Corporate Venture Management in SMEs : evidence from the German IT consulting industry

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Chapter 1

Understanding Successful Corporate Venture Management

The thesis investigates the challenge of corporations around the globe to develop new businesses. They do so in order to adapt their business portfolio to the changing environmental conditions (i.e., new technologies, new competitions and changing market demands). The failure of corporations to adapt their business portfolio caused many economic tragedies in the past. The downfall of Nokia's market leadership in the cell phone industry is a calling example. All tragedies together illustrate that the development of new businesses in anticipation of future environmental changes is essential and not easy to achieve.

The ongoing booming of founding international start-ups demonstrates that small entrepreneurial teams are an effective means to develop new businesses (see, e.g., Fritsch & Schroeter, 2011). Large corporations as well as Small and Medium Enterprises (SMEs) should be able to benefit from this form of self-organized innovation when entering novel business domains. However, entrepreneurial teams established by corporations often fail (cf. Birkinshaw & Hill, 2005). The high failure rates are, among others, attributed to the complexity that is inherent in the relationship between corporations and their entrepreneurial teams. Two examples of this complexity are given below.

First, corporations need to provide their entrepreneurial teams with *sufficient freedom* to act successfully. Freedom allows entrepreneurial teams to engage effectively in explorative activities (i.e., search, experimentation and improvisation) through which the new businesses evolve to a

mature part of the corporation (McGrath, 2001). Second, we see that these entrepreneurial teams clearly differ from independent start-ups as they are still in any form *related to the corporation* (i.e., controlled, supported or integrated). In summary, the challenge for corporate management is thus to grant entrepreneurial teams with sufficient freedom without losing control over their activities. So far, it remains however debatable how corporate management may master this challenge. Therefore, in this thesis, I investigate the guiding question: how are entrepreneurial teams managed successfully by corporate management?

The course of the first chapter is as follows. Section 1.1 gives the author's motivation for the research topic. In Section 1.2, the problem statement and the three research questions are presented. Section 1.3 provides the research objective and the research methodology. The structure of the thesis is presented in Section 1.4.

1.1 MOTIVATION

In my research, I am motivated by the *dynamic reality* in which corporations have to compete nowadays. In our globalized economy, there is an obvious need for corporations to respond rapidly when business opportunities emerge. Really, it is necessary to do so before someone else takes the chance and realizes competitive advantage. Establishing entrepreneurial teams aside the mainstream business is a legitimate path for corporations to generate organizational settings that allow them to capitalize responsively on emerging business opportunities (cf. Kuratko, 2010). However, there are two obstacles. The first obstacle is that these entrepreneurial teams often fail and the second obstacle is that it remains unclear how their success may be improved (see, e.g., Kuratko, Covin, & Garrett, 2009). The success of entrepreneurial teams is among others associated with the organizational form chosen by the corporate managers. They do establish the teams (a) as *external* subunits that operate independent from other business units or (b) as *internal* subunits that

are integrated with other business units. Below a general definition of corporate venture is provided in order to define how the term entrepreneurial team is used throughout the thesis.

Definition 1.1: A **Corporate Venture** *"is an entrepreneurial team that develops a new business for the corporation, often following the purpose to enter a novel business domain" (cf. Garrett & Covin, 2013).*

Both organizational forms (external and internal) have their merits. Establishing corporate ventures as external subunits provides the freedom and flexibility necessary to develop new capabilities. Establishing corporate ventures as internal subunits facilitates the exploitation of capabilities that do already exist in the corporation, allowing corporate ventures to take advantage of corporate strengths by achieving synergetic effects. The well-developed business intuition of the reader may lead to the preliminary conclusion that corporate ventures will achieve best results when being established as semi-autonomous subunits that are independent, yet integrated (cf. Burgers, Jansen, Van den Bosch, & Volberda, 2009).

However, it remains ambiguous how to manage corporate ventures successfully as semi-autonomous subunits (Johnson, 2012; Garrett & Covin, 2013). Research acknowledges that examining the relationship between the corporation and the corporate venture (henceforth called corporation-venture relations) will contribute to a proper understanding of effective venture management (Thornhill & Amit, 2000). Prior studies have investigated corporation-venture relations by applying (a) the resource-based view (see, e.g., Sorrentino & Williams, 1995) and (b) the organizational design-based view (see, e.g., Hill & Birkinshaw, 2012) as analytical frameworks. However, such research does not (sufficiently) take into consideration the current dynamics of the technological developments in combination with their competitive consequences.

1.2 PROBLEM STATEMENT AND RESEARCH QUESTIONS

While it is promising for corporate management to enter a novel business domain with a corporate venture, corporations often fail when taking these initiatives. The costly mistakes are attributed mostly to the mismanagement of corporate ventures (cf. Ginsberg & Hay, 1994; Birkinshaw & Hill, 2005). As stated in Section 1.1, prior research has followed (a) the resource-based view (cf. Penrose, 1959; Pitelis, 2007) and (b) the organizational design-based view (cf. Lawrence & Lorsch, 1967; Burgers et al., 2009) in an attempt to explore effective venture management practice. Alternatively, this thesis builds on (c) the dynamic capability-based view (cf. Teece & Pisano, 1994; Helfat & Peteraf, 2009). The reasoning leading to this choice is briefly given below by comparing the three views. An extensive reasoning is later provided in the literature review (Chapter 2).

Ad (a), the resource-based view assumes that an organization achieves competitive advantage through its ability to protect the resources it possesses from imitation, transfer and substitution (cf. Barney, 1991). Proponents following this view consider that venture management is associated with the effective management of resources (i.e., stocks of available factors owned and controlled by an organization) being shared among corporations and their ventures (see, e.g., Sorrentino & Williams, 1995).

Ad (b), the organizational design-based view assumes that organizations achieve competitive advantage by matching high levels of differentiation (i.e., subdivision of tasks) with high levels of integration (Lawrence & Lorsch, 1967). Proponents following this view consider that venture management is attributed to designing corporate ventures as separated subunits and integrate them at the same time with other corporate subunits (see, e.g., Burgers et al., 2009; Hill & Birkinshaw, 2012). Both views have motivated studies that explored principles for transferring resources effectively (see, e.g., Garrett & Covin, 2013) and that identified mechanisms to integrate corporate

ventures (see, e.g., Burgers et al., 2009). However, the literature review (Chapter 2) shows that studies building on either of the two views have *not yet explained corporate venture success sufficiently*. Guidelines for effective corporate venture management are consequently not provided so far by studies that follow the resource-based view or the organizational design-based view. One explanation for this lack of managerial implications may be associated with the key shortcoming of both views, viz. the dynamics in the business environment.

Ad (c), the dynamic capability-based view is chosen in the thesis as it addresses this shortcoming by assuming that organizations achieve competitive advantage through the continuous reconfiguration of their resource base in adaptation to changes in the business environment (see Teece, 2012). The reconfigurations are the outcome of routines (Eisenhardt & Martin, 2000) which are in this thesis defined as the regular and recurring meetings between the corporate management and the venture management. The terms corporate management and venture management are defined below.

Definition 1.2: **Corporate Management** *is the group of executive managers of the corporation supervising venture managers, sometimes also referred to as corporate managers.*

Definition 1.3: **Venture Manager** *is the leader of a corporate venture team, sometimes also referred to as venture management.*

Although the context is specified and it is clear to which outcome the routines refer to in this thesis, it is still difficult, if not impossible to measure the routines directly, e.g., for investigating their effects on corporate venture success (cf. Strehle, Katzy, & Davila, 2010). The best we can state is that the interaction between corporate management and venture management reflects the routines (cf. Becker, 2004). Corporate managers exercise oversight and control (tight or loose) over venture managers through the interactions carried out in the routines. Corporate management defines thereby the autonomy that is granted to venture managers at various degrees and dimensions.

Autonomy is thus an essential aspect of the routinized interaction among corporate management and venture management, on which my research is focused. Correspondingly, the thesis investigates (1) what kind of autonomy is granted by corporate management to venture managers and (2) how the distinct autonomy dimensions influence corporate venture success. The research approach chosen promises to explore how corporate ventures are managed effectively by corporate management.

Considering the fact that so far guidelines for effective corporate venture management are missing, the following problem statement (PS) is formulated.

PS: How can corporate management effectively manage corporate ventures?

In order to answer the problem statement, three research questions (RQs) are formulated. The research questions are guiding the research carried out in this thesis.

An essential assumption in this thesis is that autonomy is the authority of individuals to make decisions without approval (cf. Brock, 2003). The authority to make decisions may be associated with a broad range of conditions (cf. Birkinshaw & Hill, 2005). However, the literature review (Chapter 2) shows that the autonomy dimensions reflecting these conditions are not determined properly. In order to generate a comprehensive conceptual understanding of the autonomy that venture managers may enjoy, I formulate the first research question as follows.

RQ1: What are the dimensions reflecting the autonomy that corporate management grants to venture managers?

Having the autonomy dimensions at my disposal, I noticed that a construct (a measurement instrument) that enables us to measure the autonomy dimensions is not yet available. Therefore, I formulate the second research question as follows.

RQ2: *How can the autonomy dimensions identified by RQ1 be operationalized in a construct that enables us to measure the autonomy of venture managers?*

Having operationalized a construct for measuring, I noticed that the autonomy of venture managers does not indicate to what extent and in which dimension the autonomy is relevant for effective corporate venture management. To make an assessment based on the impact that the autonomy dimensions have on corporate venture success, I formulate the third research question as follows.

RQ3: *How are the autonomy dimensions related to the success of the corporate ventures?*

Answering the three research questions will lead to an answer of the PS. For achieving an answer to the RQs we need a clear research objective and a research methodology.

1.3 RESEARCH OBJECTIVE AND RESEARCH METHODOLOGY

The research objective of this thesis is to understand *how* corporate ventures should be managed by the corporate management in order to obtain the qualification of 'successful' corporate venture. For addressing the research objective, the thesis performs empirical research according to the following four steps:

(1) Exploring the autonomy of corporate ventures

(2) Operationalizing a multidimensional autonomy construct

(3) Evaluating and adapting the autonomy construct

(4) Applying the autonomy construct

The results of each research step forms a part of the outcome that answers the research questions (RQs) and the problem statement (PS). The research steps are described in Subsections 1.3.1 to

1.3.4 . An overview of the four research steps together with the research methodology and the data sets applied is given in Table 1.1.

1.3.1 EXPLORING THE AUTONOMY OF CORPORATE VENTURES

In the first step, case study research is carried out (see Chapter 3). The aim is to answer RQ1 by exploring the dimensions that determine the autonomy of venture managers based on qualitative research. A series of thirteen interviews is conducted with corporate managers (CEOs) and venture managers of seven technology-based German SMEs in order to examine the autonomy that corporate management grants to venture managers in real-life settings. Using grounded theory as an analytical methodology (cf. Glaser & Strauss, 1967; Turner, 1983), interviews are transcribed and coded. The explored autonomy dimensions are compared with those in literature for further characterization.

1.3.2 OPERATIONALIZING A MULTIDIMENSIONAL AUTONOMY CONSTRUCT

The second step is carried out in Chapter 4 with the aim to operationalize an initial multidimensional construct that allows to measure the autonomy of venture managers. Results contribute to answer RQ2. A theoretical model is developed that associates the explored autonomy dimensions (Step 1) with corporate venture success. The measures of the theoretical model are subsequently operationalized. For evaluating the appropriateness of the operationalizations in the context of corporate ventures, twelve managers involved in corporate venture management (corporate managers and venture managers) are interviewed to assess the relevance of each measure. The outcome of the second step is an initial multidimensional autonomy construct.

Definition 1.4: **Construct** *describes in this thesis a measurement instrument. In particular, the term multidimensional (autonomy) construct refers to an instrument that measures the autonomy of venture managers at various dimensions.*

1.3.3 EVALUATING AND ADAPTING THE CONSTRUCT

In the third step performed in Chapter 5, the validity and the reliability of the initial multidimensional autonomy construct (Step 2) is evaluated. Therefore, the evaluation procedure as described by Field (2013) is applied. The procedure includes four stages. In the *first stage*, the correlation matrix is inspected, the Kaiser-Meyer-Olkin index is calculated and the Bartlett's test of sphericity is conducted in order to test whether data is appropriate for Principal Component Analysis. In the *second stage*, Principal Component Analysis is performed in order to extract the components from the data. Therefore, the eigenvalues of the (a) extracted components are checked according to the Kaiser's Criterion, (b) the Scree Plot of the eigenvalues is inspected and (c) Parallel Analysis is conducted to cross check the visual inspections. In the *third stage*, Varimax Rotation is performed with the extracted components. General threshold criteria (cross-loadings <.0 and component loadings >.6) are checked for each item in the rotated component solution. Items not fulfilling these thresholds are excluded. In the *fourth stage*, Cronbach's Alpha coefficients are calculated to evaluate the reliability of the component solution.

1.3.4 APPLYING THE AUTONOMY CONSTRUCT

In the fourth step carried out in Chapter 6, the evaluated autonomy construct is applied to answer RQ3. Linear multiple regression analysis is performed in two stages by using a data set of 87 venture managers of distinct SMEs in the German IT consulting industry. *First*, regression analysis is conducted to investigate the relation between corporate venture success and the autonomy that corporate management grants to venture managers at distinct dimensions. *Second*, interaction terms are included in the multiple regression analysis to illustrate how the relations between the

autonomy dimensions and corporate venture success are influenced when corporate management pushes venture managers to achieve exploitative objectives.

Table 1.1: Research Steps

Research Steps		Ch.	Research Methodology	Data Set	PS	RQ1	RQ2	RQ3
Introduction		1	-		✓	✓	✓	✓
		2	Literature Review		✓	✓	✓	✓
Step 1	Exploring the Autonomy of Corporate Ventures	3	Case Studies and Literature Review	A		✓		
Step 2	Operationalizing a Multidimensional Autonomy Construct	4	Literature Review and Interviews	B			✓	
Step 3	Evaluating and Adapting the Autonomy Construct	5	Statistical Analysis	C			✓	
Step 4	Applying the Autonomy Construct	6	Statistical Analysis	C				✓
Discussion and Conclusion		7	-		✓	✓	✓	✓

Data set

A: 13 interviews in 7 SMEs in high-tech industries with corporate managers and venture managers (see Appendix A)

B: 12 interviews in 6 SMEs in high-tech industries with managers involved in corporate venture management either as corporate managers or venture managers (see Appendix B)

C: 87 valid survey responses from venture managers of SMEs in the German IT consulting industry (see Appendix C)

In my research I focus on SMEs. This implies that I do not take into account the conditions of large corporations. I focus on SMEs because they are the main drivers of innovation across many industries (cf. World Economic Forum, 2015). The innovation capacity is known to be associated with dynamic capabilities (routines) (cf. Teece, 2012). It is therefore reasonable to assume that dynamic capabilities are well developed within SMEs. Correspondingly, it seems promising to focus on SMEs to investigate corporate venture management from a dynamic capability-based view. Moreover, the assumptions of (a) the resource-based view and (b) the organizational design-

based view are of limited relevance for SMEs due to the small size of these firms. Ad (a), SMEs have fewer resources to share than large firms which limits the opportunity for corporate ventures to benefit from corporate strengths. Ad (b), SMEs are also less diversified in itself which questions the necessity to integrate corporate ventures with other corporate subunits. Hence, the effects assumed by the resource-based view and the organizational design-based view seem to be of limited relevance to explain corporate venture management in SMEs.

1.4 STRUCTURE OF THE STUDY

The thesis consists of seven chapters. They are described briefly below. The structure of the thesis is illustrated in Figure 1.1.

Chapter 1: **Understanding Successful Corporate Venture Management.** The chapter introduces the reader to the thesis by presenting the motivation, the problem statement and three research questions. It further defines the research objective and the research methodology applied to answer the research questions and the problem statement. An overview of the structure of the thesis is also given.

Chapter 2: **Related Work and Theoretical Embedding.** In this chapter the literature review conducted for the thesis is provided. First, the chapter discusses related research that positions corporate ventures as a means for corporations to realize a dual structure to achieve ambidexterity. Second, the chapter gives an overview of the analytical frameworks applied in prior research to investigate the management of corporate ventures. The dynamic capability-based view is discussed as an alternative analytical framework that defines corporation-venture relations in the form of routines.

Chapter 3: **Exploring the Autonomy of Corporate Ventures.** RQ1 is addressed in this chapter. The qualitative research carried out to explore the autonomy of corporate ventures is

presented. Case studies demonstrate that venture managers have a pivotal role to develop new business by engaging in explorative learning with their teams. Four autonomy dimensions, namely functional autonomy, decision autonomy, job autonomy and strategic autonomy are revealed.

Chapter 4: Operationalizing a Multidimensional Autonomy Construct. This chapter contributes to RQ2 by operationalizing the four autonomy dimensions (explored in Chapter 3) in an initial four-dimensional autonomy construct. This autonomy construct is an instrument that allows to measure a broad spectrum of autonomy that venture managers may enjoy.

Chapter 5: Evaluating and Adapting the Autonomy Construct. This chapter provides a conclusive answer to RQ2. The initial four-dimensional autonomy construct (operationalized in Chapter 4) is evaluated and adapted statistically in Chapter 5. The scale evaluation procedure described in Subsection 1.3.3 is therefore applied. As a result of this procedure, two autonomy dimensions were excluded for ensuring the validity and reliability of the autonomy construct. Thus, a two-dimensional construct is evaluated.

Chapter 6: Applying the Autonomy Construct. This chapter answers RQ3 by testing quantitatively the power of the two-dimensional autonomy construct to explain corporate venture success. In general, the results confirm the relevance of the autonomy construct. Based on the statistical results of the analysis, a model for effective corporate venture management is evaluated, which gives an answer to the problem statement.

Chapter 7: Answering the Problem Statement and Identifying the Conclusions. The three research questions are answered in the first section, which contributes to answering

the problem statement. The final answer to the problem statement is given in the second section. The theoretical and practical contributions are identified as conclusions in the third section. The fourth section reports the limitations of the research. The last section concludes with recommendations for future research directions.

Figure 1.1: Thesis Structure