Universiteit
Leiden
The Netherlands

Understanding the heterogeneity of corporate entrepreneurship programs

Selig, C.J.

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2 Related work & theoretical embedding

This chapter aims to deepen the understanding of CE. Moreover, it explains why the design and management of CE programs require further research. For this purpose, in Section 2.1, the different categories of CE will be described. This is followed by the theoretical embedding of our study in Section 2.2. In Section 2.3, the theoretical framework will be presented.

2.1 Understanding entrepreneurial activities in established companies

Section 2.1 starts with a short overview of how CE differs from related research areas. Subsequently, the three different sub-categories of CE (see Subsections 2.1.1 to 2.1.3) will be described to deepen the understanding of the heterogeneity of CE. In the last part of the section, the challenges of managing CE more effectively are described.

Adapting to changing market conditions is one of the key challenges of the 21st century. In that respect, entrepreneurial activities within established companies become increasingly important as a managerial way to support the organizational transformation (see Teece, 2016; Kuratko, 2009). From a scientific perspective, the activities can be subdivided into (a) *corporate entrepreneurship* and (b) *intrapreneurship* (see Schindehutte et al., 2019; Blanka, 2018). As previously described in Section 1.3, the concept of CE focuses on formalized entrepreneurial activities that are initiated top-down with the aim to support the creation of new businesses and the organizational transformation. In contrast, intrapreneurship[4] focuses on rather informal entrepreneurial activities that are driven by individuals without being mandated by the company (see Rigtering & Weitzel, 2013; Pinchot III, 1985). According to these two different streams of activities, the research conducted in this study belongs to the stream of CE studies, as it focuses on the design and strategic use of CE activities.

Over the past decades, there have been various studies defining what CE is and what it is not (cf. Schindehutte et al., 2019; Sharma & Chrisman, 2007; Zahra, 1993). This thesis follows Definition 1.3, which is reflecting that CE activities can be (a) formally set up and (b) designed and used for different objectives. For a better understanding, there are different sub-categories that describe the various phenomena covered by CE (cf. Kuratko & Audretsch,

[4] Intrapreneurship is a combination of the two terms intra-organization and entrepreneurship. It focuses on the individual, entrepreneurial behavior of employees within an established company (see Blanka, 2018).

2009; Zahra & Covin, 1995; Guth & Ginsberg, 1990). Figure 2.1 illustrates the categorization applied. It consists of the three sub-categories (a) corporate venturing, (b) strategic entrepreneurship, and (c) corporate nurturing.

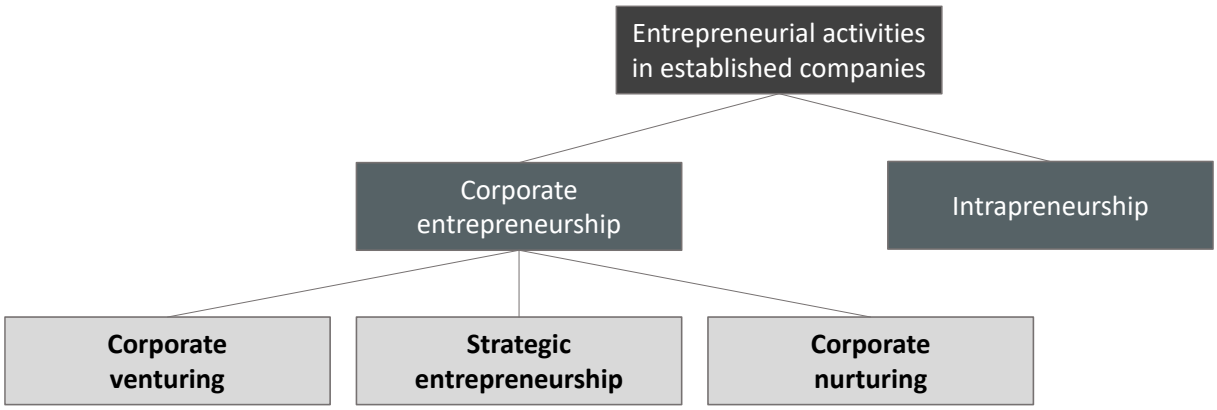

Figure 2.1: Research on entrepreneurial activities in established companies

In Subsections 2.1.1 – 2.1.3, the three sub-categories will be described, and a definition of each sub-category will be provided.

2.1.1 Corporate venturing

As one key element of the CE concept, corporate venturing focuses on the creation of new businesses within the context of an established company, which is defined as follows (see, e.g., Narayanan et al., 2009; Guth & Ginsberg, 1990).

> **Definition 2.1** *Corporate venturing* is defined as all structures and processes that are using (internal and external) entrepreneurial approaches to developing rather discontinuous innovations in the context of an established company.

The creation of new businesses can be subdivided into the following three approaches.

1) *Internal corporate venturing*: Using internal means by identifying and leveraging hidden innovation potential within the company, e.g., an internal corporate incubator that supports the employees in implementing their innovation ideas.
2) *External corporate venturing*: Using innovations from external sources, either through (a) collaborating with startups or (b) investing in startups, e.g., with a corporate venture capital unit that builds a portfolio of strategically relevant startup investments.

3) *Cooperative corporate venturing*: Applying a hybrid version of internal and external corporate venturing by combining internal and external means, e.g., through the creation of joint ventures.

These three different approaches to drive the creation of new businesses will serve as a basis for the classification of the organizational design of CE programs in Chapter 4.

2.1.2 Strategic entrepreneurship

Strategic entrepreneurship, formerly known as strategic renewal (see, e.g., Mazzei et al., 2017; Kuratko & Audretsch, 2009; Guth & Ginsberg, 1990), covers different types of innovation with the aim of achieving a competitive advantage (Mazzei, 2018). According to the understanding of strategic entrepreneurship, innovation is not limited to new products or new services but also takes place on the levels of corporate strategy, corporate organization, and business model, as well as on the market side (see Kuratko et al., 2015; Covin & Miles, 1999). Hence, corporate venturing differs from strategic entrepreneurship since creating a new business is not mandatory for this concept (Kuratko & Audretsch, 2009).

> **Definition 2.2** *Strategic entrepreneurship* is focusing on the transformational aspect of entrepreneurial activities within an established company.

In practice, strategic entrepreneurship has the following five different manifestations (see Kuratko & Audretsch, 2009). An example is given (in italics) at the end of each description.

1) *Business model reconstruction* describes the (re-) design of a company's core business model(s), aiming at differentiating the company from its competitors in a beneficial way. *Rolls-Royce shifted from selling aircraft turbines to offering them as a service – "power by the hour" – which is one example for reconstructing a business model.*
2) *Sustain regeneration* refers to the capability of companies to develop a continuous stream of new products and/or new services, which are introduced to the market. *Amazon continuously experiments with new products and services as one example of sustained regeneration.*
3) *Strategic renewal* relates to fundamental changes in a company's strategy to improve the positioning of a company in its competitive environment. *Microsoft's shift from pushing their operating system (Windows) towards providing their services to all users, independent from the used operating system.*

4) *Organizational rejuvenation* aims at innovations that primarily address the organization, e.g., by creating processes, capabilities, and structures that enable more entrepreneurial activities. *SAP has introduced design thinking throughout the whole company to become more customer-centric and more innovative.*
5) *Domain redefinition* focuses on the proactive creation of a completely new product-market arena that offers a basis for sustained competitive advantage. *The introduction of the iPad by Apple is one example of domain redefinition as it has created a totally new market in-between smartphones and laptops.*

The five manifestations illustrate the diversity of the CE concept and can serve as indicators for the possible areas of value creation discussed in Chapter 6.

2.1.3 Corporate nurturing

Corporate nurturing has recently evolved as the third sub-category of CE, complementing the ones described in 2.1.1 and 2.1.2 (Shankar & Shepherd, 2019). The need for an additional sub-category emerged out of the rather novel phenomena of different, formalized startup engagement programs, which do not fit into the scope of corporate venturing or strategic entrepreneurship. These startup engagement programs show different manifestations in practice, e.g., external corporate accelerators (Shankar & Shepherd, 2019) or startup sourcing programs (Kurpjuweit & Wagner, 2020). Corporate nurturing is focusing on these types of engagement with startups and is defined in the course of this work as follows.

> **Definition 2.3** *Corporate nurturing* is defined as all means to gain access to external innovations of new ventures, either by direct insourcing of innovations or indirectly by securing the option to access them.

Generally, there are two different paths for companies to pursue corporate nurturing. They are (a) nurture innovations and (b) nurture ecosystems. *Nurturing innovations* focus on scouting and insourcing innovations that have a rather near-term impact on the company's current core business, e.g., by running proof of concepts with startups to identify potential use cases of new technologies. *Nurturing ecosystems* is focusing on supporting startups (external ventures) with services and resources with the aim to create value in the long-term, e.g., by investing in startups to create a portfolio of potential customers and partners to expand the current market (Shankar & Shepherd, 2019). The main difference between the two paths is (a) the time horizon and (b) the directness of the value creation.

The phenomenon of corporate nurturing was already mentioned in early 2000 (Miles & Covin, 2002) but did afterward not experience much attention. This has recently changed due to the increasing efforts of CE programs that are focusing on engagement with external startups (e.g., Kurpjuweit & Wagner, 2020; Shankar & Shepherd, 2019).

2.1.4 CE and challenges of an effective management

The three sub-categories described above reflect the heterogeneity of the CE concept, which ranges from insourcing external innovations (corporate nurturing), creating new businesses (corporate venturing) to the transformation of the company (strategic entrepreneurship). At the same time, the definitions show a certain overlap, e.g., corporate venturing and corporate nurturing, which both cover the collaboration with external startups. Even though we see an ongoing discussion regarding the sub-categories CE (cf. Schindehutte et al., 2019; Mokaya, 2012; Guth & Ginsberg, 1990) and no clearly defined boundaries between them, the sub-categories are useful for understanding the variety of CE in practice.

Although the overall value of CE is widely recognized (see Covin & Miles, 2007; Zahra & Covin, 1995), the effective management of CE activities on a more operational level seems to remain challenging (Hill & Georgoulas, 2016). This can be observed, for example, based on the phenomenon that many CE activities are terminated after a short period of time (see, e.g., Ma, 2020; Burgelman & Välikangas, 2005), often before they can develop their value, only to be restarted a few years later (Burgelman & Välikangas, 2005).

At least four reasons exist why both managing and operating CE programs are a challenge for established companies. We will describe the reasons below.

1) *Level of analysis*: On the firm-level, different types of value creation have been linked to CE, such as improved financial performance, increased innovativeness, higher profitability, or organizational learning (see, e.g., Kuratko & Hoskinson, 2019; Schindehutte et al., 2019; Narayanan et al., 2009; Zahra, 1995). However, when it comes to understanding the value creation of CE activities on the program-level, the concrete outputs are often unclear (Hill & Georgoulas, 2016).
2) *Subject of investigation:* At present, a high degree of dynamism is observed in practice with regard to the emergence of novel organizational designs at the program-level. As a result, there is increasing ambiguity since (a) in some cases, the same terms are used

to describe different organizational designs, or (b) the same organizational design is described with different terms (cf. Kurpjuweit & Wagner, 2020; Shankar & Shepherd, 2019; Weiblen & Chesbrough, 2015).

3) *Lack of comparability:* Even though some studies investigate the objectives or outputs of CE programs, there is, to the best of my knowledge, a lack of studies that compare the CE program according to their value creation. This has been reported as one reason for the uncertainty the corporate management is facing when selecting the suitable CE program for achieving the desired goal (Hill & Georgoulas, 2016).
4) *Performance measurement:* Studies that are investigating the performance of CE, often focus on purely financial measurements only (Zahra & Hayton, 2008). However, such an exclusive focus on the financial value does not reflect the heterogeneity of the outputs that can be achieved by CE, which leads to uncertainty about the range of value creation of CE (Bierwerth et al., 2015).

It is therefore not surprising to observe that some CE programs are charged with different or even contradictory objectives (Hill & Birkinshaw, 2008) and that sometimes the results of CE activities are unintended or not even recognized by the management of the company (e.g., Hill & Georgoulas, 2016; Keil et al., 2009). In order to address this issue in the management of CE programs, our study focuses on understanding (a) the differences in the organizational designs and (b) the value creation of CE programs.

The next paragraphs will focus on describing *how* the RQs and the research design are addressing the four reasons for challenges in the management of CE programs. The research design itself is addressing the issue regarding *the level of analysis* by focusing on the organizational designs and value creation of CE programs, which will extend the current knowledge base about CE activities on the program-level.

- RQ1 (What are the different types of CE programs?) and the *subject of investigation*: Defining CE programs by identifying organizational design elements that are suited to systematically describe and distinguish the various CE programs, provides a clear understanding about the subject of investigation, independent from “names” or subjective interpretations of the interviewees. This will help to understand the heterogeneity of organizational designs of CE programs and deliver practitioners an overview of elements for designing and implementing a CE program.

- RQ2 (What types of outputs are created by CE programs?) and the *performance measurement:* Developing a harmonized set of outputs that is valid across the different CE programs sets a basis for future research that may aim at understanding what type of performance measurement is required to address the heterogeneity of CE outputs.
- RQ3 (Can causal relationships between CE programs and their outputs be identified?) and the *lack of comparabilit*y: By identifying relationships between the CE programs and the various CE outputs did improve knowledge about the differences in the value creation of CE programs. This will help practitioners in selecting appropriate CE programs for achieving a desired objective and will set a basis for future studies about the value creation of CE on a program-level.

To conclude, answering the three RQs improves the understanding of the heterogeneity of CE programs and is in line with Hill and Georgoulas (2016), who state: "*Beginning with the heterogeneity of forms of ICV* [internal corporate venturing]*, and of venturing more broadly, we believe that considerable scope exists for comparisons of the practices, challenges encountered, and outcomes associated with (a) dispersed versus focused modes of ICV, (b) different types of ICV units, and (c) alternative forms of CV* [corporate venturing] *(such as ICV, CVC, joint ventures and acquisitions). At present, little is known regarding whether and how the value created by these various forms varies systematically, creating considerable uncertainty in their selection by managers" (Hill & Georgoulas, 2016, p.36).*

In contrast to their conclusion, in our study, we will focus on CE programs only. However, the need for a more comparative understanding with a focus on the value creation and organizational designs is even increasing, as in practice, novel CE programs are emerging.

2.2 Theoretical embedding – understanding CE programs and their differences

Section 2.2 will focus on the theoretical embedding of our study. In this course, the three perspectives of (a) the *dynamic capabilities-based view*, (b) the contingency theory, and (c) the configuration theory are evaluated in Subsections 2.2.1 - 2.2.3. We remark that both, the contingency theory and the configuration theory, belong to the *organization design-based view*. Section 2.3 will present the most suited theoretical perspective, which will be linked with the three RQs to define the theoretical framework of our study.

As shown in Figure 2.2, our study covers three topics (linked to the three RQs) that play a role in choosing the appropriate theoretical perspective. First, the organizational design of CE programs. Second, the value creation of CE programs. And third, the relationship between organizational design and value creation and the potential impact of certain structural or contextual elements on these relationships. The appropriate theoretical perspective should, in the best case, be suitable for examining all three topics.

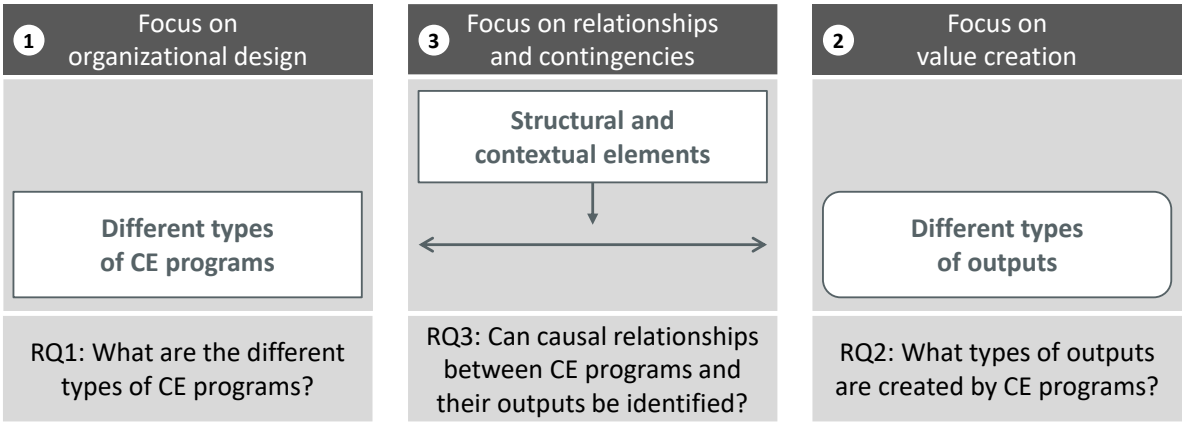

Figure 2.2: Different foci to understand the designs and value creation of CE programs

2.2.1 Dynamic capabilities-based view

The dynamic capabilities-based view focuses on the organizational abilities to adapt towards changing market conditions (see Wilden et al., 2013; Teece et al., 1997) and is meanwhile well acknowledged in strategic management and organizational design research (see, e.g., Bogers et al., 2019; Barreto, 2010). In order to adapt to changing market conditions, the companies must be capable of reconfiguring their available resource base (Barreto, 2010). This can be achieved through dynamic capabilities (Eisenhardt & Martin, 2000). In that sense, dynamic capabilities are defined as follows.

> **Definition 2.4** *Dynamic capabilities* are the processes of an organization that are used to adjust its resource base by reconfiguring, integrating, creating, or releasing resources in order to create a better fit with the market environment.

Companies that are capable of implementing effective routines of resource reconfiguration are more likely to sustain success, as the risk of organizational inertia and path dependencies is reduced (see O'Reilly & Tushman, 2008). The dynamic capabilities can be sub-divided according to the respective activities into the three types of (a) *sensing*, (b) *seizing,* and (c) *reconfiguring* (see Wilden et al., 2013; Teece, 2007).

- *Sensing* describes the capability to explore new business opportunities based on the assessment of technological or societal trends, which forms the basis for identifying relevant changes and emerging opportunities at an early stage.
- *Seizing* describes the capability to create a new product or service (based on identified opportunities), which requires, for example, testing business models, allocating resources, and capturing value.
- *Reconfiguring* describes the capability of an organization to adjust or reshape its resource base, such as assets, structure, ecosystem, and strategy, to ensure that they are aligned with changing market parameters.

Following the understanding described above, CE programs can be seen as processes that are implemented to execute the three types of activities (see Bogers et al., 2019; Teece, 2016; Yiu & Lau, 2008). In a recent study, different external CE programs were investigated according to their potential to strengthen the sensing, seizing, and reconfiguring activities of a company (Enkel & Sagmeister, 2020). That study has shown that CE programs differ by their value creation. Moreover, multiple CE programs can be used in a complementary manner, resulting in a strengthening of the dynamic capabilities of an organization.

Even though *value creation* is an important topic for research on dynamic capabilities, the precise understanding of value creation differs considerably. The dynamic capabilities-based view focuses on routines that lead to changes in a company's resource base. The focus on how (e.g., the routines) and their impact (e.g., reconfiguration, integration, creation, or releasing – see Def. 2.4) differs per RQ in our study for at least two reasons. First, RQ1 addresses differences in organizational designs of CE programs. It focuses on the structural characteristics of CE programs rather than on the process perspective that the dynamic capabilities-based view applies. Second, RQ2 addresses the different ways by which the CE programs create value. The emphasis is on the specific outputs created by CE programs, such as new products or new technological know-how. This type of value creation differs from the broader perspective of the dynamic capability-based view, which focuses on the impact of the four capabilities of reconfiguring, integrating, creating, or releasing the company's resources. Since (a) these two RQs form the basis for answering the third RQ and (b) the dynamic capability-based view does not seem to be suitable for answering them, the latter is discarded as a theoretical perspective for our study.

Besides the dynamic capabilities based-view, there are additional ones that follow a similar focus, e.g., the organizational learning or the competence based-view (Mintzberg et al., 2009). Based on the same line of reasoning described above, they were also discarded as a theoretical perspective for our study. In our search for an appropriate theoretical perspective, we will discuss the contingency theory (2.2.2) and the configuration theory (2.2.3). Both belong to the organizational design-based view as potential perspectives.

2.2.2 Contingency theory

Researching organizational designs has a long history in organizational science and strategic management studies. Over the last decades, different perspectives have emerged to improve the investigations of organizations and organizational units.

One of the most influential frameworks is the *contingency theory* which has been frequently applied in research (van de Ven et al., 2013), as well as in practice, e.g., McKinsey's 7-S framework (Pascale & Athos, 1981). The rise of contingency theory has contributed to (a) a better understanding of different types of organizations and (b) why some of them perform better than others. In the course of this work, contingency theory is defined as follows.

> **Definition 2.5** *Contingency theory* is defined as the understanding that the performance of an organization or organizational unit depends on the fit between certain design parameters and the external environment.

This definition reflects the key elements of the contingency theory, which are (a) the optimal organizational structure is determined by external contingencies and (b) internally consistent organizational structures that have a fit with the external contingency, show a better performance in achieving desired outputs (see van de Ven et al., 2013; Donaldson, 2002).

Studies that are using contingency theory aim at explaining how differences in the organizational structure are influencing the performance in relation to a certain contingency, such as technology or environment (Donaldson, 2002). Moreover, rather simplistic methods are applied that use only one element at a time to explain differences in performance (van de Ven et al., 2013). The relationship between the respective contingency and the structural element is assumed to be unidirectional and linear (Meyer et al., 1993) or in some cases curvilinear (Donaldson, 2002).

Table 2.1 presents five key assumptions based on a publication by Meyer et al. (1993) that is characteristic of the contingency theory approach.

Key assumptions of research	Manifestation in contingency theory
Dominant mode of inquiry	*Reductionistic analysis* – focuses on understanding the different parts of an organization separately. Assumes that aggregating the knowledge of each of them will result in a holistic understanding.
Social system cohesion & constraint	*Aggregates of weakly constrained components* – assumes that the respective organizational components are loosely connected subsystems, whereby each of them can be adjusted individually.
Relationship (impact) among attributes	*Unidirectional and linear* – the relationships between the few elements that are analyzed are assumed to be simple causal relationships that show a unidirectional and linear behavior.
Equilibrium assumption & mode of change	*Quasi stationary equilibrium* – following a static view that operationalizes the concept of fit as static equilibrium. In this view, changes are assumed to occur incrementally and continuously.
Effectiveness assumption	*Determined by situational context* – following the understanding that an effective (successful) organizational structure is mainly influenced by the situational context of the company.

Table 2.1: Elements of contingency theory research (Meyer et al., 1993)

Over the past decades, criticism regarding the contingency theory has evolved. The first criticism is the *suitability for different types of environments*. Whereas the contingency theory has provided relevant insights for organizations into relatively stable and simple environments, the theory seems fallible (and therefore not suited) for rather complex and dynamic environments (van de Ven et al., 2013). The second criticism is the *reductionistic approach* which implies that it is possible to understand an entire organization by investigating certain parts of it separately (van de Ven et al., 2013). This may happen in cases but not in general. The third criticism regards the *unidirectional and linear relationships* that are assumed. The unidirectional relationship ignores the mutual influences the multiple elements of an organization can have on each other (Meyer et al., 1993).

Reflecting on the five manifestations of the key assumptions of contingency theory on the three RQs leads to the following conclusion. The general understanding that certain structural or contextual elements influence the performance in achieving certain objectives might be true. The conclusion contributes to the focus of our study. However, the three well-defined criticisms are also relevant to answer our RQ. Below we reconsider the power of the arguments that reside in the manifestations, and then we investigate the three points of criticism mentioned above to a larger extent.

First, the lack of *suitability in complex and dynamic environments*. The environment of CE programs can be understood as dynamic due to at least these three circumstances.

1) Novel organizational forms of CE programs are currently emerging in practice, which makes the subject of investigation itself dynamic.
2) CE programs are used to support organizational change, which then leads to changes that alter the core organization as the direct environment of the CE program.
3) CE programs are often used to address challenges of changing market parameters, which means that the environment is dynamic as well.

Next to the dynamic elements, it holds that to study CE programs, multiple environments must be considered, such as the intra-organizational context as well as the external context, which makes the analysis complex.

Second, the *reductionistic approach* (analyzing one element at a time) does not seem to be well suited to define and distinguish the different organizational designs. This is due to the fact that CE programs are multidimensional organizational units that exhibit a high degree of heterogeneity (see Gutmann, 2018; Hill & Georgoulas, 2016). Examining the various CE programs by looking at only one design element at a time does neither reflect the heterogeneity of CE programs nor the small differences between rather similar designs.

Third, the assumption of *unidirectional and linear relationships* does not mirror the complex organizational context in which CE programs are embedded. For instance, let us assume that CE program activities and outcomes have an impact on the core business. Based on this assumption, we provide two occurrences that may happen: (1) a new product is developed that partially cannibalizes the sales of an existing product, and (2) a digital sales channel is developed that complements existing sales activities. We believe that as a result, the following would happen: (a) changes in the core organization may, in turn, impact expectations for CE

programs and (b) lead to changes in their objectives or orientation. These reciprocal relationships contradict the contingency theory.

To conclude, an approach that follows contingency theory is not appropriate as a theoretical framework for our study. Focusing on only one variable seems too simplistic to examine and distinguish the rather complex organizational designs of CE programs. However, building on the basic ideas of contingency theory seems to be a promising avenue that can be followed to understand organizational designs.

2.2.3 Configuration theory

This subsection will focus on the configuration theory, which is also known as the multi-contingency theory (Snow et al., 2006). It has emerged out of the rich theoretical foundation of the contingency theory (see van de Ven et al., 2013). In general, the configuration theory differs in at least five aspects from the contingency theory (summarized in Table 2.2). Similar to contingency theory, the internal and the external fit are at the core of the investigations.

To understand the internal fit, research focuses on identifying organizational configurations, which are multidimensional combinations of organizational design elements that commonly occur together (see van de Ven et al., 2013; Meyer et al., 1993). The focus on (a) multiple structural elements, (b) contingencies, and (c) performance outputs is characteristic of the configuration theory and fully different from the way contingency theory deals with these three elements. It is expected that focusing on multiple elements will lead to a more holistic understanding of the organization (Snow et al., 2006).

In the course of this work, the configuration theory is defined as follows.

> **Definition 2.6** *Configuration theory* is defined as a theory providing a holistic understanding about organizations by (a) investigating configurations, consisting out of multiple organizational design and performance elements that commonly occur together, and (b) their fit with different external contingencies.

Table 2.2 presents five key assumptions based on Meyer et al. (1993) that characterize research using configuration theory.

Key assumptions of research	Manifestation in contingency theory
Dominant mode of inquiry	*Holistic synthesis* – focusing on a holistic understanding with the basic assumption that the parts of an organization derive their meaning from the whole and cannot be understood separately.
Social system cohesion & constraint	*Configuration of strongly constrained components* – Organizations are understood as tightly coupled connections of the different parts of a company with more or less strong relationships between them.
Relationship (impact) among attributes	*Reciprocal and nonlinear* – the relationships between the different elements of an organization are assumed to be reciprocal and effects show a nonlinear behavior.
Equilibrium assumption & mode of change	*Punctured equilibrium* – organizations alternate between different states. Change tends to be episodic and discontinuous, as configurations are rather stable up to a certain pressure to change.
Effectiveness assumption	*Equifinality concept* – acknowledges that different organizational designs exist which are suited equally well to achieve a certain objective within the same context.

Table 2.2: Elements of configuration theory research (Meyer et al., 1993)

Two well-known examples for configurations are (a) simple structure, machine bureaucracy, professional bureaucracy, divisionalized form, and adhocracy (Mintzberg, 1981) and (b) defender, prospector, analyzer, and reacator (Miles et al., 1978). Both examples focus on the firm-level. However, configuration theory has also been applied on other levels of analysis, such as the unit-level like a department or program within a larger organization (see Biniari et al., 2015; Hill & Birkinshaw, 2008) or on the individual-level (Meyer et al., 1993). Depending on the level of analysis, the elements to describe the configuration are different (Dess et al., 1993). For example, describing configurations on the firm-level uses design elements such as the level of centralization, while on the individual-level, elements such as personality traits are used. In general, the configuration theory follows the equifinality concept (see Table 2.2), which assumes that there are several ways (configurations) that are suited equally well to achieve a certain objective (see, e.g., van de Ven et al., 2013; Doty et al., 1993).

Studies that are applying a configuration theory focus in their analysis at least on the three dimensions, viz. (a) the strategy, (b) the structure, and (c) the context (see van de Ven et al., 2013; Short et al., 2008). Figure 2.3 shows these dimensions and their relationships. Here, the strategy and structure dimensions (under left) are used to examine the internal CE program fit of a configuration (under right), while the organizational context (up in the middle) is used to examine the external CE program fit.

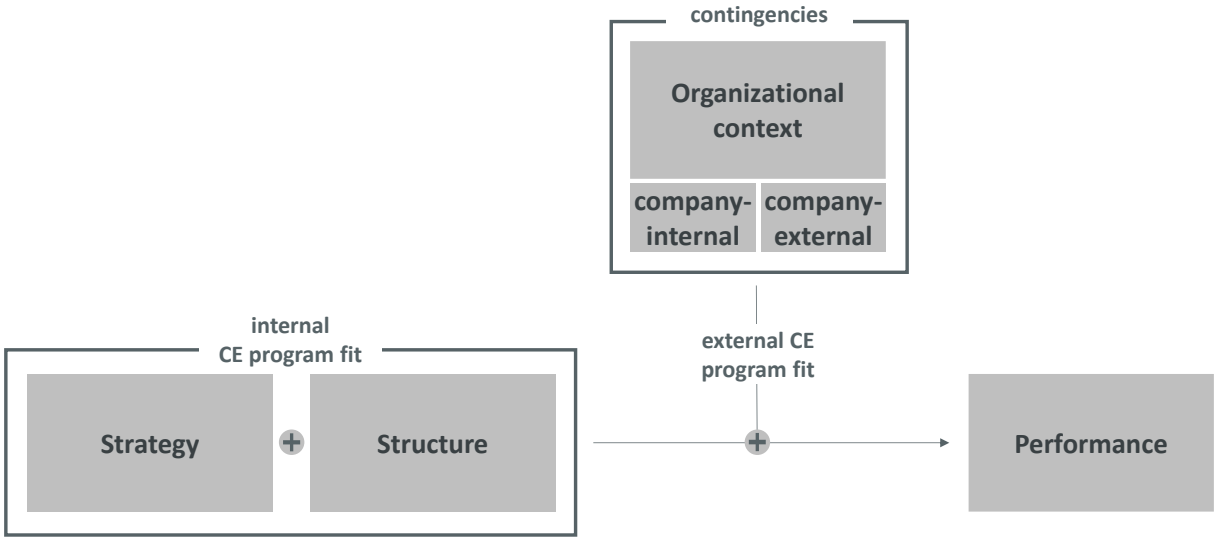

Figure 2.3: Visualization of the dimension in configuration theory

In the context of configuration theory, strategy focuses on either (a) the process of how a strategy can be developed or on (b) the content of a strategy, meaning the positioning or the objectives that should be pursued. The organizational structure focuses on design elements of an organizational unit such as the level of differentiation, formalization, or centralization (Dess et al., 1993). The context can be subdivided into (a) the *company-external context*, which describes the organizational environment using elements such as the level of uncertainty or the complexity, and into (b) the *company-internal context* that focuses on the organization itself using elements such as size, age or technology (see van de Ven et al., 2013; Mintzberg, 1981). As stated above, depending on the level of analysis, the manifestation of these elements is varying. Generally, the configuration theory, with its focus on multiple strategic, structural, and contextual elements, seems to fit well to study (a) the heterogeneity of CE programs and their different organizational designs (structure) and (b) their link to the value creation (strategy and performance).

2.3 Linking configuration theory and corporate entrepreneurship

Configuration theory has been used in a variety of fields such as strategic management and entrepreneurship (see, e.g., Harms et al., 2009; Mintzberg et al., 2001; Miles et al., 1978). For CE, the configuration theory has experienced a relatively late adoption with the publication of Hill and Birkinshaw (2008), who state as being the first one using configuration theory in the field of CE. Since then, many studies did apply a configuration approach (see, e.g., Kreiser et al., 2019; Biniari et al., 2015; Kraus et al., 2011). Recent studies recommend using configuration theory to extend current knowledge in CE (see Kreiser et al., 2019; Hill & Georgoulas, 2016).

In Subsection 2.3.1, the fit between the configuration theory and the research questions will be discussed. Subsection 2.3.2 will then present the theoretical framework of our study.

2.3.1 The relation between our problem statement and the research questions

As described in Subsection 2.2.3, one characteristic of the configuration theory (in contrast to the contingency theory) is the simultaneous focus on (1) multiple structural elements, (2) multiple contextual elements, and (3) performance outputs. Furthermore, the configuration theory acknowledges that multiple organizational configurations (distinct set of structural elements) can be suited equally well to achieve a certain objective. In this subsection, we will discuss how well the configuration theory fits to answer the problem statement and research questions (RQs) of this study.

We start with RQ1, which focuses on defining and distinguishing the different organizational designs of CE programs. We note that CE programs exhibit a wide range of different organizational designs. Many novel programs have emerged in practice in recent years. On the one hand, some of them show clear differences, e.g., corporate venture capital units investing in startups vs. corporate incubators supporting intrapreneurial employees. On the other hand, it can be observed that others are rather similar, e.g., external corporate incubators and external corporate accelerators (see, e.g., Selig et al., 2018; Pauwels et al., 2016). This leads to the need for multiple structural elements to be defined and distinguished for at least the following two reasons. First, defining rather similar CE programs with many common structural elements will require the precise definition of multiple elements, ensuring that they are clearly defined and yet distinguishable from each other. Second, rather different CE programs also appear to require very different structural elements to define them and

thereby to cover the wide range of organizational designs (e.g., investing in external startups vs. supporting internal employees). These two reasons indicate that multiple structural elements need to be seriously considered when examining the organizational designs of CE programs. This is consistent with configuration theory.

Next, RQ2 is discussed. This research question focuses on the different types of outputs that can be created by CE programs. As shown in Section 2.1, CE has been associated with different types of value creation, such as (1) the creation of new businesses or (2) the transformation of the organization itself. Depending on the desired objective, companies need to select a CE program that is suitable to work with. This split matches with the configuration theory, which recognizes that performance in achieving a particular objective is influenced by the fit between the multiple structural elements, (the context) and the various performance outputs (see van de Ven et al., 2013). By providing an overview of the different types of outputs created by CE programs, RQ2 builds the basis for (1) a better understanding of the various objectives that can be pursued (intended outputs) as well as for (2) a more nuanced performance measurement of CE programs.

Here we arrive at RQ3. This research question focuses on understanding the relationships between (a) the different CE program types and (b) the outputs that can be generated by them. The analysis of these relationships matches with the perspective of an internal fit applied in the configuration theory. Moreover, the internal fit focuses on how consistent an organization's structure is with its strategy (objectives). On top of that, the internal fit assumes that the higher the internal consistency, the better the performance in achieving the intended outputs.

As described above, the configuration theory matches the three RQs of our study. Hence, the configuration theory, with its general focus on understanding different organizational designs and their suitability to achieve a certain objective, shows that this theoretical perspective also provides a clear fit to the problem statement of this thesis, which we repeat here: “How can established companies effectively use CE programs to support their organizational transformation?”

2.3.2 Theoretical framework

In this section, we will focus on the theoretical framework that is applied in our study. It is illustrated in Figure 2.4 below. In the figure, we have combined the dimensions from configuration theory (based on Figure 2.3) with the specific dimensions for CE programs that are relevant for answering the RQs. This illustrates the relationship between the configuration theory (terms in brackets) and our subject of investigation (terms above brackets).

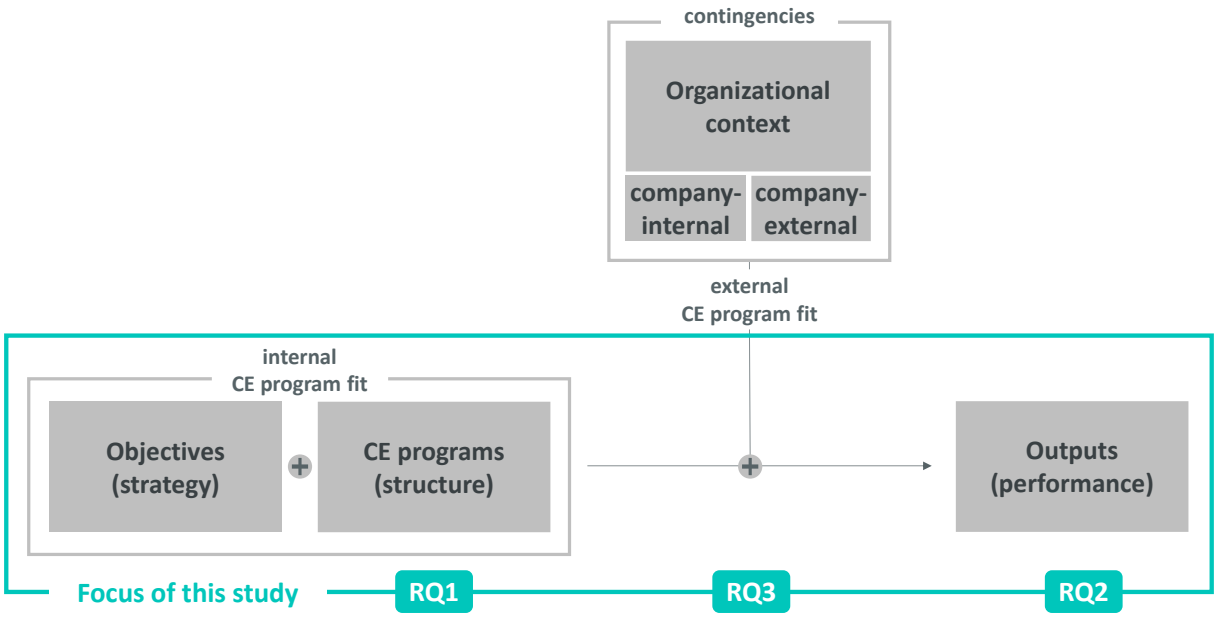

Figure 2.4: Framework of the study

Figure 2.4 includes the four dimensions of configuration theory, namely (a) the strategy, (b) the structure, (c) the performance, and (d) the organizational context. The focus of our study is set on the three dimensions (a to c). They are required to understand the internal fit of CE programs (represented by the mint-colored frame). These three dimensions and their interpretation in the context of CE are briefly described below.

a) *Strategy dimension*: For the effective use of CE programs, it is important to be clear about the specific objectives being pursued. Understanding the different outputs will form the basis for knowing the different objectives that can be achieved.
b) *Structure dimension*: The structure of CE programs is the focus of RQ1. It is described by design elements covering different aspects. For each CE program, a subset of design elements and their different manifestations is used to define them and also distinguish them clearly.

c) *Performance dimension*: The performance, or in our case the value creation of CE programs, is addressed by RQ2. The aim is to develop a harmonized set of outputs that can be created by CE programs. The output will result from the activities of the different CE programs and will serve as a basis for analyzing the performance.

Understanding the **internal fit of CE programs** is improved by identifying the different types of relationships between the CE programs (structure) and their outputs (performance), which is the focus of RQ3. Once it is known what type of outputs can be created by what type of CE program, it is possible to compare how well the CE program matches the objective (the internal CE program fit). For example, if the CE program leads primarily to the creation of new technologies but is intended to support cultural change, the fit between the objectives and the outputs tends to be poor.

To conclude, the configuration theory serves as an appropriate theoretical framework that fits well with the focus of our study. In the next chapter, the research method will be described.