Instrumente und Märkte der Unternehmensfinanzierung* (S. 641–669). München: Beck.
- Bortolini, R. F.; Nogueira Cortimiglia, M.; Danilevicz, A. de M. F.; Ghezzi, A. (2021). Lean Startup: a comprehensive historical review. *Management Decision*, 59(8), 1765–1783. <https://doi.org/10.1108/MD-07-2017-0663>.
- Brüderl, J.; Schüssler, R. (1990). Organizational Mortality: The Liabilities of Newness and Adolescence. *Administrative Science Quarterly*, 35(3), 530–547. <https://doi.org/10.2307/2393316>.
- Brustbauer, J. (2016). Enterprise risk management in SMEs: Towards a structural model. *International Small Business Journal: Researching Entrepreneurship*, 34(1), 70–85. <https://doi.org/10.1177/0266242614542853>.
- Chemmanur, T. J.; Chen, Z. (2014). Venture Capitalists Versus Angels: The Dynamics of Private Firm Financing Contracts. *Review of Corporate Finance Studies*, 3(1–2), 39–86. <https://doi.org/10.1093/rcfs/cfu009>.
- Crovini, C.; Ossola, G.; Britzelmaier, B. (2021). How to reconsider risk management in SMEs? An Advanced, Reasoned and Organised Literature Review. *European Management Journal*, 39(1), 118–134. <https://doi.org/10.1016/j.emj.2020.11.002>.
- Dahlhaus, C. (2009). Investitions-Controlling in dezentralen Unternehmen. Wiesbaden: Gabler. <https://doi.org/10.1007/978-3-8349-9461-5>.
- Freeman, J.; Carroll, G. R.; Hannan, M. T. (1983). The Liability of Newness: Age Dependence in Organizational Death Rates. *American Sociological Review*, 48(5), 692–710. <https://doi.org/10.2307/2094928>.
- Hyytinen, A.; Pajarinen, M.; Rouvinen, P. (2015). Does innovativeness reduce startup survival rates? *Journal of Business Venturing*, 30(4), 564–581. <https://doi.org/10.1016/j.jbusvent.2014.10.001>.
- Kelly, P.; Hay, M. (2003). Business angel contracts: the influence of context. *Venture Capital*, 5(4), 287–312. <https://doi.org/10.1080/1369106032000141940>.

- Schulte, R. (2006a). Begriff und Merkmale junger Unternehmen. *Wirtschaftswissenschaftliches Studium*, 35(7), 419.
- Schulte, R. (2006b). Innovative Unternehmensgründung. *Wirtschaftswissenschaftliches Studium*, 35(11), 637-638.
- Sedláček, P.; Sterk, V. (2017). The Growth Potential of Startups over the Business Cycle. *American Economic Review*, 107(10), 3182–3210.
<https://doi.org/10.1257/aer.20141280>
- Todeschini, B. V.; Boelter, A. S.; Souza, J. S. D.; Cortimiglia, M. N. (2017). Risk Management from the Perspective of Startups. *European Journal of Applied Business Management*, 3(3), 40–54.
- Trabelsi, D.; Siyahhan, B. (2021). Startup cash flows and venture capital investments: A real options approach. *Managerial and Decision Economics*, 42(3), 737–750.
<https://doi.org/10.1002/mde.3269>.

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Prof. Dr. Reinhard Schulte:

- Definition und Hervorhebung der Besonderheiten von jungen Unternehmen gegenüber etablierten Unternehmen
- Verknüpfung der Erkenntnisse mit dem Gründungsprozesses eines Unternehmens
- Validierung und Schärfung von Inhalten

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- Literaturrecherche und Aufarbeitung im Rahmen einer vorgelagerten systematischen Literaturanalyse
- Ausblick auf ein Lean Startup Riskmanagement (LSRM) und Hervorhebung der Bedeutung einer kundenzentrierten Entwicklung
- Kapitel 3 – Risikomanagement und Entwicklungsprozess von Startups

Gemeinsame, von beiden Autoren, erstellte Teile:

- Konzeption des Aufsatzes
- Abstract
- Kapitel 1 – Begriffliche Grundlagen
- Kapitel 2 – Merkmale von Startups und ihre Bedeutung für das Risikomanagement

Vor dem Hintergrund der oben geschilderten Arbeitsanteile bewerten die beiden Autoren den individuellen wissenschaftlichen Anteil an dem gemeinsamen Aufsatz einvernehmlich mit 50% Reinhard Schulte und 50% Maximilian Wagenknecht.

Lüneburg, 01. Februar 2026



Prof. Dr. Reinhard Schulte



Maximilian Wagenknecht

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Abstract: Customer Involvement aims to strengthen customer orientation and place it in the focus of entrepreneurial decisions. Customer involvement can improve product or service quality and thus reduce the risk of failure for young companies. The article discusses the importance of customer involvement for the development of robust business models. Customers represent a central resource for young companies in particular. Their targeted involvement in development processes not only sharpens business models but thus also contributes fundamentally to decision-oriented risk management of this type of company. The article provides a conceptual and theoretical view of customer involvement as a resource for young companies and discusses potentials and problems in this context. Finally, approaches for lean risk management based on this are shown, and central future research fields are derived.

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MANAGEMENT DER CHANCEN UND RISIKEN DES CUSTOMER INVOLVEMENT IN JUNGEN UNTERNEHMEN

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Abstract

Customer Involvement aims to strengthen customer orientation and place it in the focus of entrepreneurial decisions. Customer involvement can improve product or service quality and thus reduce the risk of failure for young companies. The article discusses the importance of customer involvement for the development of robust business models. Customers represent a central resource for young companies in particular. Their targeted involvement in development processes not only sharpens business models but thus also contributes fundamentally to decision-oriented risk management of this type of company. The article provides a conceptual and theoretical view of customer involvement as a resource for young companies and discusses potentials and problems in this context. Finally, approaches for lean risk management based on this are shown, and central future research fields are derived.

Zusammenfassung

Customer Involvement zielt darauf ab, die Kundenorientierung zu stärken und in den Fokus unternehmerischer Entscheidungen zu rücken. Durch Customer Involvement kann die Produkt- oder Servicequalität verbessert und damit das Risiko des Scheiterns junger Unternehmen reduziert werden. Der Artikel erörtert die Bedeutung der Kundenbeteiligung für die Entwicklung robuster Geschäftsmodelle. Kunden stellen gerade für junge Unternehmen eine zentrale Ressource dar. Ihre gezielte Einbindung in Entwicklungsprozesse schärft nicht nur Geschäftsmodelle, sondern trägt damit auch grundlegend zu einem entscheidungsorientierten Risikomanagement bei. Der Artikel liefert eine konzeptionelle und theoretische Betrachtung von Customer Involvement als Ressource für junge Unternehmen und diskutiert Potentiale und Probleme in diesem Zusammenhang. Abschließend werden Ansätze für ein darauf gestütztes, schlankes Risikomanagement aufgezeigt und zentrale künftige Forschungsfelder abgeleitet.

I. Grundlagen des Customer Involvement

Der Begriff Customer Involvement (CI) wird als ein Bestandteil der prozess- und marketingorientierten Unternehmensausrichtung verstanden. CI zielt darauf ab, die Abhängigkeit von Unternehmen von ihren Kunden in den Fokus unternehmerischer Entscheidungen zu rücken (Chang et al. 2022). Piller et al. (2010) führen die zunehmende Relevanz, dass Kunden und deren Feedback in den Kern von Produkt- und Serviceentwicklungen implementiert werden, auf die Transformation der Wirtschaftsmärkte und das steigende Interesse von Unternehmen zurück, innovative Entwicklungsprozesse gezielter voranzutreiben. Ziel ist es, die Kundenorientierung zu stärken und das Kundenbeziehungsmanagement zu erweitern (Melander 2019; Menguc et al. 2014). Die Ursprünge sind im Marketingmanagement zu finden, wo bereits seit Jahrzehnten die Kommunikation zwischen Kunden und Unternehmen im Vordergrund steht. Zudem tritt CI häufig in verschiedenen Kontexten, wie beispielsweise dem Customer Development auf (Blank und Dorf, 2015; York und Danes, 2014). Maßgeblich geprägt wurde CI durch die wachsende Bekanntheit der Lean Startup Methode (Ries, 2017). Die Lean Startup Methode ist ein Verbund von verschiedenen Bausteinen für die zielgerichtete Gründung von Unternehmen sowie zur Ausarbeitung und Erweiterung von Geschäftsmodellen (Bortolini et al. 2021; Ries 2017; Shepherd und Gruber 2020).

CI kann auf unterschiedliche Arten erfolgen. Eine davon ist die Durchführung von Kundenbefragungen und das Sammeln von Kundenfeedback, was oftmals auf Basis eines Minimum Viable Products durchgeführt wird (Moogk 2012). Hierdurch können Kundenmeinungen direkt in die Produkt- und Serviceentwicklung einfließen. Die Involvierung der jeweiligen Zielgruppe ist sowohl im Business-to-Consumer-, als auch Business-to-Business-Bereich, gleichermaßen denkbar. Durch die aktive Beteiligung der Kundschaft im Entwicklungsprozess können Unternehmen sicherstellen, dass deren Produkte und Services den Wünschen und Anforderungen ihrer Zielgruppen entsprechen. Die Kundenbeteiligung wird im Rahmen eines iterativen Prozesses genutzt, um bestimmte Annahmen wiederholt zu testen (Lundkvist und Yakhlef 2004). Ziel ist es, Vertrauen zu schaffen, um langfristig die Kundenbeziehung zu stärken, die Produkt- bzw. Servicequalität zu erhöhen und die Marktposition zu festigen.

Indem Produkte und Services unter aktiver Beachtung der Bedürfnisse und Wünsche der geeigneten Zielgruppe entwickelt werden, kann eine erhöhte Produkt- oder Servicequalität

erreicht werden (Chang et al. 2022; Melander 2019). Ziel ist es, dadurch eine Entwicklungsqualität zu erreichen, die das allgemeine Risiko des Scheiterns reduziert. Chang et al. (2022) etwa zeigen am Beispiel von Fertigungsunternehmen, dass vielfach positive Effekte entlang der gesamten Wertschöpfungskette auftreten, wenn aktiv Feedback verwendet wird. So schafft die Einbindung von Kunden neues Wissen, dass zur Verbesserung der Leistung bei neuen Prozessinnovationen in Fertigungsunternehmen genutzt werden kann (Chang et al., 2022). Die aktive Einbindung von Kunden in den Entwicklungsprozess wird genutzt, um möglichst frühzeitig eine robuste Beziehung zur Kundschaft aufzubauen (Melander 2019), was nicht nur für die Unternehmen selbst, sondern auch für den Erfolg ihrer Produkte wichtig ist.

Ein wirksames CI setzt voraus, dass Ressourcen im Unternehmen zur Verfügung stehen, um die Kommunikation und die Umsetzung der dabei erzielten Erkenntnisse im Produkt- oder Serviceerstellungsprozess sicherzustellen (Gruner und Homburg 2000). Ziel des vorliegenden Artikels ist es daher, CI als Ressource für junge Unternehmen konzeptionell und theoretisch zu konturieren und mögliche Entwicklungstendenzen abzuleiten.

Nach einer theoretischen Fundierung des CI durch die Resource Dependence Theory im nächsten Abschnitt wird CI anschließend vor dem Hintergrund der Lean Startup Methode reflektiert. Abschließend werden die sich daraus ergebenden Potentiale und Probleme für Startups diskutiert.

II. Theoretische Basis: Die Resource Dependence Theory

Die Lean Startup Methode gilt als theoretisch wenig untermauert (Shepherd und Gruber 2020). Tatsächlich wurde sie aus praktischen Erfahrungen und anekdotischen Beobachtungen heraus entwickelt, ohne damit aufgerissene theoretische Defizite grundlegend anzugehen. Bemängelt wird etwa, dass Quantifizierungen ihres Potentials (Harms und Schwery 2020) oder einheitliche Definitionen ihrer Methodenbausteine (Leatherbee und Katila 2020) fehlen.

Das CI als wesentliche Basis der Lean Startup Methode lässt sich jedoch schlüssig aus der Resource Dependence Theory ableiten und trägt so auch zu ihrer theoretischen Fundierung bei. Die Resource Dependence Theory betont die Bedeutung der Identifizierung, Verwaltung und Sicherung externer Ressourcen. Sie postuliert, dass Organisationen von externen Ressourcen abhängig sind und ihr Verhalten von solchen Abhängigkeiten beeinflusst werden (Pfeffer und Salancik 2003). Die Theorie legt mithin nahe, dass Organisationen bestrebt sein müssen, bestimmte Ressourcen zu erlangen und zu schützen, um ihre Überlebensfähigkeit und Leistungsfähigkeit zu sichern.

Der Grad der Abhängigkeit einer Organisation von einer externen Ressource kann unterschiedlich stark ausgeprägt sein und hängt von drei Faktoren ab (Pfeffer und Salancik 2003): Dem relativen Anteil dieser Ressource an den Inputs und Outputs der Organisation, der Unabhängigkeit des Kontrolleurs der Ressource sowie der Marktstellung der kontrollierenden Einheit. Die Resource Dependence Theory beinhaltet folgende zentrale Elemente, die nahtlos mit dem CI verknüpft werden können:

1. *Abhängigkeit von externen Ressourcen:* Die Theorie geht davon aus, dass Organisationen nicht nur von externen Ressourcen wie finanzieller Unterstützung,

Technologien, Fachwissen oder politischer Unterstützung abhängig sind. Sie sind ebenso abhängig von den Kunden selbst und damit Informationen über die sich ständig ändernden Bedürfnisse und Anforderungen der Kunden.

2. *Ressourcenknappheit*: Da Ressourcen und der Zugang zu ihnen begrenzt sind, muss dieser Zugang organisiert und gestaltet werden. Das betrifft im Falle des CI insbesondere die Frage, wie die für den Entwicklungsprozess passenden Kunden gewonnen und eingebunden werden können.
3. *Abhängigkeitsbeziehungen*: Organisationen stehen in Abhängigkeitsbeziehungen zu externen Quellen von Ressourcen. Hinsichtlich CI ergibt sich die Frage, wie Zugangswege zu Informationen über Kunden so organisiert und sichergestellt werden können, dass darauf im erforderlichen Umfang zugegriffen werden kann. Zu diesem Zweck können verschiedene Strategien eingesetzt werden, beispielsweise Kooperationen, Verträge oder der Aufbau alternativer Kundenbeziehungen.
4. *Umweltanalyse*: Die Theorie hebt die Bedeutung einer Analyse der externen Umwelt hervor, um einerseits die Verfügbarkeit und Zugänglichkeit von Ressourcen zu verstehen und andererseits entsprechende Strategien zu entwickeln. Informationen von und über potentielle Kunden sind also zentraler Bestandteil der Analyse der externen Umwelt.

III. Umsetzung im Rahmen der Lean Startup Methode

Die Resource Dependence Theory schafft der Lean Startup Methode ein theoretisches Fundament, indem sie die Bedeutung des CI für die Geschäftsmodellentwicklung begründet. Die Methode setzt auf Kundenressourcen wie Feedback, Testnutzer oder die Verbreitung von Produktinformationen durch Kunden. Kunden werden als Partner betrachtet und ihre Ideen, Bedürfnisse und Meinungen werden in die Leistungsgestaltung einbezogen. Feedbacks erlauben es, Produkte und Services gezielt und kundenorientiert zu entwickeln. Eine verstärkte Kundeneinbindung kann deshalb auch als strategische Ressource betrachtet werden, da sie zum Aufbau einer langfristig bestehenden Kundenbasis und damit dem Erfolg des Unternehmens beiträgt.

Grundlage der Lean Startup Methode sind schlanke Prozesse sowie das Lernen durch iteratives und kundenzentriertes Testen. Eine kundenzentrierte Entwicklung erfordert das kontinuierliche Verständnis der Bedürfnisse und Wünsche der Kunden (Ries 2017). Notwendig ist damit deren laufende Analyse, um sicherzustellen, dass Produkte oder Services, den sich ständig ändernden Anforderungen genügen. Die folgende Tabelle skizziert deren meistgenannte Bausteine und stellt sie typischen Maßnahmen des CI gegenüber.

Tabelle 1: Lean Startup Methode und Customer Involvement

Elemente der Lean Startup Methode	Exemplarische Bezüge zum Customer Involvement
<i>Hypothesis-Driven Development Processes and Validated Learning</i> Kontinuierliches Testen von Produkten und Services, um zielgruppengerechte Ausgestaltung zu sichern (Newbert et al. 2020; Silva et al. 2020). Als strategischer Entwicklungsprozess, um Gelerntes fortwährend umzusetzen und zu validieren, auch als Build-Measure-Learn-Loop bezeichnet (Ries 2017).	<i>Feedback Loop</i> Wiederholtes und systematisches Abfragen von Kundenfeedback schafft Grundlagen zur Entwicklung und Anpassung der Produkt- oder Servicestrategie und für einen kontinuierlichen Lernprozess (Chen et al. 2021).
<i>Minimum Viable Product</i> Einfaches, aber funktionales Produkt bzw. Service, um der Zielgruppe grundlegende Funktionen in einem frühen Stadium aufzuzeigen. Hilft dabei, frühzeitig wertvolles Feedback zu sammeln (Blank und Dorf 2015; Moogk 2012).	<i>Co-Creation and Co-Design</i> Unternehmen und Kunden bringen Ressourcen ein, um auf Basis von Ideen oder Prototypen gemeinsam die Entwicklung voranzutreiben (Rautela et al. 2021).
<i>Lean and Agile Management</i> Auf den japanischen Automobilhersteller Toyota zurückgehender Ansatz eines schlanken Managements, um die Kosten für Prozesse gering zu halten und mit einer agilen Strategie das Unternehmen dynamisch weiterzuentwickeln (Mansoori 2017; Ries 2017), wobei die Balance zwischen effizienter Ressourcennutzung und dem Mitteleinsatz für notwendiges Experimentierens zu wahren ist (Bortolini et al. 2021).	<i>Effective Collaboration</i> Um keine Ressourcen zu verschwenden, wird gezielt die Zusammenarbeit mit Kunden gesucht, die für den Prozess wertschöpfend sind (Melander 2019).
<i>Customer Development Method</i> Besseres Verständnis für die Kundenentwicklung durch die ständige Analyse der Bedürfnisse und Wünsche der Kunden. Die vier diesem Baustein zugehörigen Phasen (Customer Discovery, Customer Validation, Customer Creation und Company	<i>Customer Participation</i> Aktive Einbeziehung von Kunden in die Produkt- oder Serviceentwicklung ermöglicht bessere Abstimmung auf Kundenerwartungen. Intendiert höhere Kundenzufriedenheit und -treue sowie größere Innovativität (Melander 2019; Piller et al. 2010).

Building) bauen auf den drei zuvor beschriebenen Bausteinen auf (Blank 2013) und werden von einer möglichst gewinnbringenden Zusammenarbeit und entsprechender Einflussnahme der Kunden auf die Entstehung der Produkte oder Services umspannt (Melander 2019).	
<i>Persevere or Pivot</i> Ein fortlaufender Überwachungsprozess soll zeigen, ob ein Konzept sich positiv entwickelt oder eine grundsätzliche Neuausrichtung benötigt, um zu entscheiden, ob die bestehenden Strukturen beibehalten (Persevere), möglicherweise geringfügig verbessert oder grundlegend überdacht (Pivot) werden sollten (Bortolini et al. 2021).	<i>Adaptation to Customer Needs</i> Entscheidungen werden durch Kundenfeedbackdaten fundiert und können die Bedürfnisse der Zielgruppe dadurch besser erfüllen. Erfordert die Bereitschaft, die eigene Strategie extern beeinflussen zu lassen (Piller et al. 2010).

IV. Potentiale und Risiken für junge Unternehmen

Ressourcen wie Kapital oder Informationen über den Markt sind oft sehr begrenzt (Pfeffer und Salancik 2003; Zahra 2021). Junge Unternehmen auf der Suche nach einem optimalen Product-Market-Fit (Chang und Taylor 2016; De Jong et al. 2021) sind von externen Ressourcen abhängig. Gerade bei innovativen und neuen Produkten und Services muss frühzeitig und ohne Verschwendung von Ressourcen geklärt werden, was die Kundschaft nutzen wird (Melander 2019). Erschwert wird dies dadurch, dass historische Daten und Informationen fehlen oder gar nicht für die Entwicklung von innovativen neuen Produkten und Services nutzbar sind (Schulte und Wagenknecht 2022).

CI ermöglicht es jungen Unternehmen, die Innovationsentwicklung aktiv und kundenzentriert zu steuern und zu kommunizieren. Ziel ist es, Bedürfnisse der Kunden möglichst frühzeitig zu verstehen, um schnell auf Änderungen reagieren zu können. Eine einfache und transparente Kommunikation hilft, Missverständnisse zu vermeiden oder zu reduzieren (Chen et al. 2021; Melander 2019). Gleichzeitig sind mögliche negative Effekte solch iterativer Prozesse – bspw. steigende Kommunikationskosten – zu beachten. Daher sind Potentiale und Risiken im Rahmen der Geschäftsmodellentwicklung gegeneinander abzuwägen. Sie sind vielfältig und stark von den spezifischen Produkten und Services abhängig.

Wesentliche Vorteile der Nutzung von CI liegen insbesondere in der Verbesserung der Qualität von Produkten und Services, der Steigerung der Kundenzufriedenheit und -treue sowie der Stärkung der Wettbewerbsfähigkeit. Risiken betreffen direkte oder indirekte Kostensteigerungen durch höheren Zeit- und Ressourcenaufwand oder mangelnde Expertise bei der Umsetzung, eine erhöhte Abhängigkeit von externen Akteuren, der mögliche Verlust von unternehmenseigener Innovationskraft sowie ungewollte Transparenz gegenüber externen Akteuren. Darüber hinaus besteht die Möglichkeit, dass die Kundenbeziehung sich

negativ entwickelt, sei es durch Meinungsverschiedenheiten zwischen Unternehmen und Kunden oder aufgrund unerfüllter, gesteigerter Kundenerwartungen. Genau diese Aspekte sind nun theoretisch fundiert weiter zu untersuchen.

Insgesamt kann CI die Marktposition und damit den Erfolg und das Überleben junger Unternehmen in einer wettbewerbsintensiven Umgebung fördern. Um dabei auch die mit CI verbundenen Risiken mitzudenken, empfiehlt sich eine Einbettung des CI in einen ganzheitlichen Risikomanagementprozess, bei dem proaktiv vor allem darauf geachtet wird, dass sowohl Entwicklungsprozesse, als auch spätere Produkte und Services nicht zu komplex und teuer werden, und dass potenzielle Kunden frühzeitig und regelmäßig eingebunden werden. So kann die gezielte Nutzung von CI dazu beigetragen, junge Unternehmen bei der Entwicklung robuster und dauerhaft tragfähiger Geschäftsmodelle zu unterstützen.

Literatur

- Blank, S. G. (2013). The four steps to the epiphany: Successful strategies for products that win (2nd ed.). K & S Ranch.
- Blank, S. G., Dorf, B. (2015). The Path to the Epiphany: The Customer Development Model. *Revista Cuatrimestral de Las Facultades de Derecho y Ciencias Económicas y Empresariales*, 94, 119 – 142.
- Bortolini, R. F., Nogueira Cortimiglia, M., Danilevicz, A. de M. F., Ghezzi, A. (2021). Lean Startup: A comprehensive historical review. *Management Decision*, 59(8), 1765 – 1783. <https://doi.org/10.1108/MD-07-2017-0663>.
- Chang, W., Taylor, S. A. (2016). The Effectiveness of Customer Participation in New Product Development: A Meta-Analysis. *Journal of Marketing*, 80(1), 47 – 64. <https://doi.org/10.1509/jm.14.0057>.
- Chang, W.-H. C., Wang, J.-H., Teng, M.-J. (2022). Customer involvement in the new process innovation: Antecedents, mediation and performance. *European Journal of Innovation Management*, 25(4), 1115 – 1141. <https://doi.org/10.1108/EJIM-09-2019-0268>.
- Chen, Y.-C., Arnold, T., Tsai, H.-T. (2021). Customer involvement, business capabilities and new product performance. *European Journal of Marketing*, 55(10), 2769 – 2793. <https://doi.org/10.1108/EJM-01-2020-0034>.
- De Jong, A., Zacharias, N. A., Nijssen, E. J. (2021): How young companies can effectively manage their slack resources over time to ensure sales growth: The contingent role of value-based selling. *Journal of the Academy of Marketing Science*, 49(2), 304 – 326. <https://doi.org/10.1007/s11747-020-00746-y>.
- Gruner, K. E., Homburg, C. (2000). Does Customer Interaction Enhance New Product Success?. *Journal of Business Research*, 49(1), 1 – 14. [https://doi.org/10.1016/S0148-2963\(99\)00013-2](https://doi.org/10.1016/S0148-2963(99)00013-2).
- Harms, R., Schwery, M. (2020). Lean Startup: Operationalizing Lean Startup Capability and testing its performance implications. *Journal of Small Business Management*, 58(1), 200 – 223. <https://doi.org/10.1080/00472778.2019.1659677>.

- Leatherbee, M., Katila, R. (2020). The lean startup method: Early-stage teams and hypothesis-based probing of business ideas. *Strategic Entrepreneurship Journal*, 14(4), 570 – 593. <https://doi.org/10.1002/sej.1373>.
- Lundkvist, A., Yakhlef, A. (2004). Customer involvement in new service development: A conversational approach. *Managing Service Quality: An International Journal*, 14(2/3), 249 – 257. <https://doi.org/10.1108/09604520410528662>.
- Mansoori, Y. (2017). Enacting the lean startup methodology: The role of vicarious and experiential learning processes. *International Journal of Entrepreneurial Behavior und Research*, 23(5), 812 – 838. <https://doi.org/10.1108/IJEBr-06-2016-0195>.
- Melander, L. (2019): Customer involvement in product development: Using Voice of the Customer for innovation and marketing. *Benchmarking: An International Journal*, 27(1), 215 – 231. <https://doi.org/10.1108/BIJ-04-2018-0112>.
- Menguc, B., Auh, S., Yannopoulos, P. (2014). Customer and Supplier Involvement in Design: The Moderating Role of Incremental and Radical Innovation Capability: Customer and Supplier Involvement in Design. *Journal of Product Innovation Management*, 31(2), 313 – 328. <https://doi.org/10.1111/jpim.12097>.
- Moogk, D. R. (2012). Minimum Viable Product and the Importance of Experimentation in Technology Startups. *Technology Innovation Management Review*, March 2012, 23 – 26.
- Newbert, S. L., Tornikoski, E. T., Augugliaro, J. (2020). To get out of the building or not? That is the question: The benefits (and costs) of customer involvement during the startup process. *Journal of Business Venturing Insights*, 14, 1 – 9. <https://doi.org/10.1016/j.jbvi.2020.e00209>.
- Pfeffer, J., Salancik, G. R. (2003). The external control of organizations: A resource dependence perspective. Stanford Business Books.
- Piller, F. T., Ihl, C., Vossen, A. (2010). A Typology of Customer Co-Creation in the Innovation Process. *SSRN Electronic Journal*, 1 – 26. <https://doi.org/10.2139/ssrn.1732127>.
- Rautela, S., Sharma, S., Virani, S. (2021). Influence of customer participation in new product development: The moderating role of social media. *International Journal of Productivity and Performance Management*, 70(8), 2092 – 2112. <https://doi.org/10.1108/IJPPM-05-2020-0241>.

- Ries, E. (2017). *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses* (Currency international edition). Currency.
- Schulte, R., Wagenknecht, M. (2022). Risikomanagement bei Startups. *ZfKE – Zeitschrift für KMU und Entrepreneurship*, 70(3 – 4), 243 – 252. <https://doi.org/10.3790/zfke.70.3-4.243>.
- Shepherd, D. A., Gruber, M. (2020). The Lean Startup Framework: Closing the Academic-Practitioner Divide. *Entrepreneurship Theory and Practice*, 0(0), 1 – 31. <https://doi.org/10.1177/1042258719899415>.
- Silva, D. S., Ghezzi, A., Aguiar, R. B. de, Cortimiglia, M. N., Caten, C. S. ten (2020). Lean Startup, Agile Methodologies and Customer Development for business model innovation: A systematic review and research agenda. *International Journal of Entrepreneurial Behavior und Research*, 26(4), 595 – 628. <https://doi.org/10.1108/IJEBr-07-2019-0425>.
- York, J. L., Danes, J. E. (2014). Customer Development, Innovation, and Decision-Making. *Journal of Small Business Strategy*. 24(2), 21 – 39.
- Zahra, S. A. (2021). The Resource-Based View, Resourcefulness, and Resource Management in Startup Firms: A Proposed Research Agenda. *Journal of Management*, 47(7), 1841 – 1860. <https://doi.org/10.1177/01492063211018505>.

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- Theoretischer Hintergrund der Resource Dependence Theory
- Validierung und Schärfung von Inhalten

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- Ausblick auf ein Lean Startup Riskmanagement (LSRM) und Hervorhebung der Bedeutung einer kundenzentrierten Entwicklung

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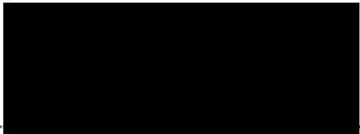
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- Abstract
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Abstract: In the chapter titled “Lean Social Media Communication Strategies for SMEs – Exploring the Field of Risk-Adjusted Lean Social Media Communication Strategies in the Context of the Lean Startup Method for SMEs,” Katrin Kizilkan and Maximilian Wagenknecht present how the Lean Startup Method can improve digital communication through active control of lean and targeted communication. This chapter provides a first attempt where parts of the Lean Startup Method are combined with social media communication to create a risk-adjusted lean communication strategy. The theoretical content of the chapter is developed by a systematic literature review and an inductive content analysis to connect these theoretical concepts. The results indicate that social media must be understood as an opportunity to actively interact with the core customers and as a tool that must be continuously evaluated and readjusted. Additionally, the benefits of a lean strategy can lead to cost reductions in market research and the preservation and control of the customer base. The most important findings are compiled in a risk-adjusted Lean Social Media Strategy framework for practitioners and future research.

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Chapter 10

LEAN SOCIAL MEDIA COMMUNICATION STRATEGIES FOR SMES

Katrin Kizilkan & Maximilian Wagenknecht

Exploring the Field of Risk-Adjusted Lean
Social Media Communication Strategies in the
Context of the Lean Startup Method for SMEs

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Abstract

In the chapter titled “Lean Social Media Communication Strategies for SMEs – Exploring the Field of Risk-Adjusted Lean Social Media Communication Strategies in the Context of the Lean Startup Method for SMEs,” Katrin Kizilkan and Maximilian Wagenknecht present how the Lean Startup Method can improve digital communication through active control of lean and targeted communication. This chapter provides a first attempt where parts of the Lean Startup Method are combined with social media communication to create a risk-adjusted lean communication strategy. The theoretical content of the chapter is developed by a systematic literature review and an inductive content analysis to connect these theoretical concepts. The results indicate that social media must be understood as an opportunity to actively interact with the core customers and as a tool that must be continuously evaluated and readjusted. Additionally, the benefits of a lean strategy can lead to cost reductions in market research and the preservation and control of the customer base. The most important findings are compiled in a risk-adjusted Lean Social Media Strategy framework for practitioners and future research.

Keywords

Customer Development Method, Lean Startup Method, Lean Communication, Persevere or Pivot, Social Media, Communication Theories, Small and Medium Enterprises, Risk Management

Introduction

It is essential for companies to show presence on social media and constantly interact with core customers (Ashley & Tuten, 2015; Ling et al., 2006). Targeted social media campaigns help connect with customers in a targeted manner and actively involve them in core processes. In this chapter, strategies derived from existing social media literature are outlined and analyzed. The focus lies on social media campaigns of small and medium enterprises (SME) in an early stage of development. All companies, irrespective of their size, must constantly realign themselves, their values, and product portfolios in line with the dynamic changes in the environment. This is especially true for SMEs, as their competitive advantage is characterized by effective solution-oriented decision-making and more dynamic processes than in larger companies. A cost-effective way for SMEs to get in direct contact with customers is through social media communication. This type of communication in connection with hypothesis-driven and long-term strategic planning enables companies to check whether their product or service meets customer requirements and to generate new ideas directly from their target group. This book chapter deals with a possible structuring of digital communication by using lean and efficient methods. According to Kent and Li (2020), the social media sphere has received very little original theorizing, even if the social media topic is present in research and has tripled in the last few years.

Moreover, Kent and Li (2020) argue that existing theories are more likely to be applied and tested in the social media field than new approaches are developed. Application examples listed in further course refer mainly to the use of the social media network Instagram. It is precisely here that communication channels such as Facebook and Twitter have increasingly been examined in the literature to date. The importance of this topic results from the chances that arise from an intelligent usage of these social media networks.

However, as part of an inductive approach, this chapter addresses many research fields. The goal is to extend established concepts by new developments from the Lean Startup Method (LSM) area. To frame these communication and marketing theories, we aim to apply parts of the LSM to create a guideline on how to effectively and goal-oriented rethink the use of social media and form it into a risk-adjusted and lean strategy.

Stepping into the field of LSM, the method proposes a process of continuous iterative and agile validation cycles for verifying and testing a suitable business model (BM) and business strategies (Bocken & Snihur, 2020; Ghezzi & Cavallo, 2020; Silva et al., 2019). This method is not only used by startups but also SMEs and large companies (Chan et al., 2019; Clutterbuck et al., 2009). However, only parts of the LSM are often used since it consists of subordinated methods for different fields of application (Bortolini et al., 2018; Lizarelli et al., 2021; Ries, 2017).

A fundamental subordinated method is the Customer Development Method (CDM) (Blank, 2013; Melander, 2019). Further, agile development, the conscious implementation of lean processes, and the persevere or pivot strategy serve as additional foundations of this method (Blank, 2013; Leatherbee & Katila, 2020; Ries, 2017; Silva et al., 2019). In the context of these methods and practices, it can be stated that SMEs that use lean and hypothesis-driven processes often need an adapted communication strategy towards their customers (Kamboj & Sarmah, 2018; Seggie et al., 2017). Approaches in this field are justified because information and digital communication management, respectively social media, are already part of lean thinking (Müller et al., 2017; Redeker et al., 2019). LSM factors are used to improve the digital communication of SMEs. By connecting the outcomes with SMEs and the social media framework, we can significantly contribute to the mentioned research fields. For this purpose, we outline the chances and risks of Lean Social Media Communication (LSMC). In this context, the following research question (RQ) needs to be elaborated:

RQ1: What key factors derived from the Lean Startup Method can be applied to communication via social media platforms for SMEs?

In the second step of this process, the current state of motives and characteristics of customer engagement are analyzed (Hutton & Fosdick, 2011), which results in new insights for a more efficient social media strategy. The aim is to determine how digital communication can be improved through customer development (CD) and why a straightforward decision-making process in the context of a persevere or pivot strategy is of utmost relevance (Balocco et al., 2019; Colazo, 2020; Lizarelli et al., 2021). Thus, the second research question is dedicated to the concrete application possibilities of these LSM fields and potential risks that might occur:

RQ2: How can these identified key factors of lean communication be implemented in a risk-adjusted social media strategy for targeted customer communication?

This question is particularly relevant because the literature repeatedly points out that the choice of social media channels and the communication strategy must be geared to the appropriate customer segment (Melander, 2019; Santos et al., 2020). In this context, lean thinking can help avoid waste drivers and thus reduce financial and strategical risks. Addressing the gap in the literature, this study explores the combination of the two research fields theoretically. It aims to elaborate how human resources, financial capabilities, and a hypothesis-driven approach can be developed and implemented in a risk-adjusted LSMC-Strategy.

Theoretical Background – Digital Communication of SMEs

To date, several studies have investigated digital communication as a subarea of communication theories. The following theoretical accumulation concentrates on the subfield of digital communication, namely social media, focusing on SMEs' application. To derive the embedding of social media in communication theories, Fraccastoro et al. (2021) divide sales communication tools into three categories according to their digitalization level. The first one includes conventional communication tools like phone and post but also classic face-to-face conversation. The second tool category involves digital tools like e-mails, Search Engine Optimizing, websites, and online meeting tools like Zoom. The third category relates to social media. Social media offers many opportunities for organizational communication (Floreddu & Cabiddu, 2016).

Nowadays, a wide variety of social media channels can be an easy and, above all, cost-effective way to reach many potential customers, especially in comparison to more traditional communication tools (Wardati & Er, 2019). Thereby, social networks play a significant role in the consumer's purchase decision because they strengthen word-of-mouth and are more trusted than traditional advertising campaigns (Karimi & Naghibi, 2015). In addition, the number of users constantly increases (Shawky et al., 2020), and customers are directly involved in the processes through active dialog (Santos et al., 2020).

Especially for SMEs, these communication channels can win potential customers or involve existing customers in development processes. Therefore, it is necessary to determine which social media channels are preferred by the target group and reach out to them efficiently (Öztamur & Karakadilar, 2014). Loyal customers buy a product or service more quickly and might even get involved in a discourse with the companies (Elmadag & Peneklioglu, 2018). Here digital communication should be embedded in the companies' marketing strategy and form a social media strategy.

Customer engagement depends on the needs, desires, and goals of the customer group. This is related to the fact that on social media, they are not just recipients of the messages but actively participate in the communication (Schmitt, 2012).

Targeted social media use may result in an increase in traffic and engagement. It also helps to reduce the high costs of classic marketing campaigns. Implementing feedback loops and honest real-time communication with the customer can improve long-term customer relationships (Karimi & Naghibi, 2015). Mangold and Faulds (2009) point out that social media activities can also be harmful to companies, depending on how customers react to the content generated by them.

There is still a lack of guidance for employees to follow a stringent execution of content generation (Ashley & Tuten, 2015). Failures often occur in the communication structure due to the use of inappropriate language. This might create unattractive content and fail to attract customer awareness (Öztamur & Karakadilar, 2014). There is a great danger for SMEs in a nonstrategic use of social media.

Theoretical Background – Lean Startup Method

Lean companies that use parts of the LSM are characterized, among other things, by hypothesis-driven development processes combined with validated learning, lean process structures, and a focus on value-added and customer-oriented order fulfillment (Blank, 2013; Ries, 2017). Strategies that correspond to lean thinking can help achieve goals more efficiently and strategically (Eckert, 2017). The origins of the lean approach come from the Japanese car manufacturer Toyota (Shah & Ward, 2003). However, LSM goes beyond these explanations and uses only principles from the original approach (Bhamu & Singh Sangwan, 2014; Jesemann et al., 2020).

Established research articles connected with agile methods in all areas of the value chain analyzed the specifics of the method (see for example Balocco et al., 2019; Ghezzi, 2019; Ghezzi & Cavallo, 2020). The main goal is to develop and improve the BM through a continuous learning process. Osterwalder (2005) classifies five BM pillars: product, customer interface, infrastructure management, and financial aspects. In this context, LSM can be applied to all areas. However, just the first two pillars and four subordinate factors (validated learning, lean structures, customer development, and persevere or pivot) are of interest in the context of this study.

A Hypothesis-driven Development Process and Validated Learning

Especially in early company development phases, entrepreneurs ask themselves what requirements their customers have and how they can best develop their products and services in a targeted manner. In this context, LSM aims to make business creation and the search for a scalable and repeatable BM less risky and more efficient (Blank, 2013; Ries, 2017). Hypothesis-driven developments and continuous improvements can help understand customer needs faster and more efficiently (Newbert et al., 2020; Silva et al., 2019). Thereby, the hypotheses should correspond to a scientific structure and be falsifiable. The knowledge is validated and continuously integrated into the development process (Balocco et al., 2019; Frederiksen & Brem, 2017). Ries (2017) proposes continuously implementing learnings but simultaneously re-measuring and validating the new implementation (Build-Measure-Learn-Loop).

Lean Process Structures and Minimum Viable Products

Focused and planned development leads to more customer-oriented services and products (Eisenmann et al., 2011; Shepherd & Gruber, 2020). The aim is to keep the costs of the process as low as possible to efficiently drive forward further development through an experimental approach (Mansoori, 2017). In this context, a minimum viable product (MVP) can verify this early and collect valuable feedback. An MVP includes only a few critical features, and companies can develop it with minimal effort (Blank, 2013; Blank & Dorf, 2017; Tripathi et al., 2019). Such an MVP does not always have to exist in physical form but also as a described service description. Digital prototypes can already deliver customer feedback at an early stage (Shepherd & Gruber, 2020). The results must always be critically scrutinized during the validation process so that no wrong decisions are made based on examining the hypotheses (Eisenmann et al., 2011).

Customer Development Method

A fundamental subordinated method is the CDM (Blank, 2015; Melander, 2019). In the context of this method, it can be stated that companies that use lean and hypothesis-driven processes are often in need of an adapted communication and development strategy towards their customers (Kamboj & Sarmah, 2018). It builds on the previously described explanations and accentuates the importance of using a customer-centric approach (Blank, 2015; Melander, 2019).

The process is structured in four phases: 1. Customer Discovery; 2. Customer Validation; 3. Customer Creation; 4. Company Building (Blank, 2013). The first phase deals with identifying the customer's requirements for the service or product. Here it is essential to check whether there is a basic demand at all. Based on this question, a hypothesis-driven approach helps to analyze the situation. The second phase explores the customer's interest in greater depth and carries out validated learning steps. The goal is to elicit the positioning on the market to obtain or improve the MVP (Blank, 2015). The two subsequent phases will then support the establishment of the BM based on the data obtained (Blank, 2013).

Persevere or Pivot

After implementing ideas or procedures, the decision must be made if structures should be maintained (=persevere), only marginally improved or whether they should be fundamentally rethought (=pivot). This should be done continuously. Many studies have shown that companies which constantly adapt to new situations are usually more successful (Bajwa et al., 2016; Pillai et al., 2020).

Methodology

This study aims to extend and connect theoretical concepts and elaborate new assumptions within a conceptual, theoretical framework through a qualitative research approach (Ferreira et al., 2019). The goal is to figure out which derived key factors and procedures of the LSM can help reach and contact customers via social media in a lean-oriented manner.

The approaches are based on a systematic literature review (SLR) and an inductive content analysis (Bengtsson, 2016; Elo & Kyngäs, 2008). These two methods were chosen because it allows the systematic extraction and combination of relevant information from both research fields (Kraus et al., 2020).

The SLR is carried out using a multi-stage approach to systematically link the main literature from the core topics to obtain comprehensible results. Figure 10.1 shows the topics and the associated categories. These categories in connection to the topics were used as keywords for the searching process.

Research Fields and Key Words	
Lean Startup Method	Communication Theories
(SME) Innovation	
Customer Oriented Strategy	
Lean Structures	
Validated Learning	(SME) Social Media
Customer Development Method	(SME) Digitalization
Persevere or Pivot	(SME) Digital Marketing

Figure 10.1: Research fields and keywords.

The following Figure 10.2 illustrates the finding process of the SLR. Four hundred and twelve articles were found by searching in different databases (Scopus, Web of Science, Google Scholar, Emerald, Springer, Elsevier, Wiley, and Science Direct). The search period was between 2001 and 2021 (=20 years). The keywords were used in the databases singularly and in various combinations with the other keywords.

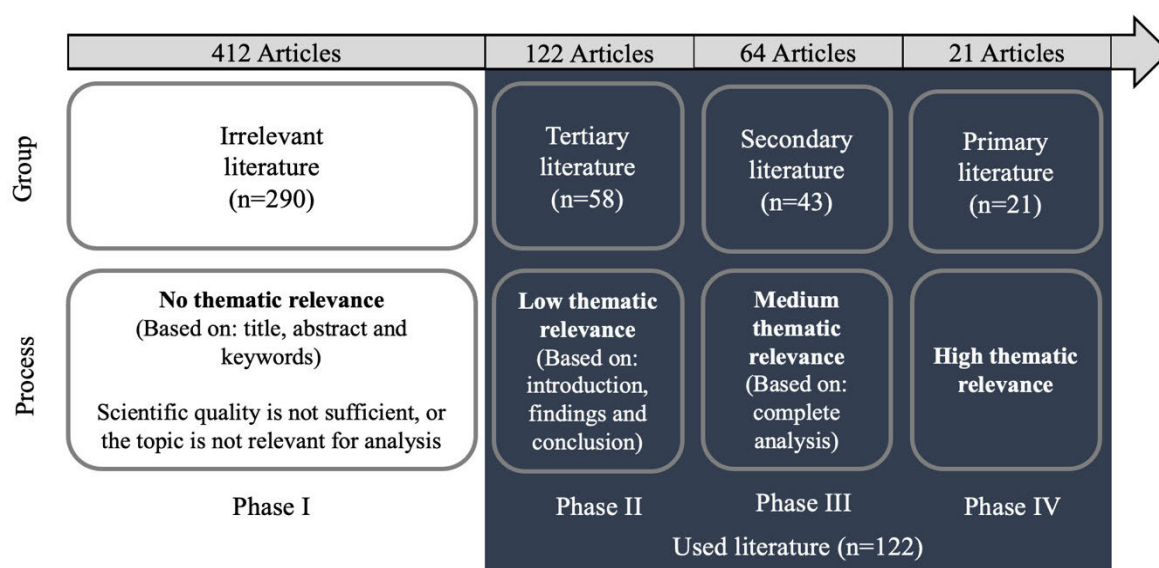


Figure 10.2: Overview of the literature search process.

Within phase I, titles, abstracts, and keywords were analyzed by their reference to the main research areas. The literature was excluded if the scientific quality was not sufficient (for example, non-academic materials, book publications) or the topic was not relevant for the analysis. This step allowed us to exclude 290 articles.

In the second step (phase II), the main theoretical core statements were extracted and evaluated by analyzing the introductions and conclusions of the articles. Here, the authors carefully agreed on whether to exclude or include each article for the SLR. This reduced the number by 58 articles. In phase III, the articles were viewed holistically. If these texts had a significant overlap to the fields, they were identified as primary literature in the last phase (=21 articles). Otherwise, the articles were used as secondary literature (=64 articles). However, all 122 articles of the SLR were considered for the writing process according to their relevance.

The 21 articles within the primary literature were analyzed in-depth and key messages were extracted as part of the finding process. Within this process, references were made between the individual core statements by implementing four categories: "CDM," "lean structures," "validated learning," and "persevere or pivot." A systematic evaluation of the main findings in each field was conducted with the help of systematic content analysis. The chosen content analysis is a research method to analyze data within a contextual frame (Elo & Kyngäs, 2008). The framework of this kind of analysis is used for describing and evaluating a subject and extending it through new insights, interpretations, and a guide for action (Khirfan et al., 2020). The goal here is to create a multi-layered overview, categorize, and examine the concepts and categories that summarize the phenomenon or theory (Elo & Kyngäs, 2008).

As there are three different approaches of content analysis, namely conventional, directed, and summative, a decision had to be made on which one fits best (Hsieh & Shannon, 2005). The method, in general, is used to focus on characteristics of language as communication with particular attention to the content of the text being analyzed. In our approach, the results were also systematically categorized in a table. In this case, the categories are formed inductively, meaning they are not initially determined but rather emerge and are recognized during the analysis. The directed content analysis differs because there is already a solid body of literature on the subject area, but it needs further research to fill several gaps.

This content analysis approach aims to identify correlations and patterns of communication concepts with a lean orientation that can be transferred to the social media communication of SMEs. The most suitable variant of the content analysis here is the directed content analysis because there is a considerable corpus of existing literature for both topics. Still, there is very little literature connecting the topics. After this process, the primary objective within the discussion part is to clarify which of the main determinants should be included in a strategy of LSMC. The focus lies on both customer acquisition and communication with customers through social media.

Findings

To classify the findings from the systematic literature review in a structured way and relate the different research fields to each other, four subcategories are derived from the theoretical part on LSM. These serve to classify SMEs' information on social media use so that a lean social media communication strategy can be derived from it.

Figure 10.3 shows the age structure of the 122 articles for this research. What is striking is that there has been a sharp increase in publications in the last four years (note: 2021 was only considered up to July 2021). The growing body of literature indicates the importance of the topic and the accompanying interest in the research area.

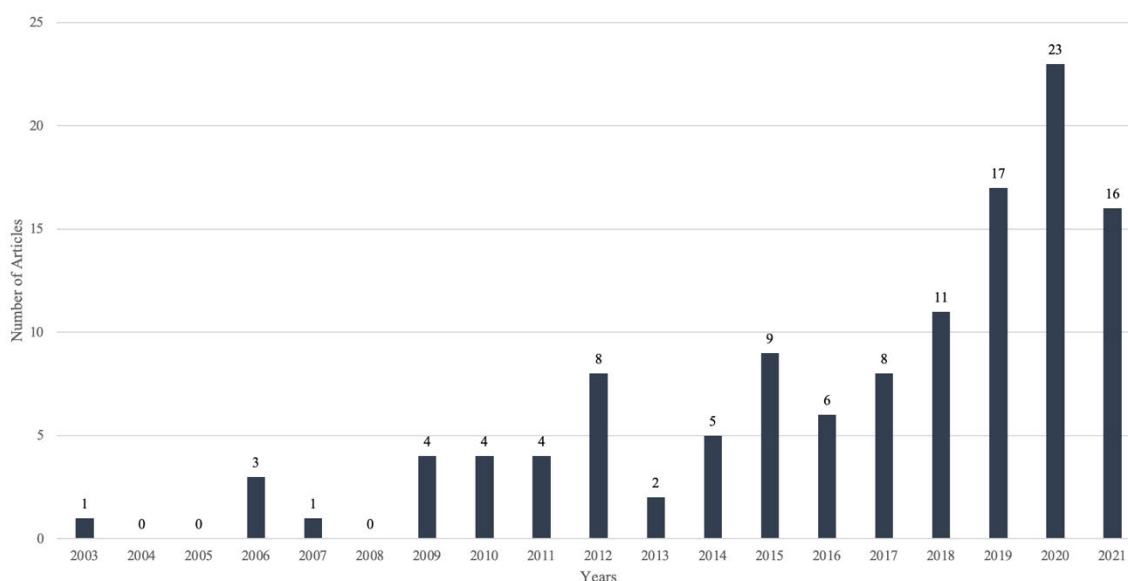


Figure 10.3: Age structure of the articles used.

The growing importance of the subject is supported by Figure 10.10 in the appendix. It becomes clear that the subject area is primarily researched qualitatively, also shown by the fact that 93 of 122 articles have an inductive approach. Figure 10.11 illustrates how in this context the most popular research method used is a literature review, followed by case studies. However, due to the analysis, the articles might have two applied research methods, and the number is therefore 169 used research methods in 122 articles. Derived from the evaluation of the SLR, Figure 10.12 in the appendix also shows an overview of the most relevant journals in this field.

As shown in Figure 10.13 in the appendix, the articles were allocated to one or two topic areas of the research field. This enabled an assignment to the following four LSM fields for this findings part. Thirty of 122 articles dealt with social media, and 35 of 122 articles contained information from the LSM.

Tables 10.2 to 10.8 in the appendix show the key findings of the primary literature. These 21 articles have the highest subject relevance of the 122 articles and cover all subject areas. These texts serve as the basis for the findings and discussion, but insights from other articles supplement them.

Validated Social Media Learning

The basis for validated social media learning is the practical evaluation and analysis of digital customer feedback. Jesemann et al. (2021) emphasize that employees need to be well trained to engage with the customers via social media and understand their needs. Mangold and

Faulds (2009) identify the potential risk of social media activities harming the company if employees are not sufficiently trained or do not know the campaign's goals and produce inappropriate content. Technology and tools evolve fast, so employees need to learn continuously (Eagleman, 2013). Before developing a proper social media strategy for the organization, employees need to accept the channel and its use. Alalwan (2018) measures the perceived ease of use and the perceived usefulness of the employees by adopting the Technology Acceptance Model. Lee et al. (2010) show that the perceived ease of use is strongly connected to the user's age, as it is probably much more accessible for digital natives to use social media within an organizational structure.

As part of this implementation process for validated learning, it is imperative that SMEs implement customer opinions and feedback correctly and through a structured process (Mangold and Faulds, 2009). Peralta et al. (2020) highlight the overall aim to deliver value to the customer. This approach can give SMEs, particularly, an advantage, even if they are weaker in their resources, such as finances, workforces, and organizational structure, than large corporations (Wardati & Er, 2019). Additionally, Wardati and Er (2019) emphasize the possibility of effective use of social media to build up networks in new markets at comparatively low costs and thus overcome limitations by using external resources to enrich and develop their communication. SMEs have a clear advantage in the absence of rigid structures and, if they know how to adapt dynamically, they can try things out and offer the customer enormous added value (Wardati & Er, 2019).

Validated learning means that through customer involvement, mainly marketing employees must also improve communication through active learning in the short term and derive a long-term strategy by aligning the suitable ideas with the general company vision (Jesemann et al., 2021). For a long-term strategy, Atanassova and Clark (2015) introduce the concept of dynamic capabilities (DCs) for a theoretical embedding that considers the dynamic adaptability of the environment of SMEs and explains the continuous learning process. To classify the further development of SMEs in the concept of DCs, it is represented by the ability of a company within a dynamic process to improve, expand, and rethink its resources, a reminder of the fundamental lean idea of build, measure, learn. Teece et al. describe DC as an organization's ability to adapt core competencies to a fast-evolving market (Teece et al., 1997). Knowledge and organizational learning form core DCs, especially when using social media for gaining customer knowledge easier (Eisenhardt & Martin, 2000). This continuous knowledge accumulation becomes a strategic resource for experimental learning (Atanassova & Clark, 2015).

Lean Social Media Structures

The knowledge about the conditions for using lean communication by applying parts of the LSM is not fully explored (De Cock et al., 2020). De Cock et al. (2020) point out that this might be related to the fact that it is often not easy to make the market information usable for the company. Soares and Teixeira (2014) list the benefits of LSM for every area, where these benefits can be mapped to each other, and how resources can be managed. The management of communication and information is a crucial part of lean thinking, and lean communication must be actively controlled and monitored because no relevant information should be lost (Redeker et al., 2019). But the processing and transfer of comments and opinions from customers are complex because the data is often just available in an unorganized form (Karimi & Naghibi, 2015). Planning in advance how to collect information in a lean and efficient manner is highly relevant (De Cock et al., 2020). But within the literature, there is no precise method or process for general improvements (Redeker et al., 2019).

One of the lean principles and, therefore, a communication rule is the elimination of waste, presented by Redeker et al. (2019). According to Redeker et al. (2019), seven types of waste in information exist: an overload of information, the use of too many systems, lack of integration between systems, too long period to wait for information, wrong information, and the information formats. Gifu and Teodorescu (2014) describe the waste drivers in communication

that should be avoided for a communication strategy that follows the lean idea: insufficient information quality, ineffective communication, and unnecessary details.

Steinemann et al. (2012) relate lean communication to applying online tools and deriving recommendations for user utilization. Furthermore, reaction time plays a crucial role in customer service, and especially for social media applications, the answer is expected promptly (Steinemann et al., 2012). Karimi and Naghibi (2015) add here that this creates pressure on the one hand; on the other hand, it creates valuable real-time communication with the customer, whose feedback can be used immediately to improve communication strategies regarding the product portfolio.

Digital Customer Development

The current state of CD and empowerment has already been widely explored (Kamboj & Sarmah, 2018; Melander, 2019; Peralta et al., 2020; Santos et al., 2020). Customers are often deeply involved in the development process, especially in the industrial market and in the context of B2B communication (Melander, 2019). Melander (2019) points out that this can also be applied to the B2C context and less industrial-driven markets. Especially in social media, customer opinions are analyzed in a targeted manner to leverage real-time market knowledge (Atanassova & Clark, 2015). As social media contains the potential to interact and exchange with the customers efficiently, it is the perfect setting to gain insights from customers' needs and generate new ideas in interaction with them (Barlatier & Josserand, 2018).

In addition, Atanassova and Clark (2015) and Melander (Melander, 2019) raise the question of how many customers should actively influence product or service development. No consistent statements on this could be found in the selected literature. Nevertheless, it is crucial to determine in advance which of the available customers need to be involved in this process. Other authors like Santos et al. (2020) focus more on how customers can be identified as the primary target group and how to process expectations. Customer value is multidimensional, and value dimensions must be prioritized based on the market and customers (Santos et al., 2020).

Floreddu and Cabiddu (2016) recognize the opportunity that dialogs can reduce product or service failure risks in the long term. In terms of frequency of contact, regular interactions between the customer and the company strengthen the relationship (Floreddu & Cabiddu, 2016). Kamboj and Sarmah (2018) reveal that the customer's engagement is often motivated by the need for information. The variety of motivation derived from the customer needs to be explored by the company within their core community to develop customized communication and targeted products or services (Kamboj & Sarmah, 2018).

Further, Bharati et al. (2021) apply in their study of idea co-creation on social media platforms the social capital theory to the social media context and attempt to generate a theory of social ideation. This procedure can be connected to the subarea of the LSM, the customer development process. The theory implies the organizational strategies for the social exchange of information, knowledge, and ideas to generate new ideas or renew existing products or service offerings (Bharati et al., 2021). In this context, Ashley et al. (2015) focus on customer engagement and how companies can effectively align themselves. Therefore, creative social media content needs to be developed by the employees to get in touch with the customer (Ashley & Tuten, 2015).

Persevere or Pivot for a Successful Growth

Lean social media processes are, as often described in the literature, processes that run in loops and are pre-planned (Bortolini et al., 2018). Persevere or pivot are thus continuous factors of such a course of action (Balocco et al., 2019). In this context, Bortolini et al. (2018) point out that the adaptability and conscious decision for or against a particular direction can determine the existence of a company. The authors justify this by stating that the success of an organization is based on its ability to adapt its BM dynamically to new market developments. Lizarelli et al. (2021) indicate that waste should be avoided, and it is crucial to identify suitable

areas where it makes sense to change processes and make them leaner at an early stage and with evaluated customer feedback. Otherwise, implementing lean structures without a long-term goal and plan can negatively influence performance (Lizarelli et al., 2021).

Atanassova and Clark (2015) argue that SMEs change and develop their marketing activities through social media use by gaining market intelligence. For them, social media might be a chance for SMEs to fill the resource gap that often exists to increase real-time market knowledge. Furthermore, Isari et al. (2016) describe that social media adapt to current trends and digital evolution. For instance, the younger generation intuitively uses lean communication because they are used to communicating with short text messages. Isari et al. (2016) also assert that the companies should continuously monitor and analyze customer communication. In addition, the companies should specifically adapt their communication strategy in the social media area to trends and current developments.

Pillai et al. (2020) indicate that companies that frequently conduct pivots and continuous scrutinization of current processes tend to be more successful than companies that have stuck to their first concept (Pillai et al., 2020). Such a pivot should be performed before the product/market fit is reached and based on empirical data (Maurya, 2012). Especially for fundamental adjustments, well-selected customer feedback is better than relying on the company's own intuition regarding customer needs (Balocco et al., 2019). However, caution is required if the core customers have not yet been identified and recommendations for action are derived from an undefined customer segment (Balocco et al., 2019).

Discussion

The discussion section is divided into three parts and intends to produce practical recommendations based on theoretical results. The first part deals with answering the first research question and shows the core factors of LSMC. The second part contains the chances of such a transition and how to implement the findings. Lastly, possible risks that could arise are discussed to look at the topic holistically.

Identified Key Factors Derived from the Lean Startup Method

The validated learning process of a lean digital communication strategy is first elaborated to answer the first research question.

RQ1: What key factors derived from the Lean Startup Method can be applied to communication via social media platforms for SMEs?

Previous research has pointed out that several strategies for SMEs are trying to improve efficiency (Öztamur & Karakadilar, 2014). Companies are not given a precise strategy here. For this reason, we will derive the key factors applicable to LSMC from our findings. Recent studies have shown that young companies in particular often do not know their digital customer base well enough, and a lack of focus within customer communication is the consequence (Appel et al., 2020).

The validated learning process, derived from lean thinking and applied to the social media context, implies several advantages, such as saving costs through an adapted learning strategy in combination with targeted customer communication. Figure 10.4 shows the most important findings and risks for validated learning.

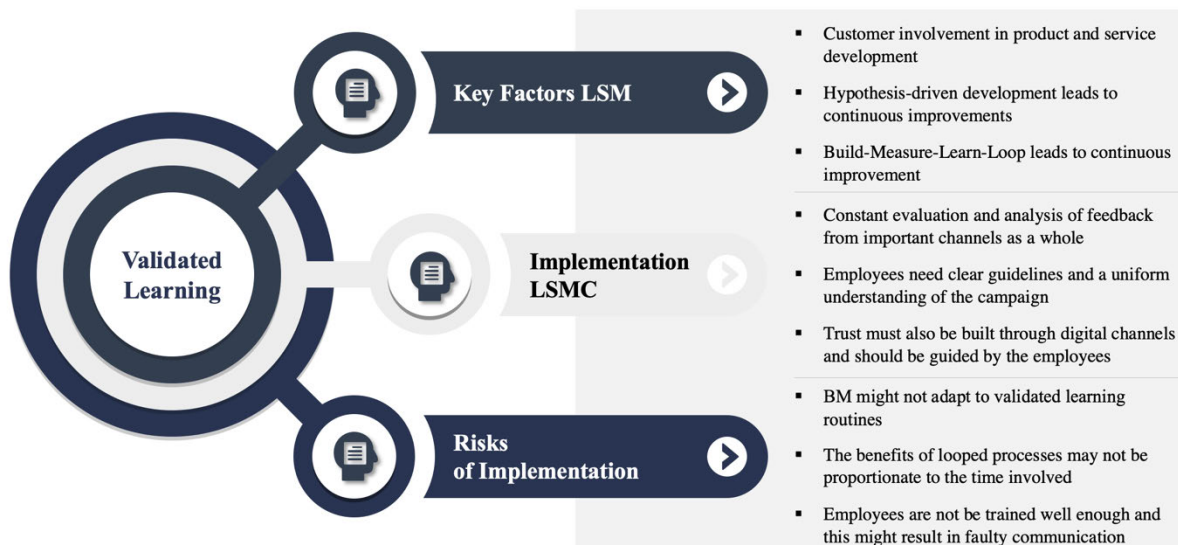


Figure 10.4: Key Factors LSM, implication LSMC, and risks of validated learning.

As Ries (2017) indicates, limited resources lead to the need for long-term planning of targeted validated learning. Here the concept of DC can also be aligned with the subfield of validated learning as it facilitates renewing organizational resources through experiential learning, integrating new knowledge, reconfiguring, and developing capabilities to maintain competitiveness (Atanassova & Clark, 2015). Ries (2017) highlights the importance of adequately measuring the tested results to validate them and afterward implementing the gained insights. Hypothesis-driven learning routines can help to improve the BM and to generate trust in a targeted manner. In doing so, employees need a uniform understanding of

the goals and strategies (Jesemann et al., 2021). Figure 10.5 shows some basics here, using the example of a strategic workflow for Instagram.

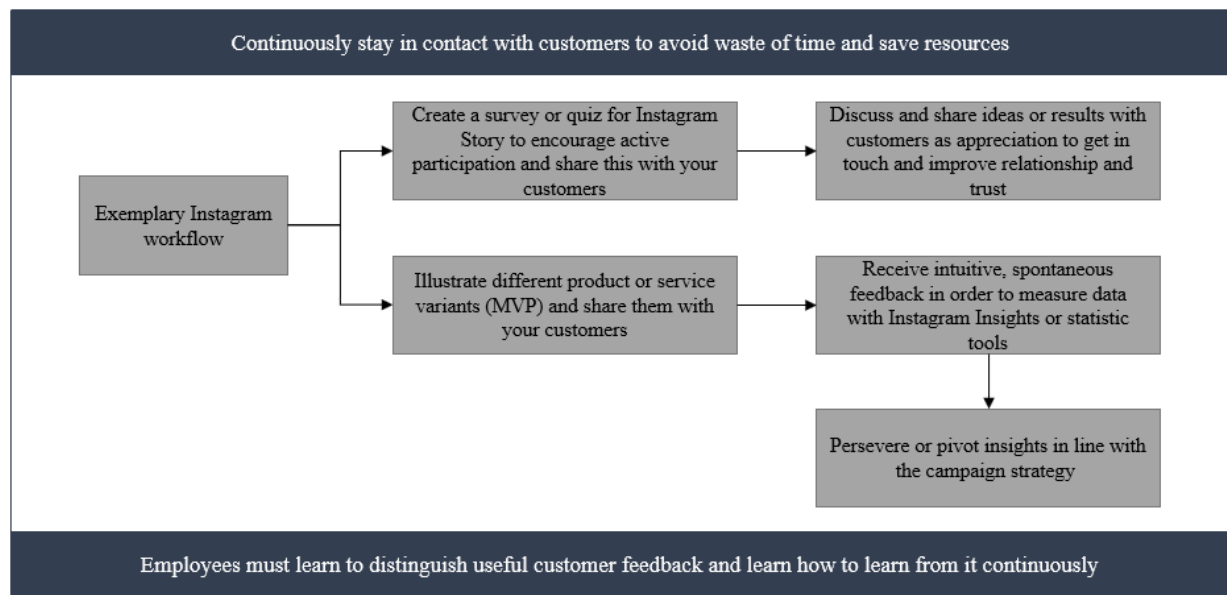


Figure 10.5: Exemplary Instagram workflow for validated learning.

To determine the customer's needs, it is crucial to start with extending market research. In doing so, social media should stimulate consumer conversations about new ideas and developments (Mangold & Faulds, 2009). Therefore, the survey function on Instagram can be used. Companies can create a question and prepare answer options or ask an open question. With the second option, you usually get more extensive and more specific feedback in the present context. The companies can share the survey results with followers as a sign of appreciation for their engagement. The survey function was used by several companies very creatively and successfully in engaging their customer base. For example, regarding customer interaction in product development, different product variants can be illustrated (Chesbrough & Tucci, 2020). Here, users decide intuitively and spontaneously, and companies receive honest and fast feedback, which they can consider in product or service development.

However, validated learning is closely linked to the implementation by the employees and how well they make use of it. Therefore, sufficient training of the employees is highly relevant (Jesemann et al., 2021; Steinemann et al., 2012). Additionally, we suggest that companies must be actively willing to make fundamental changes based on customer data.

Lean structure in social media refers to the active controlling and monitoring of information and elimination of waste in communication.

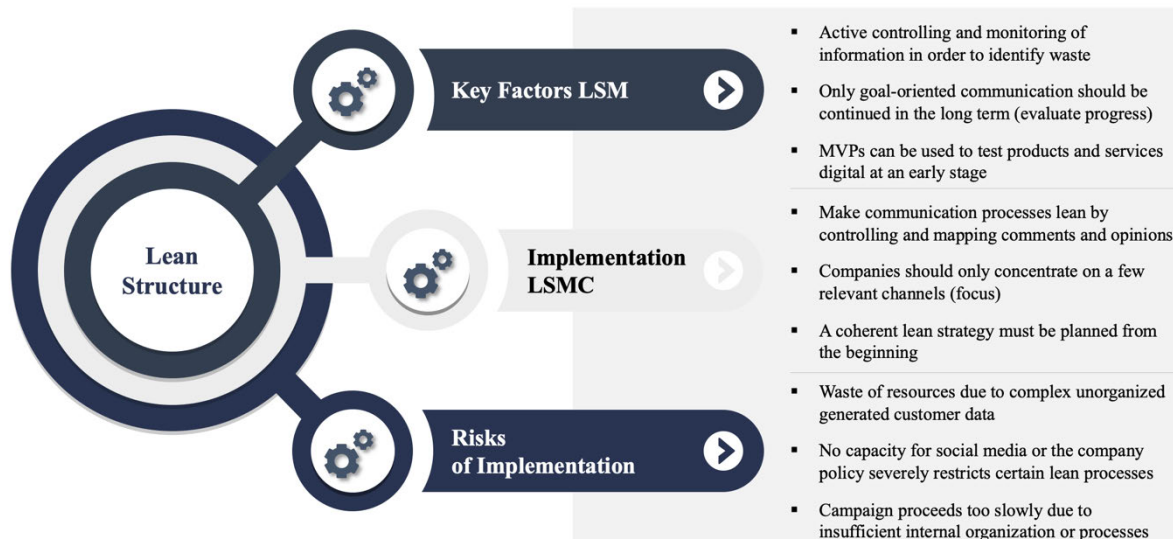


Figure 10.6: Key Factors LSM, implication LSMC, and risks of lean structure.

Figure 10.6 shows the most important key factors and risks for a lean structure. One of the key factors here is the advanced information gathering and evaluation planning to identify waste drivers (Gifu & Teodorescu, 2014). Excessive accumulation of information and the use of inappropriate technology should be avoided, as this can hardly be handled by SMEs (Steinemann et al., 2012). In addition, too many channels should be avoided (Karimi & Naghibi, 2015); instead, they should be selected and supplied with content in a precisely planned and structured manner (Isari et al., 2016).

Lean communication processes mean controlling and mapping comments and insights with each other (Gifu & Teodorescu, 2014) and must be planned from the beginning. To accommodate lean thinking, creating a lean structure with the full potential of social media use must be exploited and implemented in an integrated strategy (Barlatier & Josserand, 2018).

In this context, the analysis of CD also shows that if customers are placed in the focus of the operational analysis, market knowledge can be generated more quickly (Atanassova & Clark, 2015).

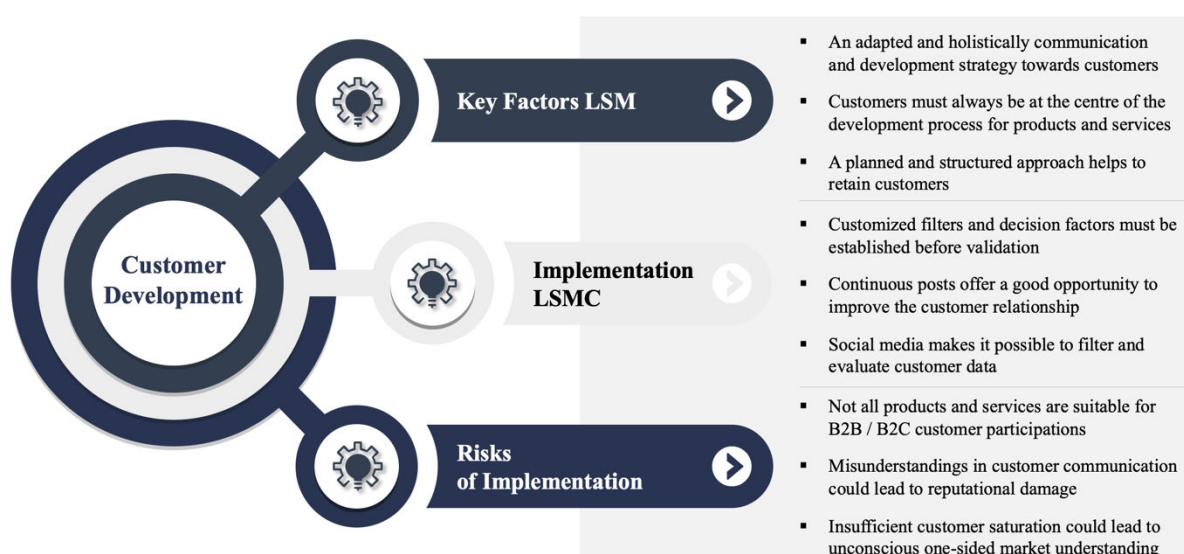


Figure 10.7: Key Factors LSM, implication LSMC, and risks of customer development.

This is part of the customer discovery process (Blank, 2015; Carroll & Casselman, 2019). Figure 10.7 shows the main findings and risks. The results indicate that by working with hypotheses and critically reflecting on the continuously acquired customer data, this process makes sense for all markets (De Cock et al., 2020; Melander, 2019). It is essential to constantly generate content (Bharati et al., 2021) and at the same time synthesize the statements through filters. However, the application possibilities in product and service development are very different regarding the customer relationship (Ashley & Tuten, 2015). Here, for instance, it can be assumed that within the B2B sector, there are hardly any limitations for early customer participation regarding product or service development. It can also be anticipated that within the B2C sector, emotionalizing products and services (primarily not from industrial sectors) (Melander, 2019) are particularly suitable for early strong customer participation. This is probably due to the generally more developed and easier to maintain customer relationships in the B2B area, especially in the digital communication processes.

As part of the customer validation process, it is crucial to determine at an early stage what kind of customers are the core customers and which are suitable for a contribution regarding a product or service development (Santos et al., 2020). The findings specify that the level of saturation for a social media campaign and the type of customers that should be included cannot be determined across the board for any kind of industry and adapt to the prevailing market environment with its unique characteristics.

The continuous evaluation of the current situation and the conscious decision for or against a particular course of the social media campaign is highly relevant. Here, the theoretical foundations of the persevere or pivot strategy from the LSM can provide helpful support. Figure 10.8 shows how to apply the results in a systematized way.

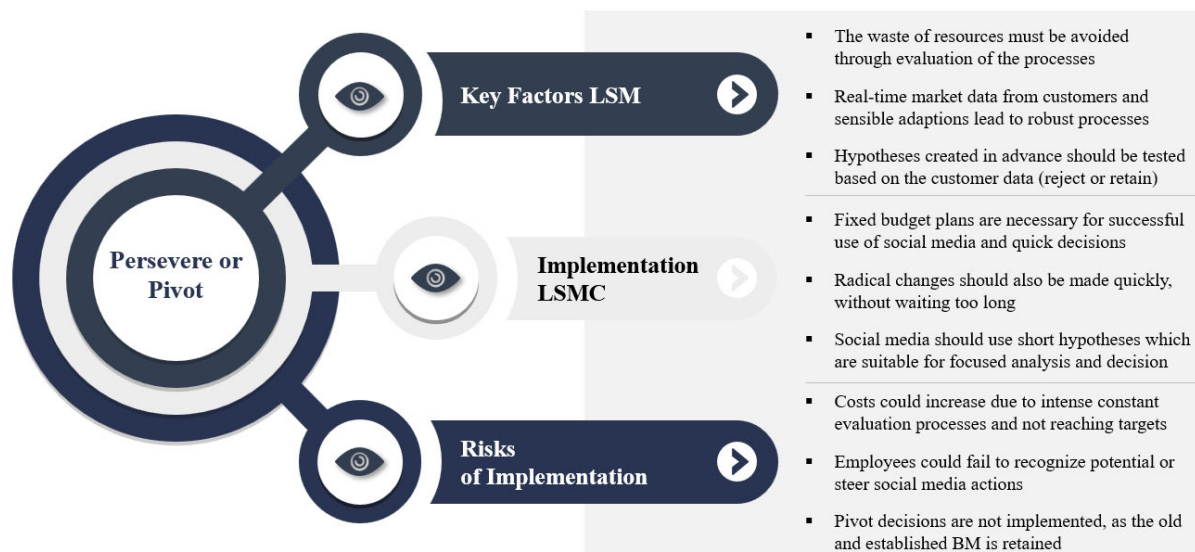


Figure 10.8: Key factors LSM, implication LSMC, and risks of persevere or pivot.

The catalog of pivots proposed by Ries (2017) can be applied on several levels. The findings provide convincing evidence that in particular the first four of the mentioned pivots can significantly influence the direction of social media communication. If used as recommended with the application of targeted hypotheses, it might achieve a positive outcome.

Type of Pivot	Information
Zoom-in Pivot	A single feature of a product becomes the whole product.
Zoom-out Pivot	A single feature of a product becomes a feature of a larger product.
Customer Segment Pivot	The product is solving a problem for a different customer than initially expected.
Customer Need Pivot	Customers have a different need than the planned product can deliver.
Platform Pivot	From application to a platform or vice versa.
Business Architecture Pivot	The company is switching its architectures (e.g., low to high volume).
Value Capture Pivot	Changes in value creation due to feedback.
Engine of Growth Pivot	A fundamental change of the growth engine (e.g., viral marketing campaign).
Channel Pivot	Change in sales channels and refocusing.
Technology Pivot	Change in the technical execution. The product or service remains the same.

Table 10.1: Types of pivots (derived from Ries, 2017, pp. 172-176).

Table 10.1, in association with the observations of Kim et al. (2018), illustrates that it is crucial to identify suitable areas where it makes sense to change processes and make them leaner. Often this is a looped process (Lizarelli et al., 2021).

The literature indicates that while generating customer data and intensifying the customer dialogue, significant changes should not automatically be integrated into operational processes. Additionally, the goals must be derived from the company's marketing campaign and continuously evaluated (Atanassova & Clark, 2015). They must be implemented in a targeted and evaluated manner and as a conscious decision (Kim et al., 2018). The aim is to revise existing hypotheses and generate new ones. But as market knowledge increases through real-time market data from customers, the BM becomes more robust over time, and adjustments can be implemented more quickly. No BM will ever be perfect and, according to the principles of lean thinking (Bhamu & Singh Sangwan, 2014), continuous improvement is the goal of such a campaign (Kim et al., 2018). Empirical evidence appears to confirm that companies which continuously adapt to market developments are often more successful in the long term (Bortolini et al., 2018).

Chances of Adapting a Lean Communication Strategy

Several scholars have provided empirical evidence supporting the chances which arise through the early and close customer relationship (Kamboj & Sarmah, 2018; Redeker et al., 2019). This empirical evidence leads us to our second research question:

RQ2: How can these identified key factors of lean communication be implemented in a risk-adjusted social media strategy for targeted customer communication?

If lean communication strategies are applied, products and services can be developed multidimensionally, promoting customer loyalty.

Social media offers an excellent opportunity to implement these adaptations in practice due to its high flexibility and almost worldwide availability (Dwivedi et al., 2021). Current studies appear to support the notion that social media is well suited for customization. A continuous aligning of the campaign to new requirements is mainly in the early stages of SMEs (Kamboj

& Sarmah, 2018). This is an excellent opportunity as SMEs are more likely to have not yet fully developed structures and might still search for a sustainable BM (Atanassova & Clark, 2015).

The tools implemented in the social media channels to get in touch with customers and encourage them to interact, offer companies the chance to enter an honest, timely exchange and receive direct feedback. These approaches and procedures can reduce risks and failure in the long term and save money.

Targeted lean communication can develop and maintain a sincere relationship with the customer base. The shared information should not have to be decoded first but rather be communicated clearly and comprehensibly and visualized with appropriate images. For a good relationship with the customer and a high rate of interaction, it is essential to respond quickly to customers' questions, requests, and comments. The companies should work with guidelines on this to align the employees on one user level. We are firmly convinced that young SMEs in the early stages of their social media development have the most significant potential to benefit from a targeted LSMC strategy.

Risks of Adapting a Lean Communication Strategy

The most significant risk of such interactive processes is that the focus can get lost, and the continuous improvement process creates more costs than ultimately creating value. The literature review emanates from considering risks from two main actors: customers and the company itself.

On the one hand, communicating with customers digitally can be complex, leading to misunderstandings (Karimi & Naghibi, 2015). Companies should know their customers, for example, to choose the appropriate social media networks. This might also originate from the communication policy of the company. Insufficiently trained employees could fail to recognize potential pitfalls or steer social media actions in the wrong direction due to a lack of knowledge. It is vital to ensure that the discussion remains objective and actively managed (Gifu & Teodorescu, 2014).

On the other hand, risks could arise because many companies do not use the information gained through the customers because they are too attached to the original BM (Ghezzi, 2020). Related to the customer base, a lean social media strategy can only be successfully implemented if the correct number and right type of customers have been identified. It should be clear if these customers are the right customers for incremental changes within core parts of the BM (Chesbrough & Tucci, 2020).

Regarding lean structures, it is mainly for SMEs challenging to create sufficient personnel capacity for social media. Since some SMEs are rather sales-driven, there is a lack of structural planning. In addition, the easy-going character that characterizes social media could get lost through strategic planning that is too small in scope. Furthermore, von Krogh (2012) draws attention to the risks of losing competitive advantage. The knowledge shared in social media networks is accessible to everyone, as well as to other companies. By willingly presenting visions in public, competitors could transfer ideas to their concepts. We are convinced that companies can gain significant competitive advantages through direct interaction with their customers with the primary goal to optimize existing processes through customer feedback.

Framework

Figure 10.9 shows the main framework of this research. The framework includes all essential points for a comprehensive and risk-adjusted lean communication strategy.

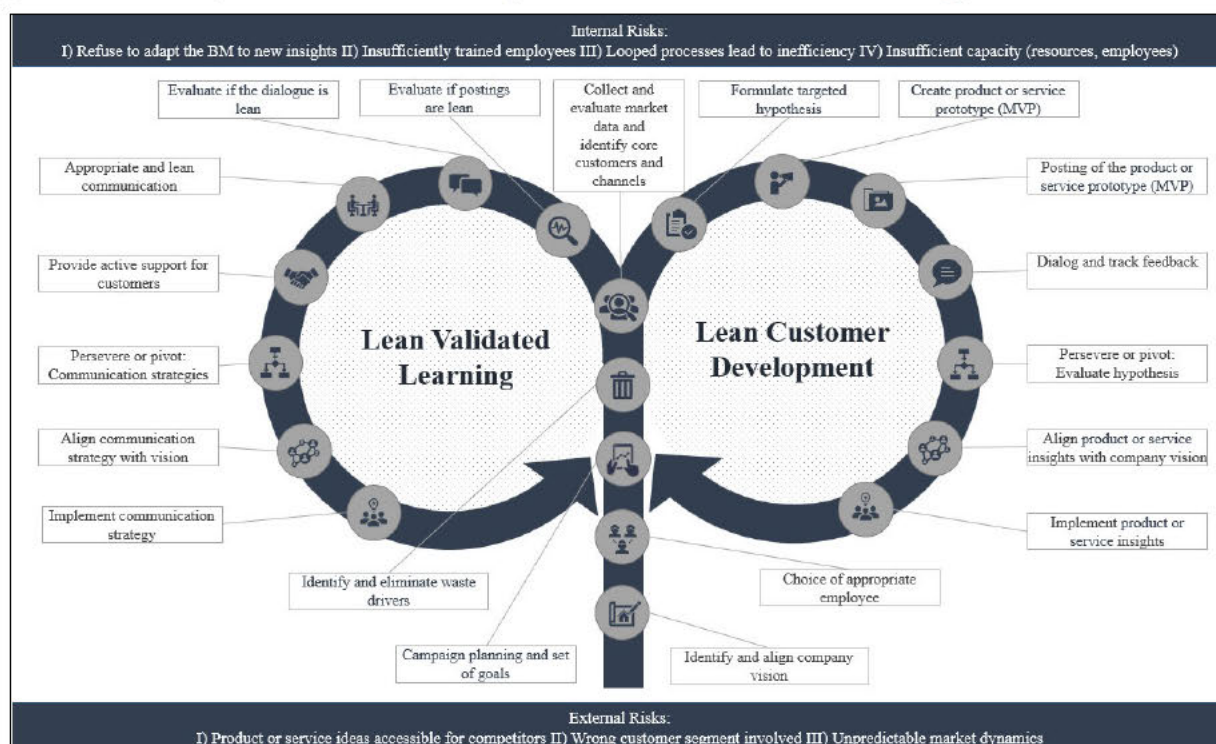


Figure 10.9: Framework of a risk-adjusted lean social media communication strategy.

Identifying the company's vision and selecting appropriate employees are located upstream of the cycle and are thus exempt from continual repetition. The whole strategy is embedded in a lean structure, which means that all aspects of the cycle described below should be based on lean thinking (Kim et al., 2018). Additionally, internal and external risks affect all processes and must be considered through the whole strategy-building process.

The validated learning cycle (left cycle) serves as a guideline for employees working with social media to improve their communication skills through continuous learning. Connected to this on the content level, creative contributions for generating new ideas can be sourced from the customer development method. Companies should always question the status quo. The BM should be dynamically and frequently adapted to customer needs and market conditions regarding products or service offerings (Ries, 2017).

The targeted hypothesis must be formulated regarding the lean customer development cycle (right cycle). Afterward, the MVP should be created or modified. During the posting process and dialog phase, the communication strategy must be coherent. In the context of the data analysis, the previously formulated hypotheses should be evaluated. After this step, the product or service insights must be aligned with the company vision before implementation.

Both cycles need to be repeated for continuous improvement, as customer requirements, customer segments, and external factors can change constantly. This is important for a successful social media campaign and a robust BM.

Conclusion

The chapter relates to new opportunities for SMEs and startups or larger companies regarding lean digital communication processes. It contributes to understanding the basics that are currently practiced in social media and reveals opportunities for improvement.

Through the evaluation of the core literature and the derived developments in the field of LSM and communication theory, it becomes apparent that parts of the LSM positively influence lean social media communication if applied correctly. The benefits can lead to cost reductions in research and development and the preservation and control of the customer base. LSMC is relevant for SMEs to counter the growing demands of digital communication and a better understanding of their customers.

The results indicate that social media must not only be understood as an advertising opportunity but as a place for targeted product and service development. The vital role of employees with a unified plan and positioning customers at the center of a social media campaign turns out to be essential for successful use of social media. The aim is to develop processes in a targeted manner and to evaluate them on an ongoing basis. It can be assumed that the successes of LSM can also be transferred to the early stages of SMEs. The necessary strategies can be linked to four identified core levels of LSM (validated learning, lean structures, customer development, and persevere or pivot).

Social media leads to a real-time increase of market data from customers. Through the analysis of validated learning, employees must be involved and know the campaign's goal to follow the unified plan. This is the best way employees can evaluate customer data in a targeted manner (reject or retain by hypotheses). Customer trust must be generated and maintained, especially in development processes.

Within the B2B sector, there are hardly any limitations for early customer participation regarding product or service development. In contrast to the B2C sector, emotionalizing products and services (primarily not from industrial sectors) are particularly suitable for early customer participation.

Lastly, the waste of resources and time must be avoided as early as possible by deciding exactly which processes or product specifications should be continued. Thereby the BM becomes more robust over time, and adjustments can be implemented more quickly. It is essential that the SMEs actively allow the BM to change dynamically because of insights gained from social media.

This book chapter has some limitations, especially regarding the methods. A SLR combined with content analysis is suitable for generating first knowledge insights by connecting established literature. The research focused only on secondary data without its empirical research. Thus, it limited the validation of the derived framework. Practical and hypothesis-driven testing is needed. Future studies should focus on the two cycles separately and in combination. This is important to determine how the two cycles influence each other. In addition, an industry-specific validation could verify the specific application areas of the individual frame parts. Already, it can be assumed that the framework cannot be fully applied to all use cases related to social media channels and industries.

Given the risks listed, it can be stated that both external and internal risks must be validated. Currently, the information is based on the selected literature. Future research should focus on individual aspects and expand the model if necessary. A long-term investigation of whether the results are feasible and transferable to a real case study might be vital, too. In addition, we focused on the social media network Instagram, which means that the results might not be transferred entirely to other social media networks.

Furthermore, lean communication on companies on social media was addressed here and summarized in a strategic framework. However, this does not consider the embedding in a cross-divisional marketing campaign, which may not only take place online.

In conclusion, as our conceptualization is justified merely by an SLR, future research should give a more comprehensive overview of this field by validating the findings through a quantitative study. All four mentioned LSM fields must be analyzed to validate the feasibility and benefits of implementations (individually and holistically).

References

- Alalwan, A.A. (2018). Investigating the impact of social media advertising features on customer purchase intention. *International Journal of Information, Business and Management*, 42, 65-77.
- Appel, G., Grewal, L., Hadi, R., & Stephen, A.T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science*, 48(1), 79-95. <https://doi.org/10.1007/s11747-019-00695-1>
- Ashley, C., & Tuten, T. (2015). Creative strategies in social media marketing: an exploratory study of branded social content and consumer engagement: Creative strategies in social media. *Psychology and Marketing*, 32(1), 15-27. <https://doi.org/10.1002/mar.20761>
- Atanassova, I., & Clark, L. (2015). Social media practices in SME marketing activities: A theoretical framework and research agenda. *Journal of Customer Behaviour*, 14(2), 163-183. <https://doi.org/10.1362/147539215X14373846805824>
- Bajwa, S.S., Wang, X., Duc, A.N., & Abrahamsson, P. (2016). How do software startups pivot? Empirical results from a multiple case study. In A. Maglyas & A.-L. Lamprecht (Eds.), *Software business* (Vol. 240, pp. 169-176). Springer International Publishing. https://doi.org/10.1007/978-3-319-40515-5_14
- Balocco, R., Cavallo, A., Ghezzi, A., & Berbegal-Mirabent, J. (2019). Lean business models change process in digital entrepreneurship. *Business Process Management Journal*, 25(7), 1520-1542. <https://doi.org/10.1108/BPMJ-07-2018-0194>
- Barlatier, P.-J., & Josserand, E. (2018). Delivering open innovation promises through social media. *Journal of Business Strategy*, 39(6), 21-28. <https://doi.org/10.1108/JBS-12-2017-0175>
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open*, 2, 8-14. <https://doi.org/10.1016/j.npls.2016.01.001>
- Bhamu, J., & Singh Sangwan, K. (2014). Lean manufacturing: Literature review and research issues. *International Journal of Operations and Production Management*, 34(7), 876-940. <https://doi.org/10.1108/IJOPM-08-2012-0315>
- Bharati, P., Du, K., Chaudhury, A., & Agrawal, N.M. (2021). Idea co-creation on social media platforms: Towards a theory of social ideation. *ACM SIGMIS Database: The DATABASE for Advances in Information Systems*, 52(3), 9-38. <https://doi.org/10.1145/3481629.3481632>

- Blank, S.G. (2013). Why the lean start-up changes everything. *Harvard Business Review*.
- Blank, S.G. (2015). The path to the epiphany: The customer development model. *Revista Cuatrimestral de Las Facultades de Derecho y Ciencias Económicas y Empresariales*, 94, 24.
- Blank, S.G., & Dorf, R. (2017). *Das Handbuch für Startups* (K. Lichtenberg, Trans.; 2nd corrected reprint). O'Reilly.
- Bocken, N., & Snihur, Y. (2020). Lean startup and the business model: Experimenting for novelty and impact. *Long Range Planning*, 53(4), 101953. <https://doi.org/10.1016/j.lrp.2019.101953>
- Bortolini, R.F., Nogueira Cortimiglia, M., Danilevicz, A. de M. F., & Ghezzi, A. (2018). Lean startup: A comprehensive historical review. *Management Decision*, ahead-of-print. <https://doi.org/10.1108/MD-07-2017-0663>
- Carroll, R., & Casselman, R.M. (2019). The lean discovery process: The case of raiserve. *Journal of Small Business and Enterprise Development*, 26(6/7), 765-782. <https://doi.org/10.1108/JSBED-04-2019-0124>
- Chan, C.M.L., Teoh, S.Y., Yeow, A., & Pan, G. (2019). Agility in responding to disruptive digital innovation: Case study of an SME. *Information Systems Journal*, 29(2), 436-455. <https://doi.org/10.1111/isj.12215>
- Chesbrough, H., & Tucci, C.L. (2020). The interplay between open innovation and lean startup, or, why large companies are not large versions of startups. *Strategic Management Review*, 1(2), 277-303. <https://doi.org/10.1561/111.000000013>
- Clutterbuck, P., Rowlands, T., & Seamons, O. (2009). A case study of SME web application development effectiveness via agile methods. *The Electronic Journal Information Systems Evaluation*, 12(1), 13-26.
- Colazo, J. (2020). Changes in communication patterns when implementing lean. *International Journal of Quality and Reliability Management*, 38(1), 296-316. <https://doi.org/10.1108/IJQRM-10-2019-0323>
- De Cock, R., Bruneel, J., & Bobelyn, A. (2020). Making the lean start-up method work: The role of prior market knowledge. *Journal of Small Business Management*, 58(5), 975-1002. <https://doi.org/10.1111/jsbm.12506>
- Dwivedi, Y.K., Ismagilova, E., Hughes, D.L., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, A.S., Kumar, V., Rahman, M.M., Raman, R., Rauschnabel, P.A., Rowley, J., Salo, J., Tran, G.A., & Wang, Y. (2021). Setting the

- future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management*, 59. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>
- Eagleman, A.N. (2013). Acceptance, motivations, and usage of social media as a marketing communications tool amongst employees of sport national governing bodies. *Sport Management Review*, 16.
- Eckert, R. (2017). Lean Startup in Konzernen und Mittelstandsunternehmen: Ergebnisse einer Expertenbefragung und Handlungsempfehlungen. Springer Fachmedien Wiesbaden. <https://doi.org/10.1007/978-3-658-15775-3>
- Eisenhardt, K.M., & Martin, J.A. (2000). Dynamic capabilities: What are they?
- Eisenmann, T., Ries, E., & Dillard, S. (2011). Hypothesis-driven entrepreneurship: The lean startup. Harvard Business School Entrepreneurial Management Case, Case no. 812–095.
- Elmadag, A.B., & Peneklioglu, O. (2018). Developing brand loyalty among SMEs: Is communication the key? *Small Enterprise Research*, 25(3), 239-256. <https://doi.org/10.1080/13215906.2018.1522271>
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107-115. <https://doi.org/10.1111/j.1365-2648.2007.04569.x>
- Ferreira, J.J.M., Fernandes, C.I., and Kraus, S. (2019). Entrepreneurship research: Mapping intellectual structures and research trends. *Review of Managerial Science*, 13(1), 181-205. <https://doi.org/10.1007/s11846-017-0242-3>
- Floreddu, P.B., & Cabiddu, F. (2016). Social media communication strategies. *Journal of Services Marketing*, 30(5), 490-503. <https://doi.org/10.1108/JSM-01-2015-0036>
- Fraccastoro, S., Gabrielsson, M., & Pullins, E.B. (2021). The integrated use of social media, digital, and traditional communication tools in the B2B sales process of international SMEs. *International Business Review*, 30(4). <https://doi.org/10.1016/j.ibusrev.2020.101776>
- Frederiksen, D.L., & Brem, A. (2017). How do entrepreneurs think they create value? A scientific reflection of Eric Ries' Lean Startup approach. *International Entrepreneurship and Management Journal*, 13(1), 169-189. <https://doi.org/10.1007/s11365-016-0411-x>
- Ghezzi, A. (2019). Digital startups and the adoption and implementation of lean startup approaches: *Effectuation, bricolage and opportunity creation in practice*.

- Technological Forecasting and Social Change*, 146, 945-960.
<https://doi.org/10.1016/j.techfore.2018.09.017>
- Ghezzi, A. (2020). How entrepreneurs make sense of lean startup approaches: Business models as cognitive lenses to generate fast and frugal heuristics. *Technological Forecasting and Social Change*, 161. <https://doi.org/10.1016/j.techfore.2020.120324>
- Ghezzi, A., & Cavallo, A. (2020). Agile business model innovation in digital entrepreneurship: Lean startup approaches. *Journal of Business Research*, 110, 519-537.
<https://doi.org/10.1016/j.jbusres.2018.06.013>
- Gifu, D., & Teodorescu, M. (2014). Communication process in a lean concept. *International Letters of Social and Humanistic Sciences*, 28, 119-127.
<https://doi.org/10.18052/www.scipress.com/ILSHS.28.119>
- Hsieh, H.-F., & Shannon, S.E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288.
<https://doi.org/10.1177/1049732305276687>
- Hutton, G., & Fosdick, M. (2011). The globalization of social media: Consumer relationships with brands evolve in the digital space. *Journal of Advertising Research*, 51(4), 564-570. <https://doi.org/10.2501/JAR-51-4-564-570>
- Isari, D., Pontiggia, A., & Virili, F. (2016). Working with tweets: The effectiveness of lean communication in collaborative problem-solving.
- Jesemann, I., Beichter, T., Constantinescu, C., Herburger, K., & Rüger, M. (2021). Investigation of the “lean startup” approach in large manufacturing companies towards customer driven product innovation in SMEs. *Procedia CIRP*, 99, 711-716.
<https://doi.org/10.1016/j.procir.2021.03.095>
- Jesemann, I., Beichter, T., Herburger, K., Constantinescu, C., & Rüger, M. (2020). Migration of the lean-startup approach from high-tech startups towards product design in large manufacturing companies. *Procedia CIRP*, 91, 594-599.
<https://doi.org/10.1016/j.procir.2020.03.110>
- Kamboj, S., & Sarmah, B. (2018). Construction and validation of the customer social participation in brand communities scale. *Internet Research*, 28(1), 46-73.
<https://doi.org/10.1108/IntR-01-2017-0011>
- Karimi, S., & Naghibi, H.S. (2015). Social media marketing (SM) strategies for small and medium enterprises (SMEs). *International Journal of Information, Business and Management*, 7(4), 86-98.

- Kent, M.L., & Li, C. (2020). Toward a normative social media theory for public relations. *Public Relations Review*, 46(1). <https://doi.org/10.1016/j.pubrev.2019.101857>
- Khirfan, L., Peck, M., & Mohtat, N. (2020). Systematic content analysis: A combined method to analyze the literature on the daylighting (de-culverting) of urban streams. *MethodsX*, 7. <https://doi.org/10.1016/j.mex.2020.100984>
- Kim, B., Kim, H., & Jeon, Y. (2018). Critical success factors of a design startup business. *Sustainability*, 10(9). <https://doi.org/10.3390/su10092981>
- Kraus, S., Breier, M., & Dasí-Rodríguez, S. (2020). The art of crafting a systematic literature review in entrepreneurship research. *International Entrepreneurship and Management Journal*, 16(3), 1023-1042. <https://doi.org/10.1007/s11365-020-00635-4>
- Leatherbee, M., & Katila, R. (2020). The lean startup method: Early-stage teams and hypothesis-based probing of business ideas. *Strategic Entrepreneurship Journal*, 14(4), 570-593. <https://doi.org/10.1002/sej.1373>
- Lee, S., Park, G., Yoon, B., & Park, J. (2010). Open innovation in SMEs—An intermediated network model. *Research Policy*, 39(2), 290-300. <https://doi.org/10.1016/j.respol.2009.12.009>
- Ling, K., Ludford, P., Wang, X., & Chang Klarissa. (2006). Using Social Psychology to Motivate Contributions to Online Communities, 10(4).
- Lizarelli, F.L., Torres, A.F., Antony, J., Ribeiro, R., Salentijn, W., Fernandes, M.M., & Campos, A.T. (2021). Critical success factors and challenges for lean startup: A systematic literature review. *The TQM Journal*, ahead-of-print. <https://doi.org/10.1108/TQM-06-2021-0177>
- Mangold, W.G., & Faulds, D.J. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, 52(4), 357-365. <https://doi.org/10.1016/j.bushor.2009.03.002>
- Mansoori, Y. (2017). Enacting the lean startup methodology: The role of vicarious and experiential learning processes. *International Journal of Entrepreneurial Behavior and Research*, 23(5), 812-838. <https://doi.org/10.1108/IJEBR-06-2016-0195>
- Maurya, A. (2012). Running lean: Iterate from plan A to a plan that works (2nd ed.). O'Reilly.
- Melander, L. (2019). Customer involvement in product development: Using voice of the customer for innovation and marketing. *Benchmarking: An International Journal*, 27(1), 215-231. <https://doi.org/10.1108/BIJ-04-2018-0112>

- Müller, R., Vette, M., Hörauf, L., Speicher, C., & Burkhard, D. (2017). Lean information and communication tool to connect shop and top floor in small and medium-sized enterprises. *Procedia Manufacturing*, 11, 1043-1052. <https://doi.org/10.1016/j.promfg.2017.07.215>
- Newbert, S.L., Tornikoski, E.T., & Augugliaro, J. (2020). To get out of the building or not? That is the question: The benefits (and costs) of customer involvement during the startup process. *Journal of Business Venturing Insights*, 14. <https://doi.org/10.1016/j.jbvi.2020.e00209>
- Osterwalder, A., Pigneur, Y., & Tucci, C.L. (2005). Clarifying business models: Origins, present, and future of the concept. *Communications of the Association for Information Systems*, 16. <https://doi.org/10.17705/1CAIS.01601>
- Öztamur, D., & Karakadilar, İ.S. (2014). Exploring the role of social media for SMEs: As a new marketing strategy tool for the firm performance perspective. *Procedia - Social and Behavioral Sciences*, 150, 511-520. <https://doi.org/10.1016/j.sbspro.2014.09.067>
- Peralta, C.B.d.L., Echeveste, M.E., Lermen, F.H., Marcon, A., & Tortorella, G. (2020). A framework proposition to identify customer value through lean practices. *Journal of Manufacturing Technology Management*, 31(4), 725-747. <https://doi.org/10.1108/JMTM-06-2019-0209>
- Pillai, S.D., Goldfarb, B., & Kirsch, D.A. (2020). The origins of firm strategy: Learning by economic experimentation and strategic pivots in the early automobile industry. *Strategic Management Journal*, 41(3), 369-399. <https://doi.org/10.1002/smj.3102>
- Redeker, G.A., Kessler, G.Z., & Kipper, L.M. (2019). Lean information for lean communication: Analysis of concepts, tools, references, and terms. *International Journal of Information Management*, 47, 31-43. <https://doi.org/10.1016/j.ijinfomgt.2018.12.018>
- Ries, E. (2017). *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses* (Currency international edition). Currency.
- Santos, A.C.O., da Silva, C.E.S., Braga, R.A.d.S., Corrêa, J.É., & de Almeida, F.A. (2020). Customer value in lean product development: Conceptual model for incremental innovations. *Systems Engineering*, 23(3), 281-293. <https://doi.org/10.1002/sys.21514>
- Schmitt, B. (2012). The consumer psychology of brands. *Journal of Consumer Psychology*, 22(1), 7-17.
- Seggie, S.H., Soyer, E., & Pauwels, K.H. (2017). Combining big data and lean startup methods

- for business model evolution. *AMS Review*, 7(3-4), 154-169.
<https://doi.org/10.1007/s13162-017-0104-9>
- Shah, R., & Ward, P.T. (2003). Lean manufacturing: Context, practice bundles, and performance. *Journal of Operations Management*, 21(2), 129-149.
[https://doi.org/10.1016/S0272-6963\(02\)00108-0](https://doi.org/10.1016/S0272-6963(02)00108-0)
- Shawky, S., Kubacki, K., Dietrich, T., & Weaven, S. (2020). A dynamic framework for managing customer engagement on social media. *Journal of Business Research*, 121, 567-577. <https://doi.org/10.1016/j.jbusres.2020.03.030>
- Shepherd, D.A., & Gruber, M. (2020). The lean startup framework: Closing the academic–practitioner divide. *Entrepreneurship Theory and Practice*.
<https://doi.org/10.1177/1042258719899415>
- Silva, D.S., Ghezzi, A., Aguiar, R.B. de, Cortimiglia, M.N., & ten Caten, C.S. (2019). Lean startup, agile methodologies and customer development for business model innovation: A systematic review and research agenda. *International Journal of Entrepreneurial Behavior and Research*, ahead-of-print.
<https://doi.org/10.1108/IJEBR-07-2019-0425>
- Soares, S., & Teixeira, L. (2014). Lean information management in industrial context: An experience based on a practical case. *International Journal of Industrial Engineering and Management*, 5(2), 107-114.
- Steinemann, A., Wampfler, S., Kennel, T., & Kunz, A. (2012). Definition and analysis of a lean communication theory. *Ninth International Symposium on Tools and Methods of Competitive Engineering* (TMCE 2012), Karlsruhe, Germany.
- Teece, D.J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Tripathi, N., Oivo, M., Liukkunen, K., & Markkula, J. (2019). Startup ecosystem effect on minimum viable product development in software startups. *Information and Software Technology*, 114, 77-91. <https://doi.org/10.1016/j.infsof.2019.06.008>
- von Krogh, G. (2012). How does social software change knowledge management? Toward a strategic research agenda. *Journal of Strategic Information Systems*, 21, 154-164.
- Wardati, N.K., & Er, M. (2019). The impact of social media usage on the sales process in small and medium enterprises (SMEs): A systematic literature review. *Procedia Computer Science*, 161, 976-983. <https://doi.org/10.1016/j.procs.2019.11.207>

Appendix

Table 10.2: Key findings of the primary literature (Part I).

Year	Authors	Title	LSM Field	Main Statements	Objective
2018	Kamboj, S. Sarmah, B.	Construction and validation of the customer social participation in brand communities scale	Customer Development	A) Social media is constantly developing and adapting to customer and company needs B) It is difficult to measure customer participation quantitatively or qualitatively to identify core customers C) Companies currently still have problems processing the disorganized information comprehensively and deriving strategies from it	This study aims to create a multidimensional scale to measure customer engagement in social media. In addition, many influencing parameters such as culture and geographic distribution are difficult to translate into a stringent strategy.
2014	Ashley, C. Tuten, T.	Creative strategies in social media marketing: An exploratory study of branded social content and consumer engagement	Customer Development	A) Social media content should be created creatively to build a strong relationship with the customer B) Social media gather customer information throughout the entire communication process, which can be monitored and implemented C) Customers will engage with the posted content on social media if it is done in a creative way D) With the generated ideas from the crowd, ideas for companies' products or services can be implemented	The article concludes several best proactive examples for customer engagement with best-practice ideas to generate creative content which stimulates the customer word-of-mouth marketing.
2019	Melander, L.	Customer involvement in product development: Using voice of the customer for innovation and marketing	Customer Development	A) Especially in industrial markets, customers should provide input for the product development process B) By using the voice of customer strategy, firms can improve their development processes and strengthen their customer relationships C) Cross-functional collaboration is the key for stable project involvement and pilot testing	Due to the case study approach, the author shows how customer involvement in product development can be achieved.

Table 10.3: Key findings of the primary literature (Part II).

Year	Authors	Title	LSM Field	Main Statements	Objective
2020	Santos, A. C. O. da Silva, C. E. S. Braga, R. A. d. S., Corrêa, J. É. de Almeida, F. A.	Customer value in lean product development: Conceptual model for incremental innovations	Customer Development	A) The lean product development process has the goal to reduce waste and improve the value creation B) Customer value is multidimensional, and the dimensions of value must be prioritized based on the market and customers C) A problem for identifying customer expectations is that customers often struggle by formulating what their requirements are	This paper is based on a systematic literature review and aims to determine the customer value dimensions. The result is that several factors such as quality, cost, emotional, social, environmental, and innovation influence the value dimension.
2018	Barlatier, P. J. Josserand, E.	Delivering open innovation promises through social media	Customer Development	A) Social media is a valuable resource for idea creation within the process of open innovation B) Information and insights must be monitored and tracked in a coordinated way C) The collected ideas must be implemented in a lean manner	The study concludes best practice points for managers as an inspiration to involve their customers via social media in the innovation process.
2021	Bharati, P. Du, K. Chaudhury, A. Agrawal, N. M.	Idea co-creation on social media platforms: Towards a theory of social ideation	Customer Development	A) Social media is perfectly suitable for idea creation B) It is necessary to check if the company can process the gathered ideas C) Social media is an excellent tool for honest and frequent communication with the customer base	The study investigates the external impact of social media on idea creation.
2018	Alalwan, A. A.	Investigating the impact of social media advertising features on customer purchase intention	Validated Learning	A) Purchase intention has its predictors B) By analyzing social media advertisements, it is possible to predict purchase intention C) Parts of the unified theory of acceptance and use of technology applied to the social media context: performance expectancy connected to extrinsic motivation and hedonic motivation related to intrinsic motivation	The paper identifies the main factors to predict purchase intention in connection to social media by applying several fragments of the unified theory of acceptance and use of technology.

Table 10.4: Key findings of the primary literature (Part III).

Year	Authors	Title	LSM Field	Main Statements	Objective
2016	Floreddu, P. B. Cabiddu, F.	Social media communication strategies	Customer Development	A) Social media can be used at a meager cost and can be used easily B) Social media allows an interactive exchange between customer and company C) Through social media, the company can receive unfiltered feedback from the customer in real-time	The authors identify an effective social media communication strategy to exchange with the core customer and receive honest feedback.
2020	Peralta, C. B. d. L. Echeveste, M. E. Lermen, F. H. Marcon, A. Tortorella, G.	A framework proposition to identify customer value through lean practices	Lean Structure	A) For innovation management within firms generating customer value is the key B) 33 practices were found for supporting capturing customer value C) Often, by using a mix of methods, best results can be achieved	This paper's objective is to achieve customer value through lean practices and various customer relationship-building methods.
2014	Gifu, D. Teodorescu, M.	Communication process in a lean concept	Lean Structure	A) Communication is an integrated process and not a single event B) Waste drivers of communication are: deficient information quality, ineffective communication, unnecessary detail, and accuracy C) Distance affects the quality of information	The authors applied the systems theory to identify the continual stages of input, throughput (processing), and output, which demonstrate the concept of openness/closeness.
2012	Steinemann, A. Wampfler, S. Kennel, T. Kunz, A.	Definition and analysis of a lean communication theory	Lean Structure	A) Often, the choice of the communication tool to get in contact with the customer seems to be wrong B) Lean communication theory contains guidelines for the behavioral code for standard business communication C) Main problems are inadequate communication, the wrong technology choice, and bad timing	In this paper, the authors investigate the awareness of the correct use of communication tools and the optimization of communication behavior. To do so, the authors analyze the current behavior and offer an efficient lean communication theory.

Table 10.5: Key findings of the primary literature (Part IV).

Year	Authors	Title	LSM Field	Main Statements	Objective
2019	Redeker, G. A. Kessler, G. Z. Kipper, L. M.	Lean information for lean communication: Analysis of concepts, tools, references, and terms	Lean Structure	A) Lean communication and information processes aim to reduce waste and make general communication more efficient B) Within the literature, there is no precise method or process for general improvements C) Fixed communication rules and strategies help to make processes more efficient D) Waste drivers should be reduced within a learning communication process E) A method to implement lean information concepts is missing	This paper analyzes how lean information leads to lean communication by analyzing different articles quantitatively. Additionally, the researchers combine their findings with a case study. The authors identified a lack of a methodology for lean information concepts.
2020	De Cock, R. Bruneel, J. Bobelyn, A.	Making the lean startup method work: The role of prior market knowledge	Lean Structure	A) The knowledge about conditions under which the lean startup method can be successful is not fully explored B) If the lean startup method is only used for product recurrence, this can lead to considerable problems C) One of the major problems is that it is often not easy to make market information usable for the company	Many growth-oriented ventures use the lean startup method for their development, but only parts of the method are often applied. This might lead to problems due to the limited market knowledge.
2015	Karimi, S. Naghibi, H. S.	Social Media Marketing (SMM) Strategies for small and medium Enterprises (SMEs)	Lean Structure	A) It is essential to use the right channel to reach the target group B) Success of campaigns can easily be tracked C) Creating good content is time-consuming and should be planned properly	The author presents concepts of social media as a marketing instrument. They explain the main reasons for using social media as a company and investigate with empirical analysis marketing techniques of SMEs.

Table 10.6. Key Findings of the primary literature (Part V).

Year	Authors	Title	LSM Field	Main Statements	Objective
2019	Wardati, N. K. Er, M.	The impact of social media usage on the sales process in small and medium enterprises (SMEs): A systematic literature review	Lean Structure	A) Social media is a helpful communication tool for organizations to achieve their goals. B) Facebook is the type of social media that's primarily investigated in the literature C) Products or services can be marketed more easily through social media	In this study, the authors analyzed the influence of the use of social media on the sales process with a focus on SMEs.
2021	Lizarelli, F. L. Torres, A. F. Antony, J. Ribeiro, R. Salentijn, W. Fernandes, M. M. Campos, A. T.	Critical success factors and challenges for lean Startup: A systematic literature review	Persevere or Pivot	A) Customer feedback should be obtained as early as possible within a development process B) Lean processes can deliver products and services better, faster, and reduce costs C) Companies should constantly evaluate what part of the venture can implement lean. Otherwise, a lean implementation might also be negative	The authors are pointing out that implementing lean processes and information flows can also negatively influence performance. It is crucial to identify suitable areas where it makes sense to change processes and make them leaner.
2019	Balocco, R. Cavallo, A. Ghezzi, A. Berbegal-Mirabent, J.	Lean business models change process in digital entrepreneurship	Persevere or Pivot	A) Business model change frequently occurs, especially in digital industries B) A lean framework can help through validated learning so that companies can develop and restructure processes in a more efficient way C) The environment is constantly changing, and by implementing a continuous customers' feedback process, business models can change in a customer-oriented manner	The article focuses on changing business models and innovation processes. The authors are suggesting that lean perspectives can be implemented in several areas.

Table 10.7: Key findings of the primary literature (Part VI).

Year	Authors	Title	LSM Field	Main Statements	Objective
2018	Bortolini, R. F. Cortimiglia, M. Danilevicz, A. d. M. F. Ghezzi, A.	Lean Startup: A comprehensive historical review	Persevere or Pivot	A) An essential factor for success is based on the companies' ability to adapt their business model dynamically and effectively B) Startups should adopt straightforward methods and processes that enable iterative development C) Lean and agile are two philosophies within the lean methodology	The article aims to present the lean startup methodology summarized from the literature. In doing so, all relevant parts of the method are addressed, and the principle of an agile and lean approach is fundamentally presented.
2021	Jeemann, I. Beichter, T. Constantinescu, C. Herburger, K. Rüger, M.	Investigation of the "lean startup" approach in large manufacturing companies towards customer driven product innovation in SMEs	Validated Learning	A) Lean startup methods can be used to adapt to changing market and customer need B) The goal of implementing agile methods is to reduce risks in the long term by flexibly adapting to markets C) Employees need to be well trained to engage with the customers and comprehend their needs and wishes	Customer-driven innovation is often used within manufacturing companies. When the development costs for a product are high, the return of investment for integrating customers into the development process can be achieved very fast.

Table 10.8: Key findings of the primary literature (Part VII).

Year	Authors	Title	LSM Field	Main Statements	Objective
2015	Atanassova, I. Clark, L.	Social media practices in SME marketing activities: A theoretical framework and research agenda	Validated Learning	A) SMEs can use social media to gain market intelligence B) Dynamic capabilities theory can be used to explain how organizations acquire new knowledge C) Day-to-day interactions become a resource of knowledge gained from social media D) Social media practices should always match with the marketing strategy E) Social media can be used to find resources outside and inside company boundaries F) Key is to build a strong relationship with the core customers and understand what they want and need	The study combines different topics such as SME marketing, social media, and dynamic capabilities to help SMEs develop and refine marketing practices.
2009	Mangold, W. G. Faulds, D. J.	Social media: The new hybrid element of the promotion mix	Validated Learning	A) Social media to stimulate consumer conversations about a new product to implement insights B) Storytelling in social media leaves a more accessible memorable message for the customer C) Companies should use social media as it becomes more and more critical for consumer purchase intention	The article aims to show the relevance of social media integration into integrated marketing communications of a company to managers.

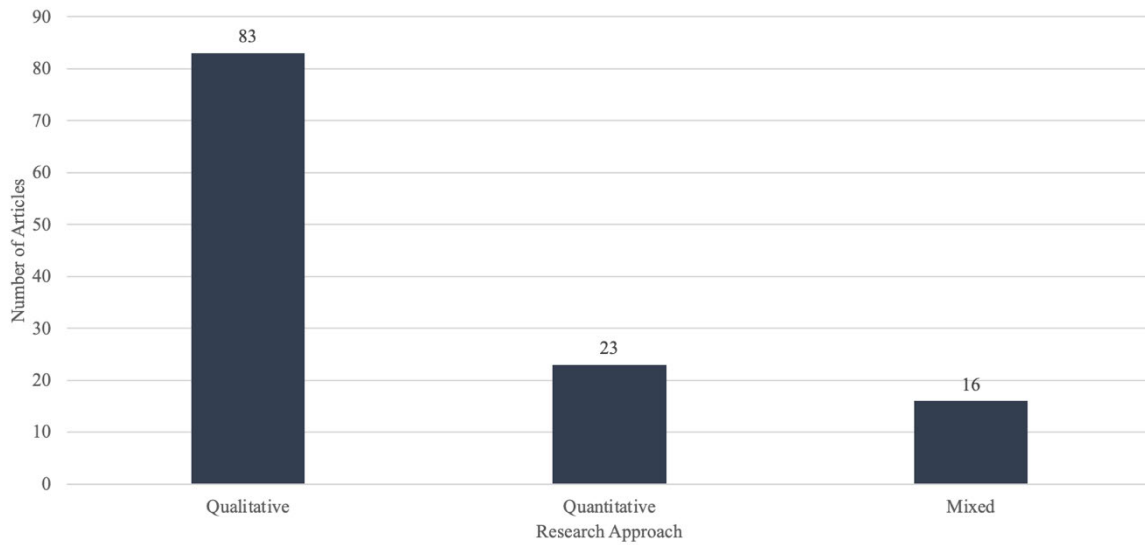


Figure 10.10: SLR – Distribution of qualitative, quantitative, or mixed-method articles.

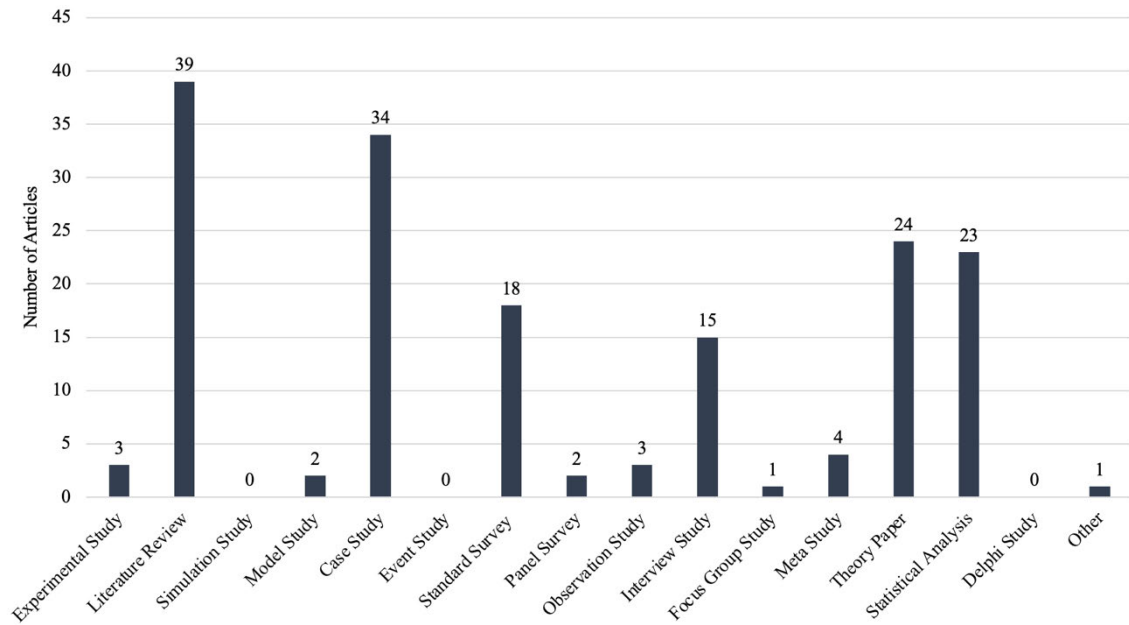


Figure 10.11: SLR – Used research methods (min. one max. two per article).

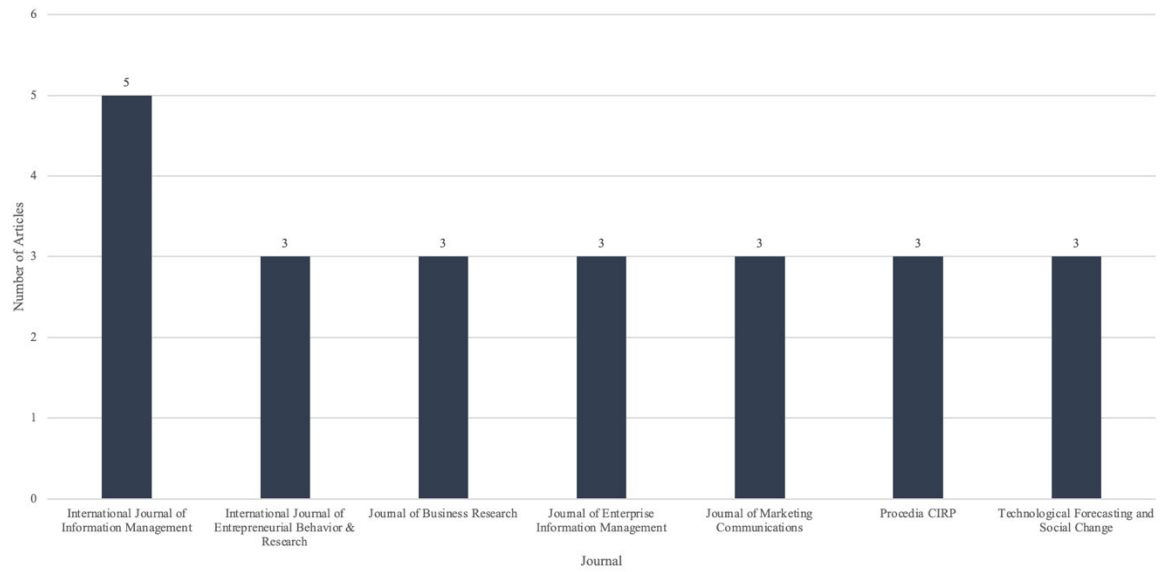


Figure 10.12: SLR – Most relevant journals for the topic.

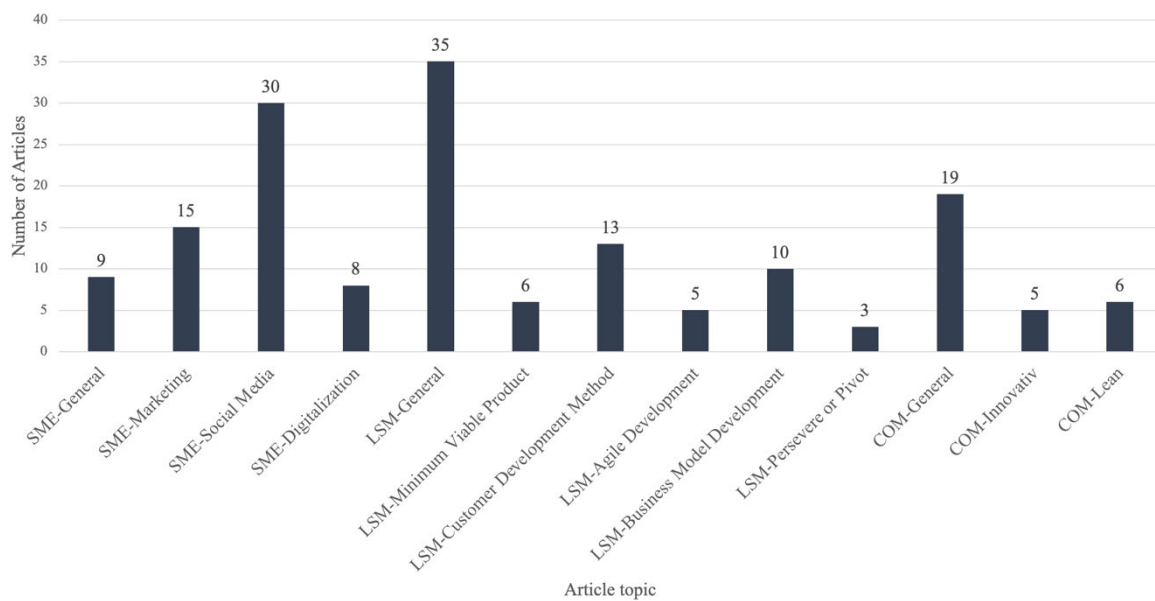


Figure 10.13: SLR – distribution of article topics (min. one max. two per article).

Gemeinsame Erklärung zur Ko-Autorenschaft

von Katrin Kizilkan und Maximilian Wagenknecht

Erklärung über die individuellen Anteile an der gemeinsamen Veröffentlichung:

Kizilkan, K. and Wagenknecht, M. (2023). **Lean Social Media Communication Strategies for SMEs**. De Gruyter Handbook of SME Entrepreneurship.

Die wissenschaftliche Leistung des Aufsatzes verteilt sich wie folgt auf die beiden Ko-Autoren:

Katrin Kizilkan:

- Theoretischer Bezugsrahmen Kommunikationstheorien
- Literaturarbeit Kommunikationstheorien
- Ergebnisaufbereitung Kommunikationsstrategien
- Darstellung der Ergebnisse
- Verschriftlichung der Inhalte

Maximilian Wagenknecht:

- Theoretischer Bezugsrahmen Lean Startup Methode
- Literaturarbeit Lean Startup Methode
- Validierung & Einbettung der Ergebnisse in den Kontext des Risikomanagements
- Diskussion & Ableitung von Implikationen
- Verschriftlichung der Inhalte

Gemeinsame, von beiden Autoren, erstellte Teile:

- Konzeption des Aufsatzes
- Einleitung
- Theoretischer Rahmen
- Forschungsdesign und -methodik
- Fazit

Vor dem Hintergrund der oben geschilderten Arbeitsanteile bewerten die beiden Autoren den individuellen wissenschaftlichen Anteil an dem gemeinsamen Aufsatz einvernehmlich mit 50% Katrin Kizilkan und 50% Maximilian Wagenknecht.

Lüneburg, 06. Mai 2024



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Maximilian Wagenknecht

V. Research Item 4 – The Path to Lean Startup Risk Management

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Abstract: This paper aims to demonstrate that many startups are unaware of the potential of strategic opportunity and risk management to gain a competitive advantage. It reveals and analyzes an opportunity and risk management gap between the pre-startup and early-startup phase, guiding toward managerial implications. The focus is on defining lean startup risk management as the core for managing and controlling risks, which can be further strengthened by embedding risk management principles into decision-making and governance structures.

The qualitative interview study, conducted with 24 German founders, examines their management of opportunities and risks. It shows which parts of the strategic identification, analysis, and assessment process are worth exploring further.

Founders strive to develop their startups with a focus on opportunities; however, they lack a strategic process to identify them. At the same time, founders tend to neglect the need to set up processes for avoiding or monitoring risks strategically. The absence of strategic opportunity and risk management in the early-startup phase is an interesting finding, as founders already include parts in their business plans or models. Results show they could build on it, especially in product and service development, customer relationships, and financing structures. These areas offer numerous ways to create a lean and strategic concept for opportunity and risk management. A multi-stage lean startup risk governance concept can help founders improve early risk management implementation. Strategic concepts would not only help founders build their businesses more securely but also help their investors place greater trust in the business's development.

An underestimation of opportunity and risk management's potential causes a misjudgment of the balance between the cost of bound resources and its benefits. The founders should understand that benefits primarily arise when startups implement the processes early and adapt them to their needs.

This paper is the first empirical analysis highlighting strategic lean startup risk management and its most promising development areas.

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THE PATH TO LEAN STARTUP RISK MANAGEMENT

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Abstract

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This paper is the first empirical analysis highlighting strategic lean startup risk management and its most promising development areas.

Key words

startup, founders, lean startup, governance, opportunity, risk management, interview study

One-sentence summary

In their early stages, startups can benefit from a tailored lean risk management approach based on the key components of their business plan or model, which has the potential to create a competitive advantage through its application.

Highlights

- A risk management development gap exists between the pre- and early- startup phases.
- Founders tend to neglect the need for strategic risk management.
- Lean startup risk management can improve the often negatively perceived cost-benefit ratio.
- Lean startup risk management can evolve into a dynamic capability itself.
- A multi-stage lean startup risk governance concept secures startups' key resources.

1. Introduction

Startups face the daily challenge of exploiting opportunities and minimizing risks to achieve long-term economic success. Many larger companies have implemented active opportunity and risk management (RM) (hereinafter collectively referred to as RM) to deal responsibly with their resources (Bromiley et al., 2015; Verbano & Venturini, 2011). Given the high level of uncertainty and the dynamic environment in which startups operate, RM might be an increasing success factor for them (Crovini, Ossola, et al., 2021; Todeschini et al., 2017). Studies show that effective RM can help smaller companies increase their probability of survival and growth, especially for innovative companies (Biellalov, 2022; Falkner & Hiebl, 2015). By strategically improving the balance between opportunities and risks, founders can sustainably achieve their business goals (Brustbauer, 2016; Crovini, Ossola, et al., 2021).

Research has not yet clarified how strategic RM can be implemented in startups or to what extent it should be applied. There is a need to develop practical, flexible, and scalable models that can support startups in capturing, evaluating, and managing uncertainty, regardless of their industry (Falkner & Hiebl, 2015; Pukala et al., 2018; Todeschini et al., 2017). Moreover, research indicates that in the long term, strategic RM facilitates ongoing assumption checks, rapid hypothesis testing, and timely strategy adjustments, as outlined in the literature on lean startup methods (S. Blank & Eckhardt, 2024; S. G. Blank, 2013; Bortolini et al., 2021; Felin et al., 2024; Harms et al., 2015; Leatherbee & Katila, 2020; Ries, 2017; Silva et al., 2020; Sreenivasan & Suresh, 2024). While industry- or company-specific approaches exist, comprehensive, cross-industry frameworks tailored to startups' unique needs and limited resources are still lacking (Todeschini et al., 2017; Venczel et al., 2024).

The core problem is that startups often approach RM reactively rather than strategically, potentially leading to financial losses, reputational damage, or other negative effects (Brustbauer, 2016; Crovini, Santoro, et al., 2021; Todeschini et al., 2017). Therefore, designing RM for startups remains challenging. This study addresses this problem by examining the transition from ad hoc to strategic RM combined with adapted governance mechanisms.

To develop practical guidelines, it is necessary to understand how founders think and process their RM. This unique perspective will be the baseline to gain first insights into how startups can implement RM. To explore these basics, the first research question (RQ) sets the course:

RQ1. What is the general perception of opportunities and risks among founders?

Research highlights the importance of building financial reserves, implementing RM protocols, and conducting market research for startups (Schulte, 2025). This study aims to understand the fundamental demand and the impact of RM by examining the founders' perspective. The results provide the basis for assessing the necessity and potential of pursuing RM as an internal controlling system:

RQ2. How do founders assess the potential and necessity of RM as an internal controlling system?

The research results from the founders' perspective serve as a basis for developing an initial path for an effective and lean RM for startups. The third RQ will conclude the first two RQs and help to structure a future research agenda:

RQ3. How do founders envision an effective and tailored RM system for the strategic development of startups?

This approach has not been pursued in the literature to date, even though many researchers point out the necessity of such systems (Brustbauer, 2016; Gao et al., 2013; Todeschini et al., 2017; Verbano & Venturini, 2013).

2. Theoretical Background

2.1 Startup Opportunities and Risks

Startups have numerous opportunities that characterize their attractiveness and growth potential in dynamic markets (van Gelderen et al., 2006). Often, the goal is to exploit these opportunities for sustainable growth that might lead to scale (Corrêa et al., 2022; Lee & Kim, 2024). Flat hierarchies and a small number of decision-makers enable quick decisions (Linton, 2019), which is a competitive advantage, especially in the face of dynamic market developments and in innovative business areas where quick decisions are required (Sedláček & Sterk, 2017; Todeschini et al., 2017; Zaby, 2017). At the same time, startups demonstrate high agility and adaptability, particularly when examined through the lens of lean startup methods (S. Blank & Eckhardt, 2024; Harms et al., 2015; Ries, 2017).

However, the often-limited resources and lack of market power also pose a threat. In this context, some risks may only have a minor impact, while others could severely affect the overall business model (Pfohl et al., 2011). The lack of well-founded historical and current data makes decision-making challenging and puts new business models to the test (Garzella et al., 2021; Hyytinen et al., 2015; Iyiola et al., 2023; Wennberg et al., 2016). It is therefore helpful for startups to focus on the underlying business plans or models, which form the basis for the initial consideration of opportunities and risks (Braun et al., 2022).

2.2 Traditional Approaches to RM

Consistent risk monitoring in companies considers the cause and effect of the significant individual risks in an overall context as a holistic RM (Gleißner, 2017, 246; Gleißner et al., 2022). The cause-related approach focuses on the information level of decision-makers within a company and the associated avoidance or reduction of the probability that risks occur. In contrast, the effect-related approach focuses on the impact of risks that materialize (Schöning et al., 2017, 210).

A risk is an objectively measurable threat of loss arising from entrepreneurial activity (Miller, 1992). The probability of occurrence and the effects of risks are not always quantifiable, but it is often possible to get approximate results through simulations and estimations. However, these processes are often laborious (Rezaie et al., 2007). Uncertainty describes the subjectively uncertain outcome of an event and refers to situations in which there is no determinable probability of occurrence. Such situations involve incomplete information about environmental or company-related conditions. By working with estimated, subjective probabilities of occurrence, it is possible to transform such a situation into an approximately measurable and thus quantifiable risk situation (Ylönen & Aven, 2023). However, this requires time and resources, which the founders must be willing to make (Todeschini et al., 2017).

Companies' objectives can contribute to different losses and require individual descriptions of impact-related risks. Andersen (2008) categorizes these into four risk categories: strategic, operational, economic, and hazard risks. Here, it is also important to consider positive deviations from targets that can arise from situations of uncertainty. This option of performing better than planned or more cost-effectively is referred to as an opportunity. In the context of RM, risks and opportunities are two sides of the same coin.

If risks materialize and risk-limiting measures are insufficient, a company's survival as a whole or in part may be at stake (Gleißner et al., 2022; Pukala et al., 2018). Comparing various descriptions of the RM process reveals inconsistencies in its outline. This study adopts the general RM structure commonly referenced in the literature (Gleißner, 2017, 81; Gao et al., 2013). It is, therefore, essential to identify risks early and frequently (Gao et al., 2013). Next, the analysis helps to understand whether to implement risk prevention or reduction measures (Crovini, Santoro, et al., 2021). In short, a more precise analysis helps to understand how the risk arose and how it could develop in the long and/or short term. Crovini et al. (2021) highlight the importance of formulating recommendations for risk assessment and prevention as part of

the process. Subsequent controlling and monitoring are also parts of the RM (Crovini, 2020), but will not be considered further for this study.

2.3 Theoretical Lens for the Empirical Findings

Startups should identify and protect their most valuable resources to ensure a competitive advantage (Liesch et al., 2011; Schulte & Wagenknecht, 2022). Therefore, the company should tailor resource use to maximize effectiveness. The resource-based view (RBV) helps to understand which resources (e.g., employees, technical expertise, patents, networks and financial resources) are central to success. RM can be part of this process and help to find the most valuable resources within the company (Welsh et al., 2010). The process starts by assessing risks linked to the business plan or model.

Edith Penrose developed the basic concept of RBV in 1959 (Kor & Mahoney, 2004). Her ideas are still an essential theoretical basis since they are crucial for startups to manage and build their valuable resources. The RBV views valuable, rare, inimitable, and non-substitutable (VRIN) resources as dynamic capabilities adapting to changing requirements (Teece et al., 1997). Identifying these VRIN resources helps companies overcome external challenges, and the deeper awareness enables startups to react to uncertainties promptly, minimize risks, and increase competitiveness (Civelek et al., 2024). As Civelek et al. (2024) show, external risks often put small companies under much pressure if not recognized in time. The strong adverse effects are not surprising, since materialized risks often result in considerable additional financing requirements.

Within the RBV perspective, RM can be a strategically embedded capability evolving into a dynamic capability itself. RM goes beyond being a purely operational process, as it is linked to strategic resource allocation and thus to the level of governance mechanisms.

3. Research Design and Methodology

Research on the process and perception of systematic RM within startups is still in its infancy (Brustbauer, 2016). To gain initial insights from the perspective of startup founders, I based the study on a qualitative cross-sectional research design with an abductive analysis approach. For this purpose, I combined inductive elements with deductive techniques.

I conducted semi-structured interviews with founders because they enable profound insights into their subjective perceptions, experiences, implicit knowledge, and decision-making logic. My goal was to reconstruct general risk assessment processes and find the underlying patterns. The insights make a decisive contribution to closing the identified research gap, which is the lack of knowledge about the strategic dimension of RM in startups.

Dresing and Pehl (2018) highlight that this interview form is frequently used in qualitative research and is well-suited to exploring new phenomena and developing initial models. Timmermans and Tavory (2012) describe how such an inductive analysis based on theoretical constructs makes new interpretations of phenomena possible. For a strong interview foundation, I conducted a systematic literature review that helped develop the interview guidelines. This review includes 31 primary and 42 secondary articles from research between 2004 and 2025. Table A1 shows the primary literature.

I carried out two pre-tests with a founder and a qualitative researcher to refine the interview guideline, generate new ideas, and ensure clarity. Figure 1 shows an overview of the final guideline.

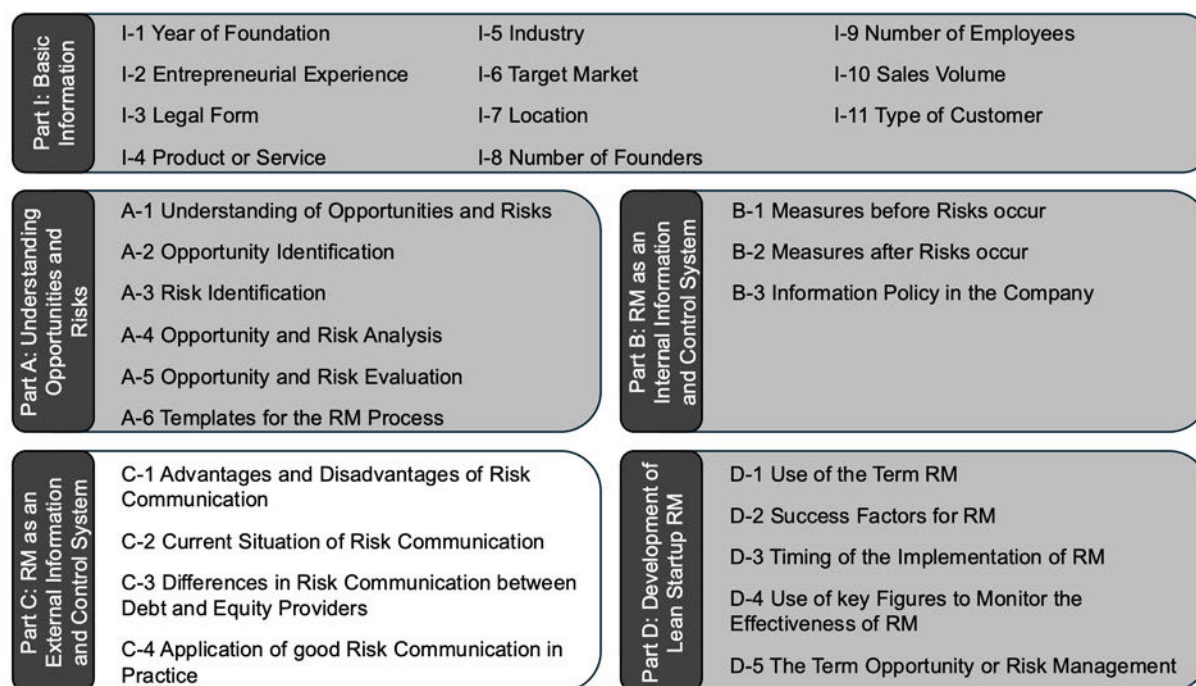


Figure 1. Overview of the interview guideline (Part C is not part of this study).

In the first step, I sent 20 standardized emails to founders, which resulted in no responses. Next, I approached public startup consultants and contacts in Hamburg, Lower Saxony, Berlin, and Munich, recruiting 14 interview partners. Third, I contacted founders at three public startup events in Hamburg and Lower Saxony, resulting in eight interviews. Finally, I asked my interviewees if they could contact other founders, leading to three additional recruits. In total, 25 interviews took place between September 2023 and January 2024. I excluded one interview because the company's legal form was unsuitable. Table 1 provides an overview.

Table 1. Overview interview partner.

No.	Age (years)	Gender	Founding (year-month)	Experience (years)	Legal form	Industry
1	26-30	Male	22-11	1	GmbH	Energy
2	26-30	Male	21-06	10	UG	Industry
3	31-35	Male	20-01	8	GmbH	Finance
4	21-25	Female	21-11	5	GmbH	Real Estate
5	26-30	Male	20-10	5	UG	Communication, Education
6	26-30	Male	22-10	1	GmbH	Communication, IT
7	31-35	Male	20-01	10	GmbH	Consumer Industry
8	31-35	Male	22-06	3	GmbH	Health Industry
9	31-35	Female	22-11	2	UG	Agriculture, Digitalization and IT
10	31-35	Male	19-04	6	GmbH	Food Industry
11	36-40	Male	22-07	9	GmbH	Real Estate
12	21-25	Male	23-05	5	UG	Health Care, IT and Software
13	21-25	Male	23-03	1	GmbH	Health Care, IT and Software
14	26-30	Male	22-08	1	GmbH	Multiple
15	26-30	Male	23-03	1	GmbH	Industry, Biotech
16	26-30	Male	22-08	4	GmbH&Co.KG	IT

17	26-30	Male	20-02	4	GmbH	IT, Software
18	36-40	Male	17-01	7	GmbH	Communication, IT
19	31-35	Male	23-06	0	GmbH	IT and Logistics Software
20	26-30	Male	20-08	6	GmbH	Communication, IT and Marketing
21	26-30	Male	21-01	3	GmbH	Finance, IT
22	26-30	Male	23-01	4	GmbH	Fashion, IT and Software
23	26-30	Male	21-10	3	GmbH	Energy
24	36-40	Female	23-11	20	GmbH	IT, Software

The recordings add up to approximately 19 h of data, which I transcribed and analyzed. Each interview lasted 45 min on average. Apart from one face-to-face interview, I held all others virtually. For the subsequent data analysis, I followed the approach outlined by Gioia et al. (2012), which provides a systematic method to move from raw data to abstract categories for theory development. To enable sustained engagement with the data, I have pre-grouped it for myself. The pre-grouping is based on startups' industry sectors and organizes the data into meaningful categories, resulting in a clearer, more structured overview. This led to a deeper understanding of the data and supported later evaluation (Corbin & Strauss, 1990; Owen, 2014).

I conducted my analysis in an exploratory manner using an open-coding approach (Corbin & Strauss, 1990). This step yielded more than 300 individual code segments, which were reduced for clarity. I iteratively grouped first-order codes into new categories, reorganized them, and analyzed patterns of similarity and difference. Subsequently, I was able to derive 43 first-order codes. Through second-order analysis, I continuously abstracted the data into overarching "aggregate topics," aligning it more closely with the RQs (Gioia et al., 2012).

In parallel to the second-order analysis, I used abduction techniques with the 31 primary articles. This approach increased the level of abstraction in the category system and facilitated the creation of 10 second-order themes. Finally, I could aggregate three dimensions, which form the main framework. Figure 2 visualizes the data structure.

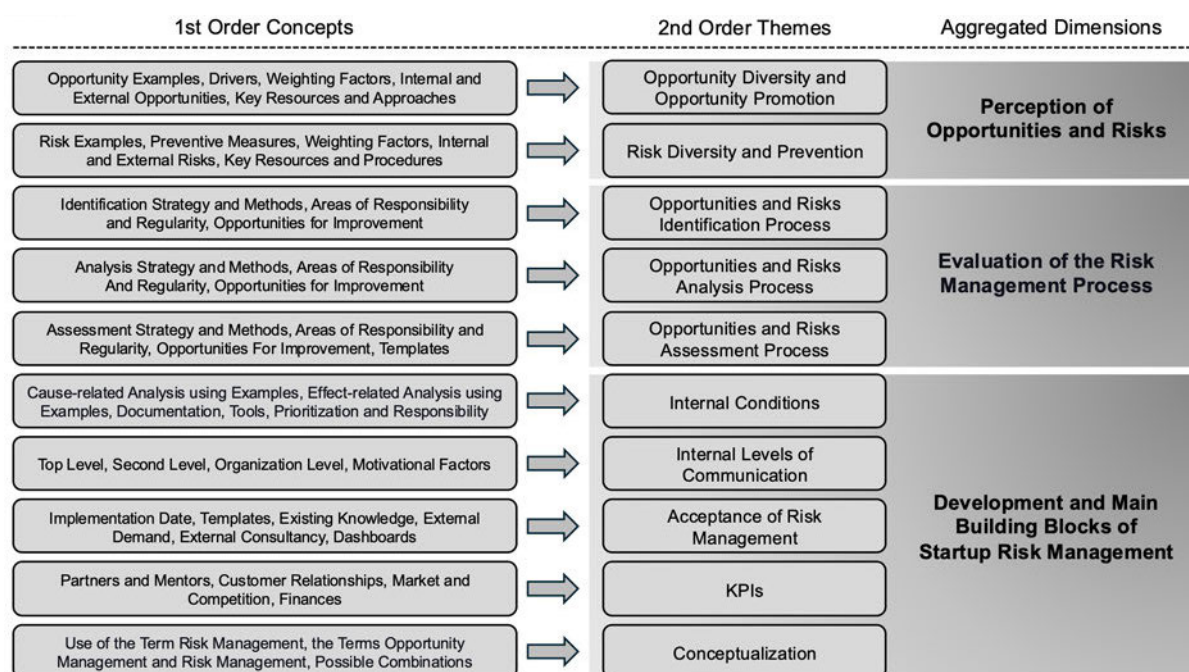


Figure 2. Data structure.

Analyzing the data, I identified two main biases. First, I observed confirmation bias, as I had to prompt founders with examples, which risked overemphasizing certain aspects. Second, I recognized a selection bias, since the study excluded startups that failed early, even though their experiences could have highlighted particularly relevant insights.

4. Results

Founders often see no need to introduce active RM, especially in the early-startup phase. The main reasons are a lack of personal and financial resources to afford the investment and time associated with the implementation. Although some interviewees plan to introduce RM in a later phase, they often lack a clear concept of an efficient RM and how to implement it. The following three subchapters elaborate on these key points. They are organized around the RQs and present the founders' key perspectives.

4.1 Perception of Opportunities and Risks

The results suggest that the interviewees' understanding of opportunities, risks, and the need for actively tracking them varies. From a quantitative point of view, they spontaneously listed significantly more risks than opportunities. Thus, the analysis summarizes 27 overarching risks in 88 coded segments. The most frequently mentioned risk is slow growth, with 11 mentions, followed by illiquidity, with 6.

In contrast, 64 coded segments summarize only 10 overarching opportunities. With 17 mentions, the focus is on utilizing innovations and future product or service development trends. Many founders hope this approach will enable them to survive in the market longer. INT#07 highlighted the necessity of integrating innovation with rigorous market monitoring to ensure robust development processes. One interviewee thinks that if a technology effectively solves a clearly defined problem, a marketable product or service will almost automatically emerge (INT#12). Accordingly, opportunities tend to arise by themselves rather than being planned.

4.2 Evaluation of the Internal RM Process

Most founders (e.g., INT#1 and INT#2) stated that their companies lack fixed or regular meetings to identify strategic opportunities. Instead, INT#01 has set up a virtual board for collecting ideas and opportunities. Additionally, the interviewee mentioned that the identification process must be open-minded and accessible to everyone within the company.

Regarding the responsibility to identify opportunities, INT#14 recommended that a team carry out the identification. Conversely, INT#11 and INT#24 stated that only one person should manage this process. Startups that have been in the market for longer confirm this mixed picture, though the trend shifts toward holistic responsibility over time. INT#02 attributes this to the fact that all the different departments have valuable insights for the process. INT#20 has a more narrowed-down perspective, in which the people closest to the customer should be responsible.

Regarding risks, two interviewees report that they do not have any systems to systematically identify and track potential risks (INT#16 and INT#03). Two other interviewees described how they regularly deal with them in the context of accounting or liquidity planning (INT#02 and INT#13). It also became clear that there are usually no recurring meetings for this purpose. INT#18 explained the lack of regular meetings with a quickly moving focus. They include the topics, if needed, in the weekly general discussions (INT#03, INT#05, INT#06, INT#11, and INT#21). However, INT#17 observed that many organizations may conduct similar meetings but label them differently. Founders with over 6 years of experience and at least 4 years in the market (INT#10 and INT#20) emphasized RM, making it a quarterly priority and an explicit agenda item.

The interviewees highlighted the importance of simple, time-efficient risk identification, primarily using methods such as brainstorming, deriving risks from key performance indicators, and employing Scrum as a framework for agile product development (INT#11). Responsibilities for risk identification are inconsistently assigned, often to a single person, typically from management.

The interviewees provided highly varied responses regarding analyzing identified opportunities and risks. One interviewee who has been working on the introduction of RM for several years, for example, considers risk measurement to be a matter of course (INT#23); however, even experienced founders confirm that they have yet to implement RM and related processes (INT#02 and INT#10).

INT#15, INT#20, and INT#23 mentioned that risk analysis was carried out more frequently in the pre-startup phase but decreased as the business progressed. The interviewees explain that this decrease might be due to a lack of time and no direct value added. Two interviewees intend, however, to establish the formal process of analyzing the risks associated with the business model even more firmly in the future (INT#07 and INT#11).

Eight interviewees stated that they had yet to develop and implement RM and had no plans to do so soon. Many of the interviewees see room for improvement in their processes. Two mentioned that estimating the time required in advance is difficult, particularly when analyzing opportunities and risks (INT#06 and INT#13).

A total of 11 out of 24 interviewees stated that they do not use explicit strategies for RM assessment and have not yet created any lists or similar assessment criteria. A total of 13 out

of 24 are dealing with RM assessment; some have already done analyses using tools with corresponding weightings. Figure 3 shows an overview of the main findings.

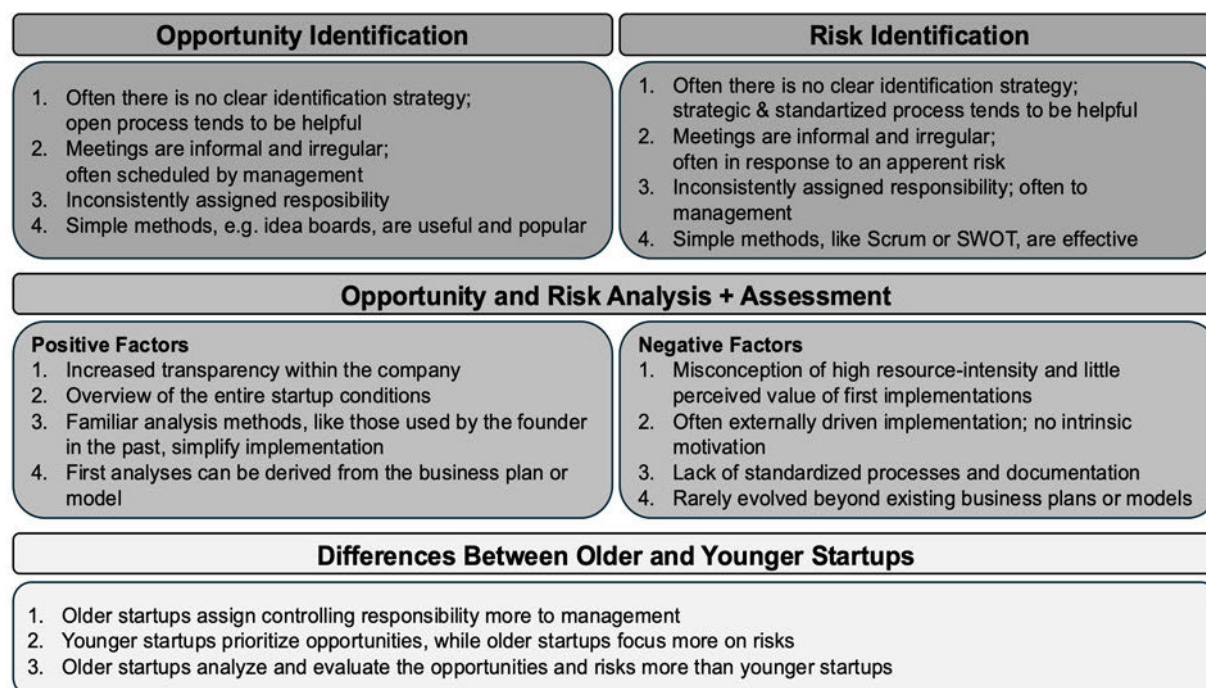


Figure 3. Risk management process within startups.

4.3 Development and Main Building Blocks of Startup RM

A total of 11 out of 24 interviewees stated that they use RM as a term within the company. Three out of 24 stated that they only use the term for external purposes, for example, when communicating with investors. A total of 10 out of 24 said they do not use it at all.

Founder statements show that RM is key in the startup phase and business plan, even if not explicitly named. INT#17 highlighted its inclusion in a pitch deck with an opportunity-risk analysis. Familiarity with RM through professional experience might increase acceptance; for example, INT#12 practices RM quarterly with the aim of standardized reporting. INT#22 referenced the SWOT analysis and other easy-to-use frameworks that many individuals have utilized but struggle to associate with RM directly. Some respondents avoid the term RM but apply its principles by consciously identifying risks and developing ways to manage them, even without a specific framework (INT#19). No consistent result emerged regarding the timing of RM implementation.

Most interviewees emphasize that clear documentation of features and risks is vital for strategic development, especially in product and service development. The aim is to balance rapid growth with repeated product testing or an extended internal development phase (INT#03, INT#17, and INT#22). The sample mainly suggested that the process should be open-minded and involve several departments of the company (e.g., INT#01 and INT#24). The interviewees mentioned numerous valuable tools, including organizational software (e.g., Confluence), Kanban or idea boards (e.g., Trello), and general documentation tools (e.g., Google Docs, Lexoffice, Notion and OneNote).

Many interviewees emphasized that gathering customer feedback in advance is essential, particularly to develop a strong customer relationship. INT#01 described that although involving customers carries risks, not doing it can be fatal. Product or service development is central to keeping customers loyal (INT#01, INT#03, INT#04, INT#05, and INT#20). INT#01 and INT#05 gave specific examples and described the importance of closely monitoring and controlling customer dialog. INT#10, INT#14, and INT#20 stated that the learning effect was

particularly significant here. They noted that customer relationships help to use feedback for early opportunity identification.

Most of the interviewees mentioned that RM is closely related to the finance structure and liquidity planning. For example, they connect financing rounds to risk prevention (INT#03, INT#09, and INT#23). Calculating variable costs also challenges startups due to a lack of experience (INT#06). Founders need to closely monitor the cost structure and avoid unnecessary costs or other financial risks (INT#08 and INT#23).

The main KPIs mentioned by the interviewees were diverse and primarily at the financial controlling level (e.g., liquidity, profit and burn rate) or the customer level (customer lifetime value and number of customers). It is striking that the founders mentioned revenue as their key control variable for whether the company is on the right track. They acknowledged, however, that conducting RM is challenging and resource-intensive. INT#23 uses sales figures as a key metric to determine the company's ongoing operational timeline. INT#18 emphasizes that from the investors' point of view, this parameter is essential for determining whether further development is worthwhile for them. Figure 4 illustrates an overview of the three building blocks.

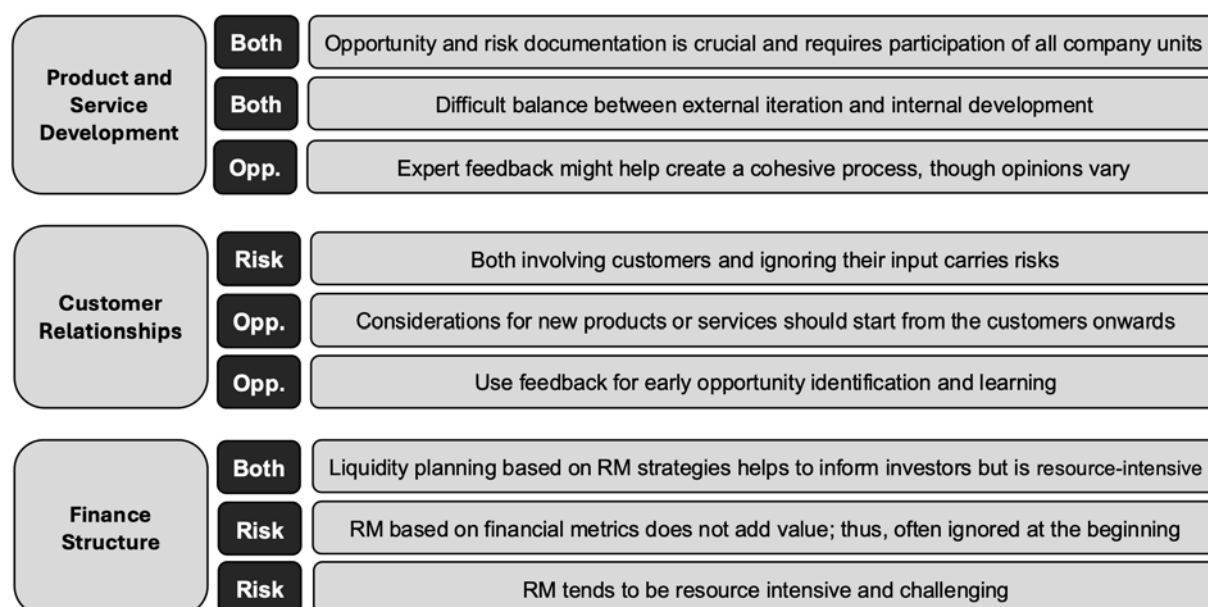


Figure 4. Main building blocks of startup risk management.

5. Discussion and Implications

The results for answering RQ1 show that founders often do not have a strategic approach to identifying, analyzing, and assessing opportunities and risks. The interviewees emphasized the importance of situational measures to maintain agility, particularly when exploiting opportunities. Although risks received more attention (quantitatively), startups tend to manage them primarily reactively. A unified strategic process is still needed as startups do not systematically integrate RM into their business development efforts. The underutilization of potential stands out, especially regarding studies highlighting simple RM systems' benefits (E. S. Silva et al., 2013; Todeschini et al., 2017; Verbano & Venturini, 2013).

In line with the literature, which suggests that SMEs and startups invest too few resources in strategic RM (Crovini, Santoro, et al., 2021; Gao et al., 2013), this study likewise found that founders seem to pay very little attention to RM. The question, however, is why, especially in the early-startup phase, founders believe that the benefits of implementing strategic RM from the outset do not cover the expected costs.

As the business progresses, RM becomes more prominent on the agenda (Falkner & Hiebl, 2015; Todeschini et al., 2017). However, the results point out that a gap exists between the pre-startup phase and the early stages of the startup. While RM is prominent during the pre-startup phase of planning and writing the business plan or model, it decreases in the early stages of the startup. The interviews provide plausible reasons for this gap, such as a lack of knowledge of RM's practical application and no expected direct outcome of it. Even toward the end of the early-startup phase, RM remains, as shown by the results, underutilized. According to interviewees, delaying the integration of RM up to this point could significantly increase the resources required for implementation, and the motivation often decreases over time. Differences from the literature may stem from the fact that previous studies often focus on established SMEs. This study focuses more on younger startups. The contrast shows that RM is not a linear process. Instead, it tends to gain attention when new risks emerge. Consequently, RM follows a fluctuating trajectory that varies from phase to phase. These explanations provide initial insights into answering RQ2. However, this study's results do not determine whether RM gains prominence during the growth phase.

Founders show a vague understanding of what a tailored RM for strategic development entails (RQ3). A clear understanding is crucial, as RM should serve a purpose beyond being an end in itself. According to the literature, it must remain comprehensive, covering everything from identification to evaluation (Crovini, Ossola, et al., 2021; Todeschini et al., 2017). This message might be appropriate for established companies, but it does not align with specific startup needs. Startups should instead implement a simplified RM from the outset to align it with their capabilities. A specific analysis of potential risks, deviations from the plan, and their economic impact on the startup's business model can provide important guidance. Coupled with the identification of necessary countermeasures, this analysis enables founders to make more informed and resilient decisions. The goal should be a lean startup RM [LSRM], which considers the capabilities of startups and builds on existing tools, such as business and liquidity planning. This planning, integrated into familiar processes, would reduce the effort bemoaned by founders. External knowledge or documentation could help to implement the first steps of RM (Hock-Doepgen et al., 2021).

Using the developed business plan or model (Felin et al., 2020; Teece, 2010) is the first way to implement RM strategies within a company. RM begins when companies identify existing and potential opportunities and risks, which is already part of the founding process (van Gelderen et al., 2006). As described in the results section for RQ3, RM should focus on product and service development, customer relationships, and finance structure. All of them form part of the business plan or model. Founders should conduct extensive research on the first two parts, mainly through customer involvement (e.g., S. G. Blank & Dorf, 2015; Schulte & Wagenknecht, 2023; Silva et al., 2020; York & Danes, 2014). Research on lean communication strategies reveals that risk-adjusted communication strengthens customer relationships (Kizilkan & Wagenknecht, 2023). However, this applies not only to customer relationships, but also to internal relationships and those with investors, which founders are often unaware of. Derived from the results, the finance structure, with its main KPIs, is the underlying tool for measuring efficiency and general usage of RM. The founders' statements that there are no RM processes, especially in young startups, are interesting because results show that regular identification of opportunities and risks enables timely reactions to deviations. Answering RQ2, RM can be a good fit for agile strategies, which is contrary to the often perceived paralyzing nature of RM by companies (O'Donnell, 2005; Verbano & Venturini, 2011). Linking RM with the fundamentals of the lean startup method could lead to greater acceptance among founders. That is why it is important to work on an LSRM strategy.

The results show that product and service development (Teberga et al., 2018) should be opportunity-driven, in contrast to the finance structure, which should focus more on risks. It seems that customer relationships can be equally opportunity- and risk-driven. In general, startups should assess available resources and allocate them effectively to support strategic processes. These strategic processes not only consume resources but can also conserve them, as routines enable effective time use (Gao et al., 2013). Regarding the RBV and LSRM

of startups, their benefits increase if startups regularly use identification and analysis methods. Involving customers is crucial for building loyalty (Wernerfelt, 1984) and identifying opportunities. This approach helps evaluate how these opportunities impact potential financial risks while generating and safeguarding essential resources (Kizilkan & Wagenknecht, 2023). Figure 5 shows the identified key features and promising development areas for LSRM in connection with the building blocks of the business plan or model.

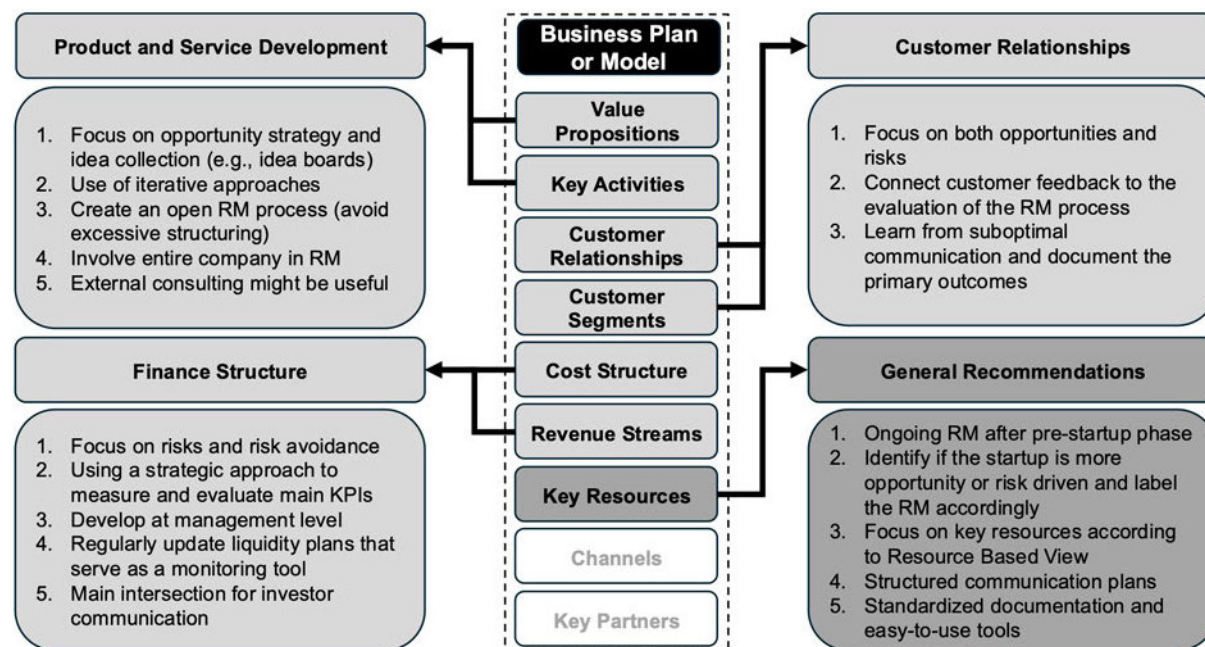


Figure 5. Development areas of lean startup risk management.

These initial guidelines focus on customer-driven product and service development for opportunities and financial risk planning. RM guidelines for startups that define the basics and grow with the startup are needed, considering their changing requirements and limited resources. This is in line with literature stating that existing guidelines have room for improvement (Schulte, 2025).

Risks, especially those that threaten a company's existence, should be identified from the outset, monitored, and, if possible, avoided or minimized. Management should maintain an overview and provide guidance (Kim & Vonortas, 2014; Wiedemann et al., 2024). The inclusion of governance mechanisms (Lundqvist, 2015) is crucial, as they shape the embedding of RM in organizational structures, assign responsibilities, and influence both strategic decision-making and stakeholder trust (Beasley et al., 2023; Stein & Wiedemann, 2016). By integrating RM into overall management, competitive advantages emerge at a strategic level. Moreover, the connection between governance mechanisms and RM allows LSRM to be framed both as a resource-efficient capability and as a signal to stakeholders that there is a strategy for resilience. The primary objective is to secure dynamic capabilities such as innovation, fast development, and communication, as these capabilities are essential within the RBV for adapting to uncertainties and maintaining competitive advantages.

Stein and Wiedemann (2016) show that it is possible to consider RM and governance mechanisms simultaneously in regard to strategic decision-making, even though they are often considered separately. This is due to the strategic necessity of implementing RM across both functional areas and operational processes (Stein & Wiedemann, 2016). In addition, Lundqvist (2015) shows that, especially in smaller companies, it is both advisable and indispensable to integrate RM with governance mechanisms and across different functional levels. Based on this assumption, Figure 6 illustrates how startups can manage constraining market mechanisms (center) by applying multi-level lean risk governance (right). These strategic approaches can leverage the derived LSRM factors (left) to unfold more effectively.

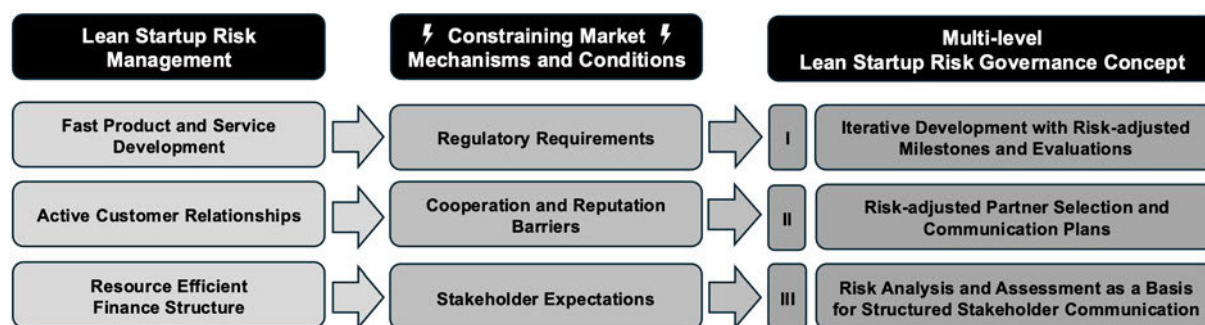


Figure 6. Development of a multi-level lean startup risk governance concept.

While external regulatory requirements may conflict with the need for fast product and service development, the first line (I) in Figure 6 shows that risk-adjusted milestones and evaluation mechanisms at the strategic level can bridge this gap. The interviewees mention that RM may be a hindrance to fast development. LSRM strategies must therefore be clearly formulated and adapted to iterative development to be accepted. Building on this, it is important to communicate clearly (II) from the product or service to the customer base (Kizilkan & Wagenknecht, 2023). Risk-adjusted partner selection and clear communication plans minimize external threats arising from uncontrolled communication. This approach establishes a comprehensive, lean startup risk governance structure that companies can use for stakeholder communication (III). Overall, it is important to control resources clearly in advance, as resource scarcity and the often risk-taking attitude of young companies limit the design of such governance structures (Beasley et al., 2023).

The results raise the question of whether national or EU-wide compliance requirements and minimum standards for RM are necessary. Frameworks used by larger companies, such as the COSO Enterprise RM Framework or ISO 31000, could serve as a basis for developing standardized guidelines tailored to startups to help reduce common pitfalls. The complete application of standards to startups would lead to over-regulation, and therefore, new standards are necessary that take LSRM into account.

The new multi-level concept illustrates that the close link between LSRM and governance mechanisms can help implement RM holistically, providing clear practical guidelines in connection with RQ3.

6. Limitations and Research Opportunities

First, quantitatively validating the models developed in this paper is advisable. The restriction to a multi-dimensional sample of diverse companies has led to a general result disregarding differences between industries. Furthermore, the small sample size does not allow for a representative analysis of startups' implementation of RM. Nonetheless, it gains an impression of how founders approach RM.

Future studies need to investigate LSRM-specific strategies beyond the identified development areas. Moreover, the data collection also explores startups' current risk communication practices with investors. It shows that founders explain opportunities to their investors rather than associated risks. Founders rate the disadvantages of active risk communication higher than its advantages. Since securing financial structure is particularly important for startups, investors could significantly encourage founders to implement appropriate RM.

7. Conclusion

Many startups are not actively conducting RM strategies. While young startups often face pressure to make quick decisions and conserve resources, research shows that RM can be a beneficial and structured method for identifying, analyzing, and assessing opportunities and risks.

Startups should build on the strategies outlined in their business plans or models during the early operational phase. This way, the discovered RM gap between the pre-startup and early-startup phase should not arise in the first place. The study shows that founders are often unaware of their chance to use the underlying elements of their business plans or models as the basis for introducing RM. These are product and service development, customer relationships, and the financial structure.

At the same time, identifying and assessing risks for future developments is especially challenging in the early-startup phase. The benefits are particularly evident in older startups, where effective RM is usually part of the management. However, avoiding or reducing risks should be just as important, especially with limited resources in the early phase. Efficient risk reduction is predicated on an awareness of potential threats to a startup's existence. Only then can countermeasures be adopted in time.

Nevertheless, the study raises doubts about whether the resources required for a traditional RM are proportional to its benefits. If the investment of time, human, or financial resources is too high, implementation will fail. A customized LSRM comes with regular RM enhancements and implementation in the startup strategy, focusing on resource planning. To be an LSRM, it must match the startups' capabilities and grow with the company. LSRM and related processes should be flexible so that startups can implement them in connection with their business plans or models. Also, LSRM enables the balancing of opportunities and risks in a targeted way. The balance can lead to more stable growth and resilience in the long term. These characteristics can promote a positive shift in the RM cost-benefit ratio perceived by founders.

This study further suggests connecting LSRM with governance mechanisms. The goal is to strategically secure the startups' key resources for long-term success, without developing a complex governance structure. Implementing a LSRM, governance mechanisms serve as bridging elements, linking the three development areas and facilitating their coherent integration. The clear anchoring highlights the benefits of active RM and, through early implementation, avoids the difficulties of implementing risk control mechanisms at a later stage. Ultimately, this should strengthen trust with the stakeholders and improve the ability to gain a competitive advantage.

References

- Andersen, T. J. (2008). The Performance Relationship of Effective Risk Management: Exploring the Firm-Specific Investment Rationale. *Long Range Planning*, 41(2), 155–176. <https://doi.org/10.1016/j.lrp.2008.01.002>
- Beasley, M. S., Branson, B. C., Braumann, E. C., & Pagach, D. P. (2023). Understanding the Ecosystem of Enterprise Risk Governance. *The Accounting Review*, 98(5), 99–128. <https://doi.org/10.2308/TAR-2020-0488>
- Biellalov, T. (2022). Risk Management of Startups of Innovative Products. *Journal of Risk and Financial Management*, 15(5), 202. <https://doi.org/10.3390/jrfm15050202>
- Blank, S., & Eckhardt, J. T. (2024). The Lean Startup as an Actionable Theory of Entrepreneurship. *Journal of Management*, 50(8), 3012–3034. <https://doi.org/10.1177/01492063231168095>
- Blank, S. G. (2013). Why the Lean Start-Up Changes Everything. *Harvard Business Review*.
- Blank, S. G., & Dorf, B. (2015). The Path to the Epiphany: The Customer Development Model. *Revista Cuatrimestral de Las Facultades de Derecho y Ciencias Económicas y Empresariales*, 94, 119–142.
- Bortolini, R. F., Nogueira Cortimiglia, M., Danilevicz, A. de M. F., & Ghezzi, A. (2021). Lean Startup: A Comprehensive Historical Review. *Management Decision*, 59(8), 1765–1783. <https://doi.org/10.1108/MD-07-2017-0663>
- Braun, M., Cannatelli, B., & Molteni, M. (2022). Risk-Managing the Business Model: Locating Tripwires at the Start. *Journal of Business Strategy*, 43(2), 115–121. <https://doi.org/10.1108/JBS-08-2020-0172>

- Bromiley, P., McShane, M., Nair, A., & Rustambekov, E. (2015). Enterprise Risk Management: Review, Critique, and Research Directions. *Long Range Planning*, 48(4), 265–276. <https://doi.org/10.1016/j.lrp.2014.07.005>
- Brustbauer, J. (2016). Enterprise Risk Management in SMEs: Towards a Structural Model. *International Small Business Journal*, 34(1), 70–85. <https://doi.org/10.1177/0266242614542853>
- Civelek, M., Erben, M., Kuděj, M., Vincúrová, Z., & Wan Hussain, W. M. H. (2024). Exploring the Influence of Risk Management Capabilities on SMEs' Export Intentions: A Cross-Country Analysis. *International Entrepreneurship and Management Journal*, 20(3), 2369–2396. <https://doi.org/10.1007/s11365-024-00978-2>
- Corbin, J., & Strauss, A. (1990). Grounded Theory Research: Procedures, Canons and Evaluative Criteria. *Zeitschrift Für Soziologie*, 19(6), 418–427.
- Corrêa, V. S., Queiroz, M. M., Cruz, M. A., & Shigaki, H. B. (2022). Entrepreneurial Orientation far Beyond Opportunity: The Influence of the Necessity for Innovativeness, Proactiveness and Risk-taking. *International Journal of Entrepreneurial Behavior & Research*, 28(4), 952–979. <https://doi.org/10.1108/IJEBr-06-2021-0518>
- Crovini, C. (2020). *Risk Management in Small and Medium Enterprises* (1st ed.). ROUTLEDGE.
- Crovini, C., Ossola, G., & Britzelmaier, B. (2021). How to Reconsider Risk Management in SMEs? An Advanced, Reasoned and Organised Literature Review. *European Management Journal*, 39(1), 118–134. <https://doi.org/10.1016/j.emj.2020.11.002>
- Crovini, C., Santoro, G., & Ossola, G. (2021). Rethinking Risk Management in Entrepreneurial SMEs: Towards the Integration with the Decision-making Process. *Management Decision*, 59(5), 1085–1113. <https://doi.org/10.1108/MD-10-2019-1402>

- Dresing, T., & Pehl, T. (2018). *Praxisbuch Interview, Transkription & Analyse: Anleitungen und Regelsysteme für qualitativ Forschende*. 8th ed. Dr. Dresing & Pehl GmbH.
- Falkner, E. M., & Hiebl, M. R. W. (2015). Risk Management in SMEs: A Systematic Review of Available Evidence. *Journal of Risk Finance*, 16(2), 122–144. <https://doi.org/10.1108/JRF-06-2014-0079>
- Felin, T., Gambardella, A., Novelli, E., & Zenger, T. (2024). A Scientific Method for Startups. *Journal of Management*, 50(8), 3080–3104. <https://doi.org/10.1177/01492063231226136>
- Felin, T., Gambardella, A., Stern, S., & Zenger, T. (2020). Lean Startup and the Business Model: Experimentation Revisited. *Long Range Planning*, 53(4), 101889. <https://doi.org/10.1016/j.lrp.2019.06.002>
- Gao, S. S., Sung, M. C., & Zhang, J. (2013). Risk Management Capability Building in SMEs: A Social Capital Perspective. *International Small Business Journal: Researching Entrepreneurship*, 31(6), 677–700. <https://doi.org/10.1177/0266242611431094>
- Garzella, S., Fiorentino, R., Caputo, A., & Lardo, A. (2021). Business Model Innovation in SMEs: The Role of Boundaries in the Digital Era. *Technology Analysis & Strategic Management*, 33(1), 31–43. <https://doi.org/10.1080/09537325.2020.1787374>
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. *Organizational Research Methods*, 16(1), 15–31. <https://doi.org/10.1177/1094428112452151>
- Gleißner, W. (2017). *Grundlagen des Risikomanagements Mit fundierten Informationen zu besseren Entscheidungen* (3rd ed.). Vahlen.
- Gleißner, W., Stein, V., & Wiedemann, A. (2022). Krisen- und Risikomanagement im Mittelstand – von der gesetzlichen Pflicht zur betriebswirtschaftlichen Kür. *ZfKE –*

- Zeitschrift für KMU und Entrepreneurship*, 70(3–4), 197–211.
<https://doi.org/10.3790/zfke.70.3-4.197>
- Harms, R., Marinakis, Y., & Walsh, S. T. (2015). Lean Startup for Materials Ventures and other Science-based Ventures: Under what Conditions is it Useful? *Translational Materials Research*, 2(3), 035001. <https://doi.org/10.1088/2053-1613/2/3/035001>
- Hock-Doepgen, M., Clauss, T., Kraus, S., & Cheng, C.-F. (2021). Knowledge Management Capabilities and Organizational Risk-taking for Business Model Innovation in SMEs. *Journal of Business Research*, 130, 683–697.
<https://doi.org/10.1016/j.jbusres.2019.12.001>
- Hyytinen, A., Pajarinen, M., & Rouvinen, P. (2015). Does Innovativeness Reduce Startup Survival Rates? *Journal of Business Venturing*, 30(4), 564–581.
<https://doi.org/10.1016/j.jbusvent.2014.10.001>
- Iyola, K., Alzubi, A., & Dappa, K. (2023). The Influence of Learning Orientation on Entrepreneurial Performance: The Role of Business Model Innovation and Risk-taking Propensity. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(3), 100133. <https://doi.org/10.1016/j.joitmc.2023.100133>
- Kim, Y., & Vonortas, N. S. (2014). Managing Risk in the Formative Years: Evidence from Young Enterprises in Europe. *Technovation*, 34(8), 454–465.
<https://doi.org/10.1016/j.technovation.2014.05.004>
- Kizilkan, K., & Wagenknecht, M. (2023). Lean Social Media Communication Strategies for SMEs. In *Handbook of SME Entrepreneurship* (pp. 201–239). De Gruyter.
- Kor, Y. Y., & Mahoney, J. T. (2004). Edith Penrose's (1959) Contributions to the Resource-Based View of Strategic Management. *Journal of Management Studies*, 41(1), 183–191. <https://doi.org/10.1111/j.1467-6486.2004.00427.x>

- Leatherbee, M., & Katila, R. (2020). The Lean Startup Method: Early-stage Teams and Hypothesis-based Probing of Business Ideas. *Strategic Entrepreneurship Journal*, 14(4), 570–593. <https://doi.org/10.1002/sej.1373>
- Lee, S. (Ronnie), & Kim, J. D. (2024). When Do Startups Scale? Large-scale Evidence from Job Postings. *Strategic Management Journal*, 45(9), 1633–1669. <https://doi.org/10.1002/smj.3596>
- Liesch, P. W., Welch, L. S., & Buckley, P. J. (2011). Risk and Uncertainty in Internationalisation and International Entrepreneurship Studies: Review and Conceptual Development. *Management International Review*, 51(6), 851–873. <https://doi.org/10.1007/s11575-011-0107-y>
- Linton, G. (2019). Innovativeness, Risk-taking, and Proactiveness in Startups: A Case Study and Conceptual Development. *Journal of Global Entrepreneurship Research*, 9(1), 20. <https://doi.org/10.1186/s40497-019-0147-5>
- Lundqvist, S. A. (2015). Why firms Implement Risk Governance – Stepping Beyond Traditional Risk Management to Enterprise Risk Management. *Journal of Accounting and Public Policy*, 34(5), 441–466. <https://doi.org/10.1016/j.jaccpubpol.2015.05.002>
- Miller, K. D. (1992). A Framework for Integrated Risk Management in International Business. *Journal of International Business Studies*, 23(2), 311–331. <https://doi.org/10.1057/palgrave.jibs.8490270>
- O'Donnell, E. (2005). Enterprise Risk Management: A systems-thinking Framework for the Event Identification Phase. *International Journal of Accounting Information Systems*, 6(3), 177–195. <https://doi.org/10.1016/j.accinf.2005.05.002>

- Owen, G. (2014). Qualitative Methods in Higher Education Policy Analysis: Using Interviews and Document Analysis. *The Qualitative Report*, 19(26), 1–19. <https://doi.org/10.46743/2160-3715/2014.1211>
- Pfohl, H., Gallus, P., & Thomas, D. (2011). Interpretive Structural Modeling of Supply Chain Risks. *International Journal of Physical Distribution & Logistics Management*, 41(9), 839–859. <https://doi.org/10.1108/09600031111175816>
- Pukala, R., Sira, E., & Vavrek, R. (2018). Risk Management and Financing Among Start-ups. *Marketing and Management of Innovations*, 3, 153–161. <https://doi.org/10.21272/mmi.2018.3-13>
- Rezaie, K., Amalnik, M. S., Gereie, A., Ostadi, B., & Shakhseeniaee, M. (2007). Using Extended Monte Carlo Simulation Method for the Improvement of Risk Management: Consideration of Relationships Between Uncertainties. *Applied Mathematics and Computation*, 190(2), 1492–1501. <https://doi.org/10.1016/j.amc.2007.02.038>
- Ries, E. (2017). *The lean startup: How today's Entrepreneurs use Continuous Innovation to Create Radically Successful Businesses*. Currency International Edition. Currency.
- Schöning, S., Sümer Göğüş, E. H., & Pernsteiner, H. (Eds.). (2017). *Risikomanagement in Unternehmen: Interkulturelle Betrachtungen zwischen Deutschland, Österreich und der Türkei*. Springer Fachmedien Wiesbaden. <https://doi.org/10.1007/978-3-658-07073-1>
- Schulte, R. (2025). New Venture Risk Management: Theoretical Framework and Research Perspectives. *Journal of the International Council for Small Business*, 1–20. <https://doi.org/10.1080/26437015.2024.2448982>
- Schulte, R., & Wagenknecht, M. (2022). Risikomanagement bei Startups. *ZfKE – Zeitschrift für KMU und Entrepreneurship*, 70(3–4), 243–252. <https://doi.org/10.3790/zfke.70.3-4.243>

- Schulte, R., & Wagenknecht, M. (2023). Management der Chancen und Risiken des Customer Involvement in jungen Unternehmen. *ZfKE – Zeitschrift für KMU und Entrepreneurship*, 71(2), 171–179. <https://doi.org/10.3790/ZfKE.2023.1434504>
- Sedláček, P., & Sterk, V. (2017). The Growth Potential of Startups over the Business Cycle. *American Economic Review*, 107(10), 3182–3210. <https://doi.org/10.1257/aer.20141280>
- Silva, D. S., Ghezzi, A., Aguiar, R. B. de, Cortimiglia, M. N., & ten Caten, C. S. (2020). Lean Startup, Agile Methodologies and Customer Development for Business Model Innovation: A systematic Review and Research Agenda. *International Journal of Entrepreneurial Behavior & Research*, 26(4), 595–628. <https://doi.org/10.1108/IJEBr-07-2019-0425>
- Silva, E. S., Wu, Y., & Ojiako, U. (2013). Developing Risk Management as a Competitive Capability: Risk Management Capability. *Strategic Change*, 22(5–6), 281–294. <https://doi.org/10.1002/jsc.1940>
- Sreenivasan, A., & Suresh, M. (2024). A comparative analysis of lean start-up and design thinking and its integration. *Asia Pacific Journal of Innovation and Entrepreneurship*, 18(2), 172–194. <https://doi.org/10.1108/APJIE-09-2023-0181>
- Stein, V., & Wiedemann, A. (2016). Risk Governance: Conceptualization, Tasks, and Research Agenda. *Journal of Business Economics*, 86(8), 813–836. <https://doi.org/10.1007/s11573-016-0826-4>
- Teberga, P. M. F., Oliva, F. L., & Kotabe, M. (2018). Risk Analysis in Introduction of new Technologies by Start-ups in the Brazilian Market. *Management Decision*, 56(1), 64–86. <https://doi.org/10.1108/MD-04-2017-0337>

- Teece, D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, 43(2–3), 172–194. <https://doi.org/10.1016/j.lrp.2009.07.003>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509–533.
- Timmermans, S., & Tavory, I. (2012). Theory Construction in Qualitative Research: From Grounded Theory to Abductive Analysis. *Sociological Theory*, 30(3), 167–186. <https://doi.org/10.1177/0735275112457914>
- Todeschini, B. V., Boelter, A. S., Souza, J. S. D., & Cortimiglia, M. N. (2017). Risk Management from the Perspective of Startups. *European Journal of Applied Business Management*, 3(3), 40–54.
- van Gelderen, M., Thurik, R., & Bosma, N. (2006). Success and Risk Factors in the Pre-Startup Phase. *Small Business Economics*, 26(4), 319–335. <https://doi.org/10.1007/s11187-004-6837-5>
- Venczel, T. B., Berényi, L., & Hriczó, K. (2024). The Project and Risk Management Challenges of Start-ups. *Acta Polytechnica Hungarica*, 21(2), 151–166. <https://doi.org/10.12700/APH.21.2.2024.2.8>
- Verbano, C., & Venturini, K. (2011). Development Paths of Risk management: Approaches, Methods and Fields of Application. *Journal of Risk Research*, 14(5), 519–550. <https://doi.org/10.1080/13669877.2010.541562>
- Verbano, C., & Venturini, K. (2013). Managing Risks in SMEs: A Literature Review and Research Agenda. *Journal of Technology Management & Innovation*, 8(3), 186–197. <https://doi.org/10.4067/S0718-27242013000400017>

- Welsh, D. H. B., Davis, A. E., Desplaces, D. E., & Falbe, C. M. (2010). A Resource-based View of Three Forms of Business in the Startup Phase Implications for Franchising. *Journal of Small Business Strategy*, 22(1), 47–65.
- Wennberg, K., Delmar, F., & McKelvie, A. (2016). Variable Risk Preferences in New Firm Growth and Survival. *Journal of Business Venturing*, 31, 408–427.
- Wernerfelt, B. (1984). A Resource-based View of the Firm. *Strategic Management Journal*, 5(2), 171–180. <https://doi.org/10.1002/smj.4250050207>
- Wiedemann, A., Bouten, C., Hertrampf, P., Stein, V., & Mues, N. (2024). The Risk-related Tone from the Top: Evidence from German Regional Banks. *Journal of Risk Research*, 27(7), 713–734. <https://doi.org/10.1080/13669877.2023.2176911>
- Ylönen, M., & Aven, T. (2023). A Framework for Understanding Risk Based on the Concepts of Ontology and Epistemology. *Journal of Risk Research*, 26(6), 581–593. <https://doi.org/10.1080/13669877.2023.2194892>
- York, J. L., & Danes, J. E. (2014). Customer Development, Innovation, and Decision-Making_Journal of Small Business Strategy. *Journal of Small Business Strategy*, 24(2), 21–39.
- Zaby, S. (2017). Innovative Start-ups and Young Entrepreneurs: Definition of Venture Capital and Findings from Switzerland. *Risk Governance and Control: Financial Markets and Institutions*, 7(1), 75–81. <https://doi.org/10.22495/rgcv7i1art10>

A. Appendix

Table A1. Primary literature.

No.	Author(s)	Year	Journal	Title
1	van Gelderen et al.	2006	<i>Small Business Economics</i>	Success and Risk Factors in the Pre-Startup Phase
2	Liesch et al.	2011	<i>Management International Review</i>	Risk and Uncertainty in Internationalization and International Entrepreneurship Studies: Review and Conceptual Development
3	Verbano and Venturini	2013	<i>Journal of Technology Management & Innovation</i>	Managing Risks in SMEs: A Literature Review and Research Agenda
4	Gao et al.	2013	<i>International Small Business Journal: Researching Entrepreneurship</i>	Risk management capability building in SMEs: A social capital perspective
5	Silva et al.	2013	<i>Strategic Change</i>	Developing Risk Management as a Competitive Capability: Risk Management Capability
6	Kim and Vonortas	2014	<i>Technovation</i>	Managing risk in the formative years: Evidence from young enterprises in Europe
7	Falkner and Hiebl	2015	<i>Journal of Risk Finance</i>	Risk management in SMEs: a systematic review of available evidence
8	Harms et al.	2015	<i>Translational Materials Research</i>	Lean startup for materials ventures and other science-based ventures: under what conditions is it useful?
9	Wennberg	2016	<i>Journal of Business Venturing</i>	Variable risk preferences in new firm growth and survival
10	Brustbauer	2016	<i>International Small Business Journal: Researching Entrepreneurship</i>	Enterprise risk management in SMEs: Toward a structural model
11	Todeschini et al.	2017	<i>European Journal of Applied Business Management</i>	Risk Management from the Perspective of Startups
12	Zaby	2017	<i>Risk Governance and Control: Financial Markets and Institutions</i>	Innovative start-ups and young entrepreneurs: Definition of venture capital and findings from Switzerland
13	Pukala et al.	2018	<i>Marketing and Management of Innovations</i>	Risk management and financing among Start-ups
14	Teberga et al.	2018	<i>Management Decision</i>	Risk analysis in introduction of new technologies by start-ups in the Brazilian market
15	Linton	2019	<i>Journal of Global Entrepreneurship Research</i>	Innovativeness, risk-taking, and proactiveness in startups: a case study and conceptual development

16	Crovini et al.	2020	<i>Management Decision</i>	Rethinking risk management in entrepreneurial SMEs: toward the integration with the decision-making process
17	Hock-Doepgen et al.	2020	<i>Journal of Business Research</i>	Knowledge management capabilities and organizational risk-taking for business model innovation in SMEs
18	Silva, et al.	2020	<i>International Journal of Entrepreneurial Behavior & Research</i>	Lean Startup, Agile Methodologies and Customer Development for business model innovation: A systematic review and research agenda
19	Crovini et al.	2021	<i>European Management Journal</i>	How to reconsider risk management in SMEs? An Advanced, Reasoned and Organized Literature Review
20	Bortolini et al.	2021	<i>Management Decision</i>	Lean Startup: a comprehensive historical review
21	Corrêa et al.	2022	<i>International Journal of Entrepreneurial Behavior & Research</i>	Entrepreneurial orientation far beyond opportunity: the influence of the necessity for innovativeness, proactiveness and risk-taking
22	Gleißner et al.	2022	<i>ZfKE – Zeitschrift für KMU und Entrepreneurship</i>	Krisen- und Risikomanagement im Mittelstand – von der gesetzlichen Pflicht zur betriebswirtschaftlichen Kür
23	Schulte and Wagenknecht	2022	<i>ZfKE – Zeitschrift für KMU und Entrepreneurship</i>	Risikomanagement bei Startups
24	Bielialov	2022	<i>Journal of Risk and Financial Management</i>	Risk Management of Startups of Innovative Products
25	Braun et al.	2022	<i>Journal of Business Strategy</i>	Risk-managing the business model: locating tripwires at the start
26	Zhang et al.	2023	<i>International Small Business Journal: Researching Entrepreneurship</i>	How political connections affect entrepreneurial risk-taking in SMEs: A symmetric assessment and a configurational approach
27	Iyola et al.	2023	<i>Journal of Open Innovation: Technology, Market, and Complexity</i>	The influence of learning orientation on entrepreneurial performance: The role of business model innovation and risk-taking propensity
28	Venczel et al.	2024	<i>Acta Polytechnica Hungarica</i>	The Project and Risk Management Challenges of Start-ups
29	Blank and Jonathan	2024	<i>Journal of Management</i>	The Lean Startup as an Actionable Theory of Entrepreneurship
30	Felin et al.	2024	<i>Journal of Management</i>	A Scientific Method for Startups
31	Sreenivasan and Suresh	2024	<i>Asia Pacific Journal of Innovation and Entrepreneurship</i>	A comparative analysis of lean start-up and design thinking and its integration