

**FOUR PERSPECTIVES ON CORPORATE ENTREPRENEURSHIP
AND NEW VENTURE CREATION**

Der Fakultät für Wirtschaftswissenschaften der
Universität Paderborn
zur Erlangung des akademischen Grades
Doktor der Wirtschaftswissenschaften
– Doctor rerum politicarum –
vorgelegte Dissertation von

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Erscheinungsjahr 2022

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Danksagung

Es ist mir an dieser Stelle ein besonderes Anliegen, einigen Personen meine Dankbarkeit für die Unterstützung in den letzten Jahren auszudrücken, die damit hinreichend zu der Erstellung dieser Dissertation beitragen haben.

Zunächst bedanke ich mich bei Prof. Dr. Rüdiger Kabst, der mir die notwendigen Rahmenbedingungen mit dem Feldlabor garage33 geschaffen hat, die wissenschaftliche Reise anzutreten und mir stets mir seiner Erfahrung und Offenheit zur Seite stand. Über die Unterstützung auf sowohl praktischer als auch wissenschaftlicher Ebene bin ich sehr dankbar.

Mein besonderer Dank gilt Prof. Dr. Bernhard Wach der mir als Coach und Mentor jederzeit zur Seite stand, sämtliche Wochenend- oder Late-Night-Sessions mit mir verbrachte und mich stets nach Rückschlägen und Motivationstiefs wieder aufrichtete. Ebenfalls möchte ich Dr. Holger Steinmetz besonders danken, der mir von der ersten Stunde an mit seiner immensen fachlichen Expertise zur Seite stand und maßgeblich an der Gestaltung und Auswahl von Forschungsdesigns und interessanten Fragestellungen beteiligt war. Beiden möchte ich für ihren unermüdlichen Motivation entlang aller Höhen und Tiefen, für ihren Ehrgeiz immer noch ein Stückchen mehr aus den gemeinsamen Manuskripten zu holen, die intensiven wissenschaftlichen Diskussionen und die Möglichkeit von ihnen zu lernen herzlich danken!

Darüber hinaus möchte ich bei meinen Ko-Autoren Prof. Dr. Rodrigo Isidor, Prof. Dr. Katrin Burmeister-Lamp, Dr. Benjamin Krebs, Mirko Brunk und Marieke Funck bedanken, die mich fachlich und persönlich durch die gemeinsamen Forschungsprojekte gefördert haben und mit mir die gemeinsamen Herausforderungen bestritten haben. Zudem möchte ich meinen (ehemaligen) Kollegen Nicolas Megow, Yasmine Yahyaoui, Dr. Tim Brühn, Lea Hansjürgen, Katharina Weßling und Eva Jakob für ihren Zuspruch, Inspiration und Motivation danken.

Zu guter Letzt möchte ich meinem persönlich Umfeld danken:

Besonders wichtig, wenn nicht sogar am wichtigsten für das Gelingen der Dissertation war die seelische als auch moralische Unterstützung meiner ganzen Familie, insbesondere meiner Eltern Wassili und Nina und meiner Lebenspartnerin Laura. Ihre unermüdliche Positivität, bedingungslose Unterstützung und ihr kontinuierlicher Glaube an mich über alle Phasen der Dissertation haben mich stets darin bestärkt eine Schippe draufzulegen, weiterzumachen und nicht aufzugeben. Auch wenn meine Dankbarkeit schwer in Worte zu fassen ist: Danke, dass ihr den Weg von Anfang bis Ende mit mir gegangen seid!

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CHAPTER 1 | SYNOPSIS

1.1. Introduction

Increasing competition, unforeseen environmental shocks, instabilities in market demands, political changes, technological disruption, environmental dynamism, and the desire to grow are only few reasons why established firms have to rethinking their strategies on how to compete in the future (e.g., Agarwal & Helfat, 2009; Flier et al., 2003; Guth & Ginsberg, 1990; Kuratko & Morris, 2018). While competitive advantages have been seen as sustainable once achieved and guaranteed long-term survival with financial prosperity, these competitive advantages might turn into deadly structures that promote organizational inertia and stagnation (McGrath, 2013) in a world where technological disruption and change became rather a normal than abnormal thing (Kuratko & Morris, 2018).

To hold pace and solve emerging challenges by innovating and re-inventing themselves constantly, established organizations engage in corporate entrepreneurship (CE) that describes entrepreneurial behavior within established firms (Guth & Ginsberg, 1990; Stopford & Baden-Fuller, 1994), conceiving activities to sustain innovativeness by means of generating novel products, services, and/or processes (Guth & Ginsberg, 1990; Sharma & Chrisman, 1999). With CE, established firms are extending their portfolio of innovation activities to engage and collaborate with entrepreneurial ventures (Shankar & Shepherd, 2019; Weiblen & Chesbrough, 2015), which is corroborated by a report of 500Startups and INSEAD from 2016. The report states that half of the 500 publicly-traded organizations in the USA already had any kind of startup engagement and a quarter of them having launched an incubator or accelerator program (Bonzom & Netessine, 2016; Shankar & Shepherd, 2019). Similar progress can be observed in Germany, where the intrapreneurship monitors from 2020 and 2021 highlight the importance of corporate entrepreneurial initiatives: the authors state that 13% of organizations had established dedicated departments for CE in 2020 which has grown to 29% in 2021 (Baum et al., 2020, 2021). Yet, this trend has not finished as

60% of the 603 German organizations are planning to increase and promote corporate entrepreneurial activities (i.e., intrapreneurial activities) within the next 24 months by several initiatives, for instances, training the managerial employees, providing more financial resources to venture projects, and unlocking more time for exploration (Baum et al., 2021).

1.2. Theoretical Foundation: Corporate Entrepreneurship and New Venture Creation

It becomes apparent, that established firms are seeking to integrate and engage increasingly in CE and collaborate with new ventures in the future which is the topic of the present dissertation. By definition, CE embraces two types of phenomena that address mutually exclusive and collectively exhaustive activities, namely, *strategic renewal* and *corporate venturing* (Guth & Ginsberg, 1990; Zahra, 1993) that help organizations to become more innovative. Herein, *strategic renewal* describes the revitalization and rejuvenation of the company's business by means of changing the scope of its current business (Zahra, 1993, 1995), thereby generating new wealth from existing resources by recombining and altering resource combinations to serve novel environmental demands (Guth & Ginsberg, 1990; Sharma & Chrisman, 1999). In that sense, strategic renewal promotes the transformation of an organization by renewing the central ideas firms are built on (Guth & Ginsberg, 1990) with the aim to gain and re-gain competitive advantages in an ever-changing environment (Covin & Miles, 1999).

In addition, *corporate venturing* describes the creation of entirely new businesses within the structure of pre-existing firms (Covin & Miles, 2007; Guth & Ginsberg, 1990) in order to explore and exploit new markets and/or new products (Sharma & Chrisman, 1999), embracing an internal and external perspective. The distinction between the emergence of new ventures inside or outside the parent firms' boundaries is addressed by *internal or external corporate venturing* (Miles & Covin, 2002; Sharma & Chrisman, 1999).

On the one hand, *internal corporate venturing* addresses new venture creation inside the existing organization as individuals or small groups of individuals alter their entrepreneurial behavior to start working on novel entrepreneurial opportunities from within the firm (e.g., Guth & Ginsberg, 1990; Sharma & Chrisman, 1999; Stopford & Baden-Fuller, 1994). By means of internally staffed venture teams that are detached from organizational regulations and work semi-autonomously, they enter new businesses by expanding operations in new markets (Sharma & Chrisman, 1999; Zajac et al., 1991).

On the other hand, *external corporate venturing* describes activities that result in the creation of semi-autonomous organizational entities or new ventures that reside outside the organization (Covin & Miles, 2007; Sharma & Chrisman, 1999). Particularly, external corporate venturing consists of entrepreneurial activities that invert or acquire new businesses that have been created by parties outside the established organization (Kuratko & Audretsch, 2013) or develop ventures together with external partners to facilitate new venture emergence (Keil, 2004). Thus, external corporate venturing defines the organizations' search of novel ideas outside of the own company (e.g., Dushnitsky & Lenox, 2006; Wadhwa & Kotha, 2006). Examples for external corporate venturing activities are joint ventures, spin-offs, venture capital investments in independent startups (Sharma & Chrisman, 1999), idea-sourcing events, hackathons, and business plan competitions (Mocker et al., 2015; Shankar & Shepherd, 2019).

1.3. Research Gaps and Overarching Research Questions

The profound objective of CE, either through strategic renewal or corporate venturing, is to enhance organizational profitability and growth by means of nurturing entrepreneurial behavior within the organization. With that objective, extant research largely investigated organizational-level performance effects of CE, finding primarily positive performance implications of CE (Bierwerth et al., 2015; Schmitt et al., 2018). However, notwithstanding

these positive effects, our understanding relies on overly simplistic assumptions as studies rarely integrate temporal dynamics that may obscure distinct (negative) performance effects. In that sense, competing within dynamic environments with ever-changing market demands may nurture the chaos within organizational structures (Brown & Eisenhardt, 1997; Eisenhardt & Brown, 1998), thereby temporarily generating disadvantages related to radical change events. Thus, the first overarching research question of this dissertation addresses the role of time (i.e., temporal dynamics) for organizational-level CE and firm performance, shedding explicit light on the phenomenon of strategic renewal as an instrument to rejuvenate the firms' business.

Research Question 1:

What implications does the integration of temporal dynamics have on the performance effects of strategic renewal?

While organizational-level performance effects have been the primary focus of CE studies (e.g., Bierwerth et al., 2015), individual-level mechanisms that promote CE and nurture employees' entrepreneurial behavior remain less represented with few exceptions (e.g., Biniari, 2012; Fini et al., 2012; Rigtering et al., 2019). To understand underlying individual-level dynamics in CE, this dissertation builds on knowledge from *new venture creation* (e.g., Davidsson & Gruenhagen, 2021; Patzelt et al., 2021; Shepherd et al., 2021) to shed light on the role of employees' entrepreneurial activity (EEA) and individuals' collaboration in new venture teams that are precursive to organizational-level performance implications.

New venture creation (NVC) is described as the central topic of entrepreneurship (Shepherd et al., 2021), adapting a processual perspective of how ventures are created from

initiation to completion (Davidsson & Gruenhagen, 2021). Herein, a new venture can emerge as either an independent or corporate venture, seeking to seize entrepreneurial opportunities to bring novel ventures into life (Shankar & Shepherd, 2019). Yet, to understand underlying individual-level dynamics within the NVC process in a corporate context, extant research cautioned to investigate distinct venture phases in order to generate a holistic understanding of NVC, namely venture inception, venture development, and venture decline (Patzelt et al., 2021).

A recent literature review on NVC (Shepherd et al., 2021) corroborates that knowledge in the field remains limited and blurred as scholars encounter the challenge to study new ventures before they have been created, especially as entrepreneurial efforts of starting up are oftentimes abandoned or terminated prior to first sales or the formal creation of a venture itself (McGrath, 1999; Shepherd et al., 2021; Ucbasaran et al., 2013). In that sense, extant research retrospectively investigated successful ventures and thereby faced a sample selection bias that blurs our understanding regarding the inception phase of ventures and its corresponding antecedents (e.g., Davidsson & Gruenhagen, 2021; Patzelt et al., 2021; Shepherd et al., 2021).

Nevertheless, prior research has generated important evidence regarding the role of individuals for NVC (Shepherd et al., 2021; Shook et al., 2003). Particularly, Shook et al. (2003) found in their literature review, that psychological determinants (e.g., personality, beliefs, values, attitudes), demographic characteristics (e.g., gender, age, education, past experience), and cognition (e.g., knowledge, biases, and heuristics) are preceding entrepreneurial intentions that eventually translate into entrepreneurial actions (e.g., Bird, 1992; Boyd & Vozikis, 1994; Krueger & Carsrud, 1993) and the establishment of new ventures (Bird, 1992; Gartner, 1985; Shook et al., 2003).

However, most studies investigated actions taken by independent entrepreneurs (Shepherd et al., 2021; Shook et al., 2003), not addressing the idiosyncrasies that corporate employees' are facing once engaging in CE and NVC. Particularly, Shepherd and colleagues (2021) caution that corporate venturing activities may be different from those of independent entrepreneurs (i.e., in regard of starting from the scratch or from an existing product) which is why the authors excluded CE studies from their literature review. Therefore, this dissertation seeks to contribute towards understanding NVC in the context of CE, particularly because the corporate context might impede or promote EEA differently (Hornsby et al., 2002, 2009; Kuratko et al., 2005). As scholars corroborate that entrepreneurial thoughts and behaviors are not stable and may vary across situations and environments (Shane & Venkataraman, 2000; Shook et al., 2003), for example given a corporate entrepreneurial context, this dissertation complements research in this regard by studying “why, when and how different modes of action are used to exploit entrepreneurial opportunities” (Shane & Venkataraman, 2000: 218; Shook et al., 2003).

As NVC begins prior to the generation of first revenues or the formal establishment of ventures, the venture inception phase is of primary interest in this dissertation, describing a period of time in which formal structures have not been established yet and individuals or groups of individuals are elaborating on the initial steps of a venture journey (Patzelt et al., 2021). The venture inception phase is characterized by the goal of entrepreneurs to develop first ideas into products or services with a corresponding business model by integrating early feedback from customers and experts (Grimes, 2018; Patzelt et al., 2021). Moreover, the venture inception phase addresses the formation of new venture teams by collectively coming up with an entrepreneurial opportunity to work on and seizing this by collaborating mostly in a team (Patzelt et al., 2021). Herein, entrepreneurial team collaboration is depended on

individual-level characteristics such as cognition, affect, identity and interpersonal processes that potentially prevent or promote the creation of new ventures (Patzelt et al., 2021).

However, as contemporary research on NVC encounters difficulties observing the new venture inception phase with its corresponding dynamics that are implied in venture teams (Shepherd et al., 2020), I seek to generate more knowledge on this behalf within a CE context. To complement on existing knowledge on individual-level CE and NVC, the second overarching research question addresses how and why individual-level characteristics nurture EEA (i.e., entrepreneurial behavior) within organizations, and how those characteristics influence new venture team collaboration that eventually leads to venture creation. Moreover, the third overarching research question focusses on how contextual factors (i.e., national culture and cultural hierarchical values) influence new venture team collaboration and corresponding entrepreneurial outcomes. Stated formally:

Research Question 2:

How do individual-level characteristics contribute to employees' entrepreneurial activity that are precursors of corporate entrepreneurial outcomes?

Research Question 3:

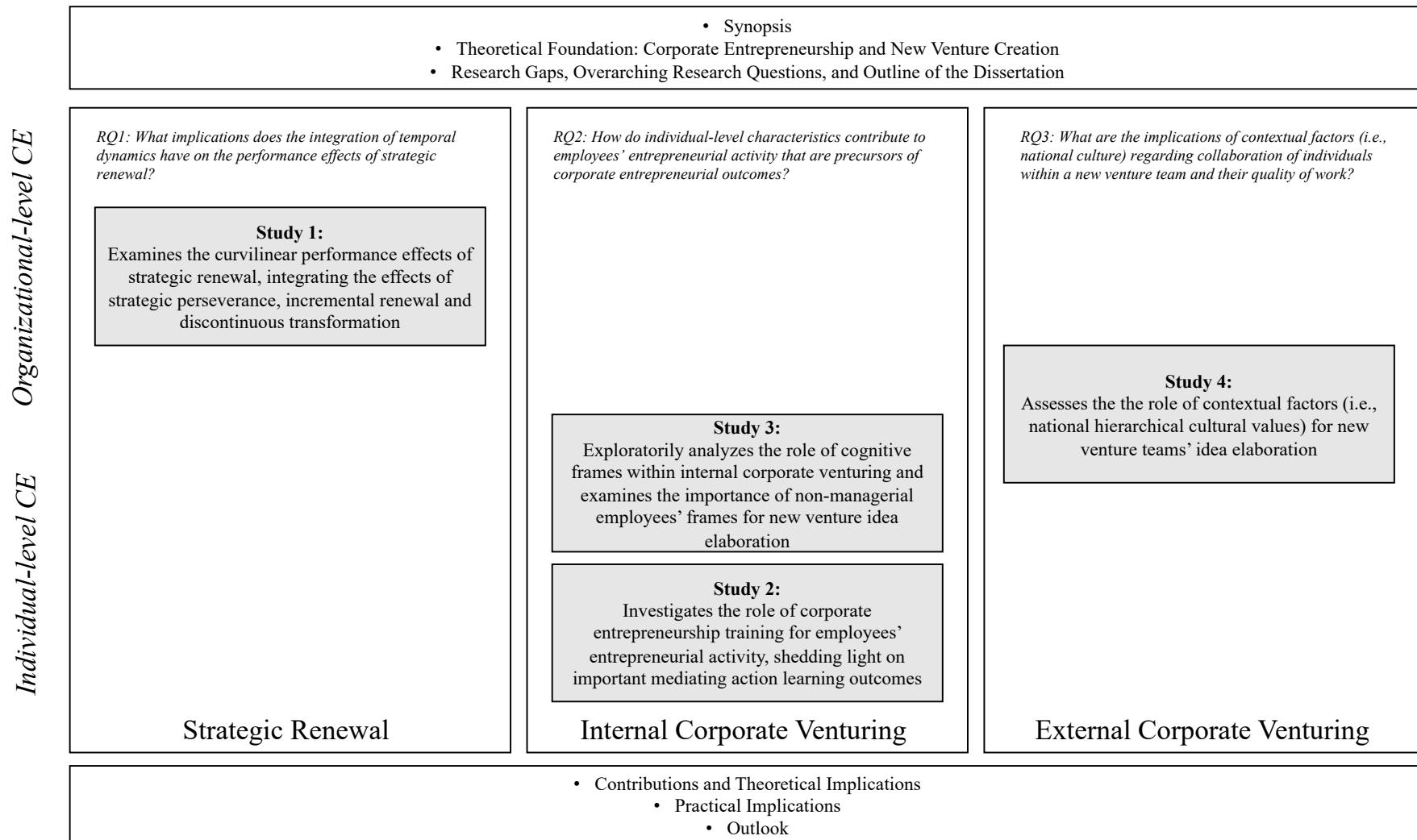
What are the implications of contextual factors (i.e., national culture) regarding the collaboration of individuals within a new venture team and their quality of work?

1.4. Outline of the Dissertation and Research Aims and Contributions

The present dissertation comprises four research papers with distinct research gaps in order to enhance our understanding concerning CE and NVC on either organizational- or individual-level. Figure 1 depicts the overall outline of this dissertation and connects each

studies' research aim to the corresponding research question. Herein, Study 1 focusses on the time-related performance implications generated from strategic renewal as part of organizational-level CE, answering *Research Question 1*. Study 2 and 3 shift the perspective towards internal corporate venturing, as part of the overarching CE construct, extending current knowledge on the individual-level phenomenon, which is a precursor of firm performance. Thereby, both studies contribute towards the aim of answering *Research Question 2*. Finally, Study 4 contributes towards the aim of understanding external corporate venturing, investigating contextual factors (i.e., the influence of hierarchy) that may influence individuals' collaboration within new venture teams, addressing *Research Question 3*. In the following, each of the papers will be briefly elaborated by outlining the theoretical background, methodology used, and contributions generated. An overview of all four research papers is presented in Table 1.1.

Figure 1.1: Dissertation Outline



1.4.1. Study 1: Investigating the Performance Effects of Strategic Renewal: The Role of Strategic Perseverance, Incremental Renewal and Discontinuous Transformation

Study 1 (single-authored) follows the objective to examine curvilinear (i.e., inverted u-shaped) performance effects embedded in CE. Adopting the tenet of the evolutionary theory (Nelson & Winter, 1982), this study analyzes how established firms foster strategic renewal as part of CE, simultaneously reconciling mechanisms of strategic perseverance (i.e., stability) and change over time. Moreover, by separating incremental renewal and discontinuous transformation, I investigate the unique performance effects of each sub-type of strategic renewal (Agarwal & Helfat, 2009). I test my hypotheses using panel data on 1,164 organizations between 1990 and 2018, applying a linear fixed-effects regression model.

The contributions of Study 1 are twofold. First, I provide longitudinal evidence on the curvilinear unfolding of strategic renewal, generating initially positive performance effects during strategic perseverance but shifting negative once a high environmental misfit is present, thereby contributing to a time-related perspective that enables researchers to observe both short-and long-term performance effects. Incremental renewal further moderates the effects on both ends. In that sense, I open up the debate about studying the role of temporal dynamics, specifically strategic perseverance (i.e., stability), in contrary to analyzing change events (Albert et al., 2015; Fang et al., 2021). Second, by decomposing strategic renewal into incremental renewal and discontinuous transformation (Agarwal & Helfat, 2009), I uncover distinct performance effects that remained previously obscured (Bierwerth et al., 2015), such as the negative performance effects of CE in case of discontinuous transformation.

1.4.2. Study 2: Fostering Employees' Entrepreneurial Activity: A Quasi-Experimental Field

Study on Internal Corporate Venturing

Study 2 (co-authored) analyzes EEA by investigating mediating learning mechanisms (Kraiger et al., 1993), that are necessary to understand the antecedents of EEA within internal corporate venturing, adopting an action-learning approach (Byrne et al., 2016; Gielnik et al., 2015). Particularly, we develop a lean startup-based training (LST) (e.g., Ries, 2011; Shepherd & Gruber, 2021) and investigate longitudinal effects on learning outcomes that nurture EEA sustainably. By means of a quasi-experimental field study with 276 employees from 12 organizations, we apply an autoregressive structural equation model.

Study 2 makes three primary contributions. First, we theoretically and empirically validate the importance of the lean startup framework for academia (e.g., Leatherbee & Katila, 2019; Shepherd & Gruber, 2021) and its usability for CE. Second, we add upon the understanding of the composition of venture learning proficiency (e.g., Covin et al., 2018, 2020), emphasizing embedded learning mechanisms across three levels (i.e., cognitive, skill-based, and affective learning), highlighting the importance of action learning to promote EEA (e.g., Gielnik et al., 2015, 2017). Lastly, we corroborate the effectiveness of CE training (Byrne et al., 2016), in this case LST, that enables employees' to sustain EEA over time by drawing on decision rules to bypass organizational rigidity (Hornsby et al., 2002, 2009).

1.4.3. Study 3: How Non-Managerial Employees Navigate Venture Idea Elaboration: A

Cognitive Frame Perspective on Corporate Entrepreneurship

Study 3 (co-authored) combines the logics of internal corporate venturing (e.g., Burgelman, 1983; Miles & Covin, 2002) and NVC (e.g., Davidsson & Gruenhagen, 2021; Patzelt et al., 2021). Drawing on cognitive frame theory (Goffmann, 1974), we identify distinct cognitive frames that are utilized by non-managerial employees (NMEs) within the new venture idea elaboration phase (Perry-Smith & Mannucci, 2017) and examine how

NMEs' cognitive frames influence the creative synthesis among team members (i.e., synthesis of individual members' judgement regarding the understanding of a new venture idea). Thereby, we investigate how a collective understanding of a new venture idea eventually may lead to venture creation via distinct entrepreneurial behaviors of employees. By means of an inductive qualitative study with 35 semi-structured interviews from two organizations, we contribute on the role of NMEs within internal corporate venturing and the importance of individual-level cognitive frames for NVC.

The contributions of Study 3 are threefold. First, we accentuate the importance of NMEs (Zimmermann et al., 2018) within the new venture elaboration process (Perry-Smith & Mannucci, 2017), complementing research on CE that attributes successful CE initiatives rather to senior- and middle managers than to NMEs (e.g., Corbett et al., 2013; Hornsby et al., 2002, 2009). Particularly, we show that NMEs entrepreneurial behavior within new venture idea elaboration is imperative for the potential creation of new (corporate) ventures. Second, we pinpoint towards the role of individual-level cognition within CE (e.g., Corbett et al., 2007; Corbett & Hmielewski, 2007), nurturing or impeding employees' entrepreneurial behavior. Third, we develop a model of frame-related interactions within the venture inception phase, shedding light on the importance of cognitive frames in the collaboration among team members, to integrate or disregard differences in individual judgment on new venture ideas to champion concrete venture ideas (e.g., Kaplan, 2008; Patzelt et al., 2021).

1.4.4. Study 4: New Venture Teams' Capacity for Idea Generation and Execution in light of Hierarchical Cultural Values

Study 4 (co-authored) addresses external corporate venturing (e.g., Keil, 2004; Kuratko & Audretsch, 2013) and NVC (e.g., Davidsson & Gruenhaben, 2021; Patzelt et al., 2021) by means of understanding contextual factors that have an effect on a new venture team (NVT) and corresponding entrepreneurial outcomes. Specifically, we assess the role of

hierarchical cultural values (Schwartz, 2004) that influence NVTs' entrepreneurial outcomes within their venture inception phase (Patzelt et al., 2021). Drawing upon dysfunctional (Bunderson et al., 2016; Bunderson & Reagans, 2011; Greer & Kleef, 2010; Tarakci et al., 2016) and functional accounts of hierarchy (Greer et al., 2018; Halevy et al., 2012; Magee & Galinsky, 2008), we propose that hierarchical cultural values work as a double-edged sword. On the one hand, hierarchy reduces information-sharing that culminates in decreasing the quality of new ventures' ideas within the idea generation, and on the other hand, enhances team coordination ultimately increasing implementation speed within the idea execution. By means a third-party international hackathon with 284 monocultural NVTs, we found that hierarchical cultural values negatively influence both the new ventures' idea quality and implementation speed. Therefore, NVTs that are embedded in hierarchical cultures are hampered by a liability of hierarchy.

The contributions of Study 4 are threefold. First, we are among the first to analyze contextual factors that influence early-stage NVTs capacity to generate and execute new venture ideas, thereby accentuating the importance of culture on early-stage entrepreneurial outcomes (Davidsson & Gruenhagen, 2021). Second, we provide evidence from a large-scale international hackathon on cross-cultural differences in NVTs, assessing social dynamics through which hierarchical cultural values influence entrepreneurial activity in NVTs (Gartner & Teague, 2020). Third, we contribute on the new venture inception phase, observing NVTs in a highly controlled environment where new venture operations are initiated and terminated equally and comparable (Lifshitz-Assaf et al., 2021). Thereby, we overcome a pre-existing sampling bias in NVC literature that primarily investigated successful ventures, by providing evidence on entrepreneurial outcomes that are usually generated prior the formal creation of a venture (Davidsson & Gruenhagen, 2021).

Table 1.1: Overview of Studies included in the Dissertation

Title	Research Aims	Contributions	Theoretical Perspective(s)	Core Constructs	Method	Sample
Study 1: Investigating the Performance Effects of Strategic Renewal: The Role of Strategic Persistence, Incremental Renewal and Discontinuous Transformation	Analyze how established firms engage in strategic renewal, simultaneously reconciling mechanisms of stability and change over time. Investigate the distinct roles of incremental renewal and discontinuous transformation on firm performance.	Provide longitudinal evidence on the unfolding of strategic renewal, by adding a time-related perspective to understand short- and long-term performance. Decompose the construct of strategic renewal into incremental renewal and discontinuous transformation, thereby observing positive and negative performance effects.	Corporate Entrepreneurship / Strategic Renewal Evolutionary Theory	Strategic Persistence Incremental Renewal Discontinuous Transformation Firm Performance	Linear Fixed-effects Regression Analysis	1,164 firms between 1990 and 2018 (S&P 500 index)
Study 2: Fostering Employees' Entrepreneurial Activity: A Quasi-Experimental Field Study on Internal Corporate Venturing	Investigate training effects from a lean startup-based training (LST) on multidimensional learning outcomes and employees' entrepreneurial activity. Examine whether action learning enables sustainable entrepreneurial activity and learning transfer.	Highlight the importance of the lean startup method for academia. Investigate experimentally the longitudinal effects of LST on learning outcomes (i.e., cognitive, skill-based, and affective learning) nurturing EEA. Validate empirically the effectiveness of LST.	Corporate Entrepreneurship / Internal Corporate Venturing Lean Startup Framework Action-Learning Approach	Training Participation Lean Startup Knowledge Entrepreneurial Alertness Creative Self-Efficacy	Autoregressive Structural Equations Model	276 employees from 12 organizations

Table 1.2: Overview of Studies included in the Dissertation (continued)

Title	Research Aims	Contributions	Theoretical Perspective(s)	Core Constructs	Method	Sample
Study 3: How Non-Managerial Employees Navigate Venture Idea Elaboration: A Cognitive Frame Perspective on Corporate Entrepreneurship	Identify types of cognitive frames that are applied within the new venture idea elaboration process.	Examine the importance of NMEs for CE, particularly for idea elaboration and selection during the NVC process.	Corporate Entrepreneurship / Internal Corporate Venturing	Cognitive Frames New Venture Idea Elaboration	Inductive Qualitative Analysis	35 interviews from 33 informants from 2 established firms
	Examine the role of NMEs in CE, and analyze how cognitive frames influence creative synthesis to find a collective understanding of a new venture idea.	Evaluate the role and types of cognitive frames applied in CE activities.	Cognitive Frame Theory New Venture Creation	Employees' Entrepreneurial Behavior		
	Investigate how creative synthesis may lead to venture creation via entrepreneurial behavior.	Assess and decompose the role of individual-level cognition for idea elaboration and a collective creative synthesis during the venture inception phase.				
Study 4: New Venture Teams' Capacity for Idea Generation and Execution in light of Hierarchical Cultural Values	Examine the effects of hierarchical cultural values on new ventures' outcomes, particularly on new venture idea quality (idea generation) and implementation speed (idea execution).	Position hierarchical cultural values as contextual factors that influence new venture teams' capacity to generate and execute on new venture ideas.	New Venture Teams New Venture Creation	Hierarchical Cultural Values (from the Schwartz Value Survey)	Linear Mixed-effects Regression Analysis	284 mono-cultural new venture teams from an international hackathon (#EuvsVirus)
		Identify cross-national differences among individuals to become entrepreneurially active.	Dysfunctional/Functional Perspectives of Hierarchy	New Venture Idea Quality		
		Mitigate an existing sample bias of heterogeneity and oversampling of successful ventures in NVC research.		Implementation Speed		

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**CHAPTER 2 | INVESTIGATING THE PERFORMANCE
EFFECTS OF STRATEGIC RENEWAL: THE ROLE OF
STRATEGIC PERSISTENCE, INCREMENTAL RENEWAL,
AND DISCONTINUOUS TRANSFORMATION**

Chapter 2:

**Investigating the Performance Effects of Strategic Renewal:
The Role of Strategic Persistence, Incremental Renewal and Discontinuous
Transformation**

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**CHAPTER 3 | FOSTERING EMPLOYEES'
ENTREPRENEURIAL ACTIVITY: A QUASI-
EXPERIMENTAL FIELD STUDY ON INTERNAL
CORPORATE VENTURING**

Chapter 3:

**Fostering Employees' Entrepreneurial Activity: A Quasi-Experimental Field Study on
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**CHAPTER 4 | HOW NON-MANAGERIAL EMPLOYEES
NAVIGATE IDEA ELABORATION: A COGNITIVE FRAME
PERSPECTIVE ON CORPORATE ENTREPRENEURSHIP**

Chapter 4:

How Non-Managerial Employees Navigate Idea Elaboration: A Cognitive Frame Perspective on Corporate Entrepreneurship

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**CHAPTER 5 | NEW VENTURE TEAMS' CAPACITY FOR
IDEA GENERATION AND EXECUTION IN LIGHT OF
HIERARCHICAL CULTURAL VALUES**

Chapter 5:
New Venture Teams’ Capacity for Idea Generation and Execution in light of
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CHAPTER 6 | GENERAL DISCUSSION AND OUTLOOK

6.1. Contributions and Theoretical Implications

The dissertation contributes to our understanding of corporate entrepreneurship (CE) and new venture creation (NVC), equipping established firms with the necessary instruments to become more innovative by means of generating and growing long-term profits in new market domains. Although CE research proliferated and built a cornerstone in research since the 1980s (Bierwerth et al., 2015; Phan et al., 2009), this dissertation seeks to answer three overarching research questions addressing important shortcomings in literature that refer to either distinct organizational-level performance effects, to an embedded individual-level and human side of internal corporate venturing, or to contextual factors that influence external corporate venturing. Overall, this dissertation accentuates both organizational- and individual-level effects across the three major manifestations of the CE construct: strategic renewal, internal corporate venturing, and external venturing.

More precisely, *Research Question 1* addressed the organizational-level performance implications of strategic renewal by integrating temporal dynamics into performance evaluations. *Chapter 2* investigated by means of a 28-years panel data the time-related performance effects embedded in strategic renewal (Albert et al., 2015), revealing the existence of both curvilinear (i.e., inverted u-shape) and negative performance effects over time that remained previously obscured in literature (cf. Bierwerth et al., 2015). Particularly, I found that strategic persistence (as a time dimension representing stability in business operations and routines) is related to firm performance in a curvilinear manner, initially enhancing performance but decreasing over time. In the first place, organizations derive performance increases from strategic persistence by reducing variance in operating activities, increasing efficiency in operations, circumventing uncertainty, and producing economies of scale (Bingham et al., 2019; Fang et al., 2021; Sydow et al., 2009). Thereby, I extend CE

literature in terms of shifting the focus towards a debate of studying stability rather than radical change events in isolation (e.g., Basu & Wadhwa, 2013; Fang et al., 2021).

Furthermore, by decomposing strategic renewal into two idiosyncratic sub-types, namely incremental renewal and discontinuous transformation (Agarwal & Helfat, 2009), I uncovered that incremental renewal moderates the relationship of strategic persistence and firm performance, amplifying both the positive and negative consequences. Complementary, discontinuous transformation showed strong negative performance effects. This means that with progressing strategic persistence, existing routines and capabilities might turn into deadly structures that nurture escalating commitment, organizational inertia and obsolescence ultimately threatening organizational survival (Albert et al., 2015; Fang et al., 2021; Leonard-Barton, 1992; Sydow et al., 2009). Thus, radical change in terms of discontinuous transformation becomes inevitable to re-adapt to environmental demands (Albert et al., 2015; Tushman et al., 1986), however, producing negative performance implications at least on short-term basis. Therefore, the answer to *Research Question 1* is that by adopting a time-related perspective on strategic renewal, this dissertation corroborates distinct performance effect that go beyond current knowledge in the field. Particularly, I accentuate curvilinear and negative performance effects that complement existing research that predominantly proposed positive performance effects of CE (e.g., Bierwerth et al., 2015).

Complementary to organizational-level performance effects, the individual-level perspective on CE remains less prominent in literature. Considering the growing need to understand the role of individuals within CE, scholars have started to investigate the human side of CE by adopting an individual-level perspective (e.g., Biniari, 2012; Fini et al., 2012; Rigtering et al., 2019). Hence, this dissertation seeks to answer *Research Question 2*, asking how and why individual-level characteristics contribute to employees' entrepreneurial activity (EEA). Particularly, as entrepreneurial behaviors are highly dependent on the existing situations and the environment individuals are embedded in, scholars call to understand

distinct entrepreneurial actions to exploit entrepreneurial opportunities (Shane & Venkataraman, 2000; Shook et al., 2003). Correspondingly, *Research Question 2* is addressed by two studies: *Chapter 3* investigated the role of lean startup-based training (LST) stimulating EEA via distinct individual learning outcomes, while *Chapter 4* analyzed the role of cognitive frames for internal corporate venturing activities and the initial elaboration of new venture ideas in new venture teams.

More precisely, *Chapter 3* investigated internal corporate venturing from an individual-level perspective by examining how lean startup training (LST) transmits its effects on EEA via distinct cognitive, skill-based, and affective learning outcomes (Kraiger et al., 1993). A subsequent quasi-experimental field study revealed that employees learn primarily via two learning outcomes (i.e., cognitive and skill-based learning) that sustainably nurtured EEA. We observed that LST stimulated a flow of learning processes, accentuating a nexus of cognitive and skill-based learning mechanisms. Herein, cognitive learning (i.e., lean startup knowledge) turned out to be the catalyst in the learning process, setting in motion the development of skill-based learning (i.e., entrepreneurial alertness) and ultimately affective learning (i.e., creative self-efficacy). However, affective learning did not transmit further to EEA, thereby bearing potential for future research.

The findings in *Chapter 3* extend our knowledge in three ways: First, we strengthen empirically the academic value of the lean startup framework in a recently growing debate (e.g., Bocken & Snihur, 2020; Contigiani & Levinthal, 2019; Felin et al., 2020; Harms & Schwery, 2020; Leatherbee & Katila, 2020; Shepherd & Gruber, 2021). Thereby, we provide scientific knowledge on the effectiveness of LST for training corporate entrepreneurs, adding important insights to develop a theory of lean startup in academia. Second, we contribute to CE research by elaborating on the detailed composition of venture learning proficiency that is precursive to venture performance (Covin et al., 2018, 2020; Garrett & Covin, 2015). Cognitive learning proved to be the central mediator to stimulate EEA. Thereby, we

corroborate the importance of psychological and cognitive determinants for EEA within the NVC process and CE activities, going beyond the investigation of hypothetical entrepreneurial intentions towards concrete entrepreneurial actions (e.g., Bird, 1992; Boyd & Vozikis, 1994; Fini et al., 2012; Krueger & Carsrud, 1993). Our findings showed that mental processes of corporate entrepreneurs are imperative to assess entrepreneurial opportunities and making sound entrepreneurial decisions (e.g., Corbett et al., 2007; Corbett & Hmielecki, 2007). Third, we contribute on the practical usefulness of LST for training corporate entrepreneurs (Byrne et al., 2016), generating sustainable learning transfer towards the employees' operating job (Salas et al., 2012), thus providing an instrument for established firms to motivate and encourage key personnel to engage entrepreneurially beside their regular job (Rigtering et al., 2019).

In addition, *Chapter 4* describes another prevalent case studying the role of individual-level determinants in internal corporate venturing on a nuanced level. By means of an inductive case study, *Chapter 4* revealed that employees that are engaging in internal venturing projects draw on idiosyncratic cognitive frames to decompose new venture ideas (Goffmann, 1974; Kaplan, 2008). For simplicity, we assessed two types of frames that take on opposed peculiarities, namely contracted and expanded cognitive frames. Employees with a contracted frame primarily evaluated new venture ideas based on a short-term perspective, applied a technology-focused problem solving and concentrated on adjacent competitors. In contrary, employees with an expanded frame adopted a customer-centric problem solving, promoted distinct business models for novel products and anticipated competitors from other (unknown) industries.

Following a call by Patzelt and colleagues (2021), we investigated the idea elaboration (i.e., evaluation of opportunities) among early-stage venture teams (Perry-Smith & Mannucci, 2017), assessing how a group of individuals strives from dispatched individual judgement towards a collective judgement regarding the new venture idea. In our frame-based process

model, we found that venture teams are encountering different degrees of frame resonance in the inception of venture projects, either leading to frame convergence (i.e., mutual understanding about a new venture idea) or frame divergence (i.e., continuing misalignment about a new venture idea) among the group of individuals. In both cases, we found that employees engaged in specific bottom-up behavioral practices to influence the judgement of the others (Kaplan, 2008). Herein, we uncovered practices corresponding to recognizing of others' perspective, expanding of these perspectives, or bridging insights by using linguistic tools or metaphors that nurtured a higher probability of frame convergence (i.e., the creative synthesis among the venture team on a specific venture idea) that is followed by the championing of a new venture idea. In contrary, behavioral practices such as defense of the own understanding, confusion of others, or bypassing specific stakeholders increasingly led to frame divergence, leaving employees behind with their ideas searching for other sponsors within the organization, ultimately failing in championing new venture ideas that leads to project termination.

The findings of *Chapter 4* contribute on individual-level determinants (Rigtering et al., 2019) that influence the new venture idea elaboration process, in which individuals seek to decide on a joint new venture idea to champion (Patzelt et al., 2021; Perry-Smith & Mannucci, 2017). Thereby, we position cognitive frames as an important antecedent of EEA, complementary to the previously identified structural organizational factors (Hornsby et al., 2002; Kuratko et al., 2005). The interaction between employees' cognitive frames during the venture inception phase determined if a new venture team can find congruence among team members and mutually champion their ideas to the senior management to receive additional funding or remain separated in their interpretations regarding ideas and therefore failing to act mutually. Particularly, we examined the entrepreneurial behavior of employees below the senior or middle management, thereby shedding light on the importance on non-managerial

employees (NMEs) within CE (e.g., Gibson et al., 2019; Zimmermann et al., 2018), that are an important source of innovative ideas (e.g., Corbett et al., 2013; Hornsby et al., 2002, 2009).

Based on the findings from *Chapter 3 and 4*, the answer to *Research Question 2* is that individual-level studies are imperative to understand CE and NVC holistically. More precisely, the findings of this dissertation pinpoint towards an increased importance of (entrepreneurial) cognition. As individuals within a corporate setting are rather rewarded by risk-aversion than risk-taking and tolerate less risk than independent entrepreneurs (Bloodgood et al., 2015; Busenitz & Barney, 1997; Levinthal & March, 1993), specific decision-making rules may help them to become entrepreneurially active and overcome organizational rigidity. Herein, *Chapter 3* corroborated that corporate entrepreneurs need to gain sufficient lean startup knowledge (i.e., cognitive learning) and entrepreneurial alertness (i.e., skill-based learning) to sustain EEA over time. Moreover, investigating cognitive underpinnings of CE in greater detail showed that individuals' cognition plays a major role for successful CE initiatives (Corbett et al., 2007; Corbett & Hmieski, 2007). Thereby, we complement research that increasingly studied organizational-level factors (i.e., management support, rewards, or supportive organizational structures) as the primary amplifiers or rigidity for EEA (Corbett et al., 2013; Hornsby et al., 2002, 2009) by accentuating how and why individual-level determinants (i.e., cognition) influence EEA. Consequently, the findings of this dissertation highlight that individual learning outcomes enable employees to sustain EEA over time even though being back on the daily job. However, *Chapter 4* showed that individual factors such as cognitive frames may function as a double-edged sword, having both impeding and amplifying effects once it comes towards a collective understanding of a new venture idea. It becomes apparent, that the human side of CE and NVC must be investigated carefully, as individual-level determinants carry a great proportion in explaining entrepreneurial actions and ultimately firm performance.

Finally, *Chapter 5* addressed *Research Question 3* that seek to understand the role of contextual factors for the collaboration of employees within new venture teams (NVTs) and how these contextual factors influence the quality of their work. Herein, our findings contribute towards understanding team-based new venture creation by highlighting the role of hierarchical cultural values in NVTs' idea generation and execution. By means of an international hackathon (i.e., #EUvsVirus), *Chapter 5* adopted a dysfunctional (Bunderson et al., 2016; Bunderson & Reagans, 2011; Greer & Kleef, 2010; Tarakci et al., 2016) and functional perspective of hierarchy (i.e., hierarchical cultural values) (Greer et al., 2018; Halevy et al., 2012; Magee & Galinsky, 2008). We found that hierarchical cultural values reduced information-sharing among team members and decreased team coordination contrary to our expectation. Thus, we confirm that NVTs from hierarchical cultures suffer a liability to hierarchy as both, the quality of the venture idea as well as the implementation speed is negatively affected. Therefore, we shed light on the role of the socio-cultural environment for the new venture idea elaboration, determining the outcomes of new venture inception phase. As we were able to access real-world data from the #EUvsVirus hackathon, our findings accentuate social dynamics in NVTs within the new venture inception phase that significantly and negatively influenced early-stage venture outcomes (Patzelt et al., 2021). In order to overcome detrimental effects of hierarchy, NVTs are obliged to establish compensating routines, such as techniques related to self-worth affirmation (Cunningham et al., 2021) or that high-status members actively integrate low-status members (Shim et al., 2021). By means of our highly controlled research setting, we were able to overcome the existing sampling bias that is encountered due to primarily focus of research on successful ventures from a retrospective standpoint rather than assessing ventures during their emergence (e.g., Davidsson & Gruenhagen, 2021; Patzelt et al., 2021).

6.2. Practical Implications

The findings of the four research projects additionally offer implications for practitioners. *Chapter 2* promotes the benefits of incremental renewal activities that potentially extend the time of strategic persistence by constantly re-adapting towards environmental demands and reducing coordination costs. However, even though the prevailing strategy remains longer in place and high investments are abandoned, inevitable punctuated discontinuous transformation might absorb prior savings. Practitioners are prompted to prepare anticipatorily to discontinuous transformation by allocating sufficient resources for error-correction and the creation of capabilities and routines. By constantly re-evaluating the environmental landscape and reacting to linear changes with incremental renewal, the size of punctuated radical changes may be diminished ensuring long-term survival.

The findings of *Chapter 3* corroborated that LST eventually is the starting point for NVC and the corresponding emergence of corporate ventures. Based on multi-dimensional learning outcomes, employees are able to sustain EEA over time, making use of distinct decision-making heuristics that help particularly to cope with entrepreneurial setbacks in the inception of every venture journey. Thus, LST proved as a valuable instrument for established firms to foster EEA and venture emergence, enabling organizations to seize novel entrepreneurial opportunities beyond the beaten path.

Chapter 4 holds implication for senior management of established firms. To engage successfully in CE and NVC, established firms are encouraged to cautiously pay attention to the human side of CE in addition to structural requirements. We argue that frame-based interactions embedded in the venture inception phase need to be considered in setting up internal corporate venture projects, paying attention to the composition of the NVT regarding the hired key personnel. However, as diverse team members may bring advantages to the

NVT, these peculiarities might promote chaos and incongruence among team members. To alleviate potential cognitive (frame-based) biases, practitioners may train key personnel equally *a priori* in entrepreneurship methodologies such as lean startup, design thinking and the business model canvas that have gained increasing attention in academia and entrepreneurship practice (e.g., Leatherbee & Katila, 2020; Micheli et al., 2019; Osterwalder & Pigneur, 2010; Ries, 2011).

Finally, *Chapter 5* has implications for practitioners and hackathon organizers around the world as it carved out two central mechanisms, namely information-sharing and team coordination, that influence the quality of results and future prospects of NVTs. To diminish the liability of hierarchy that NVTs from hierarchical cultures are facing, hackathon organizers should ensure equal conditions for NVTs across the globe by arranging working phases to cultural circumstances. Particularly, hackathon organizers should provide the right context (i.e., technological requirements, safe space, and psychological safety) and sufficient time for discussion that potentially enhance information-sharing and team coordination among NVTs. Especially in a digital environment as the #EUvsVirus hackathon, extended working phases could contribute towards equalizing the chances for global NVTs and improve the overall quality of venture ideas, their implementation speed and survival rates.

6.3. Outlook

Overall, this dissertation offered new contributions related to the relevance of CE and NVC for established firms to explore novel markets and exploit existing resources, however, additional questions arose that need to be addressed by future research. To complement the generated insights from this dissertation, more in-depth and comprehensive longitudinal research is necessary to assess the role of individuals and NVTs in CE holistically.

Particularly, this dissertation uncovered that strategic persistence and discontinuous transformation (i.e., describing a radical change event) carry a great proportion explaining

organizational-level firm performance. Despite the new contribution regarding temporal dynamics and distinct performance effects embedded in different sub-types of strategic renewal, hardly any research covered cross-level investigations that may trigger or impede the resolution of strategic persistence by means of radical change. We prompt future research to integrate individual-level decision-making biases to understand the initiation of either incremental renewal or discontinuous transformation. While this dissertation addressed negative performance implications as the trigger for discontinuous transformation in the overall business portfolio, the role of managers' cognition that may play an important role for initiating changes was not integrated. Scholars argued that managers' cognitive models translate and process environmental signals into firm-level activities (e.g., Huff et al., 1992; Kiss & Barr, 2015; Tushman et al., 1986), thereby potentially explaining the occurrence of punctuated discontinuous transformation or strategic persistence. Consequently, future research should integrate the role of managers' cognition into investigations to study managerial decision-making in favor of strategic persistence or discontinuous transformation.

Another facet of CE that needs further examinations in future research is the individual- and team-level. This dissertation primarily adopted a between-person perspective on CE and NVC to shed light on self-regulated learning and entrepreneurial behavior. However, within-person changes that potentially explain the stepwise development of EEA and entrepreneurial outcomes have only been captured vaguely. Particularly, we prompt future research to adopt a within-person perspective to further advance our understanding related to venture learning proficiency (e.g., Covin et al., 2018, 2020; Garrett & Covin, 2015). Although *Chapter 3* provided valuable insights on the composition of venture learning proficiency, future research shall investigate individual learning by means of a comprehensive longitudinal research design to capture systematic within-person growth curves. Such an approach may advance our understanding regarding what and how much is learnt by

individuals that engage in CE within established firms (e.g., Covin et al., 2018; Hardy et al., 2019).

Finally, in-depth research on social dynamics alongside the NVC process is needed across the new venture creation lifecycles (Patzelt et al., 2021), from initiation to completion. While *Chapter 4* corroborated the importance of cognitive frames of NMEs to manifest a mutual creative synthesis by integrating team members' unrelated ideas into a bigger picture, additional in-depth research is needed to assess team cognition and interpersonal team processes (Patzelt et al., 2021). Moreover, *Chapter 5* corroborated that NVTs from hierarchical cultures suffered a liability to hierarchy, however, important mechanisms such as information-sharing and team coordination seem to be the central mediators but have not been captured quantitatively. Consequently, future research shall quantitatively and qualitatively assess interpersonal processes that influence NVTs outcomes. Particularly, we propose to study the role of trust and communication within NVTs in order to investigate if coalition of team members emerge alongside the process of creative synthesis that may bias the collective judgement (Patzelt et al., 2021). Moreover, as venture creation is increasingly gaining attention, further empirical studies addressing the new venture inception are welcome to reduce the pre-existing sample bias that result from over-studying successful ventures in contrary to focus on early-stage NVTs or creative teams (e.g., Davidsson & Gruenhangen, 2021; Gray et al., 2020; Patzelt et al., 2021; Shepherd et al., 2021). Hence, a thorough understanding of the NVC process especially within a corporate entrepreneurial context is a fruitful avenue for future research.

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