

**An integration-responsiveness perspective
on subsidiary entrepreneurship in diversified firms**

A case study approach

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List of abbreviations

BA	business area
CEO	Chief Executive Officer
e.g.	exempli gratia (for example)
EU	European Union
etc.	et cetera
GOS	group operating system
GBU	global business unit
HQ	headquarters
ICB	industry classification benchmark
i.e.	id est (that is)
I/R-framework	integration-responsiveness framework
IT	information technology
ll.	loco laudato
max	maximum
min	minimum
MNC	Multinational Corporation
MNCs	Multinational Corporations
MNE	multinational enterprise
n/a	not applicable
RBU	regional business unit
RQ	research question
R&D	research and development
SE	subsidiary entrepreneurship
Sic	thus, so
Sqq	et sequentes
Sub	subsidiary
TV	television
UK	United Kingdom
U.S.	United States

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1 Introduction

“The challenge of going global is not simply to sell products wherever customers are but to take advantage of bright ideas wherever they spring up.” (Birkinshaw and Hood, 2001: 131)

Subsidiary entrepreneurship, as one form of innovation in multinational corporations, is recently attracting increasing attention from researchers and practitioners. However, many questions still demand an answer: how does headquarters leverage and react to entrepreneurial subsidiary activities? What is headquarters' attitude towards such activities and has it changed over time? What are perceived chances and risks? How does headquarters manage such activities? How does headquarters leverage the results from entrepreneurial subsidiary activities for the overall organization? Do companies differ in their attitude towards and handling of subsidiary entrepreneurship?

The first chapter gives an introduction to the theme “subsidiary entrepreneurship.” In the first sub-chapter (1.1) the research field is described, detailed and set into the context of theoretical and practical experiences. The second sub-chapter (1.2) outlines the structure of this thesis and serves as an orientation for the reader.

1.1 Framing the subsidiary entrepreneurship theme

Multinational corporations (MNCs) are among the world's most powerful types of organizations and play a more and more important role. These companies have a strong share of world economy with about 82,000 MNCs accounting for about one third of total world exports of goods and services. MNCs employ about 77 million people, which is more than double the workforce of Germany; the hundred largest MNCs together generate \$8,500 billion of sales (United Nations, 2009). However, the necessity to continuously generate innovations and improvements in order to successfully compete in such highly globalized markets has strongly increased for MNCs over the last years (Dunning, 1994; Chiesa, 1999; Birkinshaw and Fey, 2000; Sohail and Ayadurai, 2004; Bartlett et al., 2008). The innovation environment has also changed dramatically: competition became increasingly global and intense, the length of product-life cycles has dramatically dropped, and knowledge has become more multidisciplinary and dispersed. All of this makes

innovation more risky and expensive (de Backer, 2008; Guinet et al., 2008). Consequently, the internationalization of MNC's innovation activities has strongly increased over the last years (Papanastassiou and Pearce, 2000; Asakawa and Lehrer, 2003; Carlsson, 2006; Ambos and Schlegelmilch, 2007).

According to Prahalad and Oosterveld (1999), MNCs currently have to move from “the zone of comfort – the familiar” to the “zone of opportunity – the unknown.” This development is mainly driven by increased customer power, changed sales channel structures, deregulation, privatization, and globalization. Consequently, managers have to develop new capabilities which are aligned to “think globally and act locally.” Therefore, entrepreneurial activities are considered essential for large companies in order to adapt to changes occurring in an increasingly dynamic global environment (Zahra et al., 1999b). As a result, MNCs are currently searching for new ways to boost their innovations; the term “open innovation” is regularly mentioned in this context (Reichwald and Piller, 2006; Ernst, 2007): *“Companies ‘openly’ innovate with customers, suppliers, competitors, universities and research institutes, etc., as they increasingly rely on outside innovation for new products and processes.”* (de Backer et al., 2008: 7). However, it seems that a lot of corporations striving for open innovation have not yet untapped the innovation potential slumbering in their own organization (Cantwell, 2007). Therefore, fostering subsidiary entrepreneurship might be an instrument for successfully competing under the changed market conditions: *“Competition in all industries is now so intense that creativity and initiative-taking is required throughout the organization.”* (Delany, 2000b: 240). However, the increased internationalization bears opportunities and risks for the multinational organizations. On the one hand, the MNCs explore comparative advantages through relocating production to low-cost countries and secure future growth by entering new markets. On the other hand, the increased internationalization demands that MNCs balance localization and globalization needs (Bartlett and Ghoshal, 1989; Prahalad and Doz, 1987; Gustavsson et al., 1994): *“MNCs face considerable pressure to quickly and effectively respond to local market needs, while achieving global efficiency. This has led some MNCs to recognize the need to leverage innovation that occurs within their subsidiaries to meet global needs.”* (Zahra et al., 2000: 3). In addition, subsidiaries become increasingly important for the multinational organization to develop firm-specific advantages through their entrepreneurial activities: the focus shifts from headquarters being the sole innovation contributor to a collective innovation responsibility (Birkinshaw et al., 1998; Zanfei, 2000;

Cantwell and Mudambi, 2005). Besides that, the increasing geographical expansion of many multinational corporations forces headquarters to get back on the ideas of their subsidiary managers in order to adequately operate in all countries around the world (Birkinshaw, 1998). Therefore, *“The role of the subsidiary company in the multinational corporation (MNC) continues to be an issue of great interest to international business researchers, and a matter of great importance to MNC executives.”* (Birkinshaw et al., 2005: 227).

Consequently, entrepreneurial activities pursued by subsidiaries of MNCs have attracted increasing interest from researchers and practitioners since the late 1990s (Sohail and Ayadurai, 2004). Subsidiary entrepreneurship in this context is understood as the sum of all entrepreneurial initiatives performed by mainly foreign subsidiaries of MNCs (Birkinshaw and Ridderstråle, 1999; Birkinshaw et al., 2005). The following five examples of subsidiary entrepreneurship shed light on the diversity of such entrepreneurial subsidiary activities.

(1) Philips’ Canadian subsidiary created company’s first color television, its Australian subsidiary created the first stereo TV, and its UK subsidiary created the first TV with teletext capabilities. All of these innovations were started and developed by subsidiaries and later leveraged for the global network (Lightfoot, 1992; Zahra et al., 2000).

(2) The Finnish subsidiary of a globally operating hydraulic component manufacturer developed a new mass-customized power unit concept that enables the delivery of customized power units without any part-level engineering. This helped the overall organization to significantly reduce costs, cut delivery times, and switch its mode of operation from engineering-to-order to an assembly-to-order context. It also represents new thinking in the industry (Lyly-Yrjänäinen et al., 2008).

(3) T-Mobile’s US subsidiary is responsible for innovation in wireless technology and pushed the organization forward in this topic through its entrepreneurial initiative-taking. The US subsidiary decided to embrace W-LAN technology for sustaining its competitive advantage. Its activities led to the formation of a new and geographically separated business unit (Ambos and Schlegelmilch, 2005).

(4) NCR's Scottish subsidiary, being a second-source manufacturer for NCR's products and facing technological changes and internal problems, was on the verge of closure. Even their most promising product – the automatic teller machine – was struggling in its marketplace due to quality issues. Product development responsibilities lay with headquarters, but the Scottish subsidiary started to work on upgrading and renewing its product line to meet the key customer demands. The subsidiary's persistence paid off, and only a year later a successful product upgrade was launched. Later on, the product the next-generation ATM was launched which set new standards. This success is also responsible for the transfer of all global ATM business responsibilities to the Scottish subsidiary (Birkinshaw and Fry, 1998).

(5) GE's Canadian subsidiary business was almost closed down because it was too small and far away from headquarters and GE's core business. However, the subsidiary took the chance to respond to a government-sponsored program seeking energy-efficient lightning and was able to even successfully establish a new enterprise called "GE Energy Management." The subsidiary was the one which identified this opportunity in the first place, tested the idea in a small way and afterwards sought allies throughout the corporation (Birkinshaw and Fry, 1998).

The previous examples are only a few from dozens of subsidiaries that have developed new products for local or global markets, prepared acquisitions of other companies, improved or changed existing routines, or otherwise improved their prospects independently (Ambos et al., 2009). These entrepreneurial subsidiary activities which *"occur outside the home country of the multinational corporation and allow the subsidiary to tap into new opportunities have been brought together under the label 'subsidiary initiatives'."* (Ambos et al., 2009: 3).

1.2 Dissertation Outline

After having introduced the theme of subsidiary entrepreneurship in the previous chapter, this section will focus on the structure of the present thesis (Figure 1):

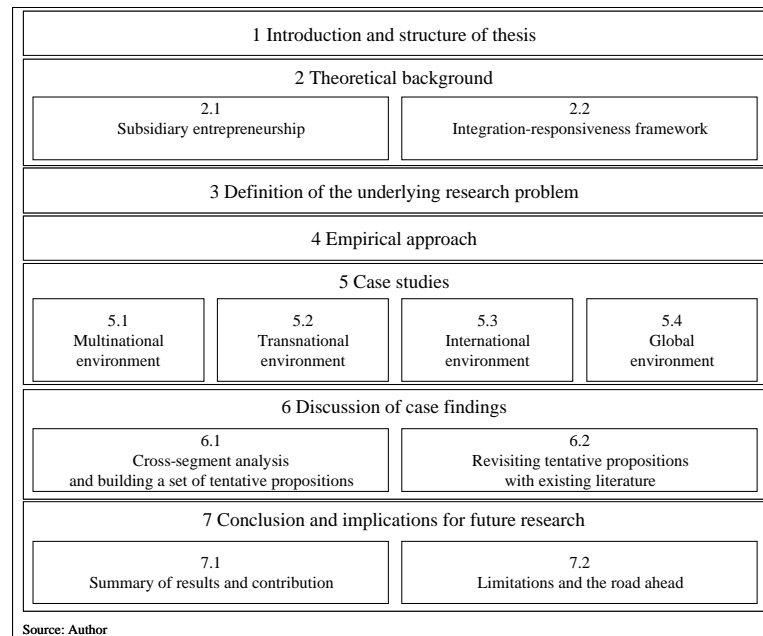


Figure 1: Structure of thesis

Chapter 2 sets the theoretical background of this thesis for the benefit of readers who are new to this field as well as to develop the foundations for the subsequently empirical analysis. First, the theme of subsidiary entrepreneurship is reviewed. This review comprises a comprehensive literature overview and highlights the existing insights from previous research. Second, an introduction into the integration-responsiveness framework is given to build the foundation for the analysis of differences in headquarters' behavior towards subsidiary entrepreneurship dependent on its specific environment.

In *Chapter 3* the two theoretical pillars – the subsidiary entrepreneurship theme and the integration-responsiveness framework – from the previous chapter are combined and used for formulating this thesis research problem. In addition, the two leading research questions of this thesis are developed and the outline for the empirical research is derived. Also, first ideas of expected results are developed.

In *Chapter 4* the empirical approach used in this work will be explained. First, research methodology and approach is delineated. The material includes a short disquisition of case

studies as one valid research method and a short introduction in the multiple case studies approach. Finally, the research design of this work is presented. This includes the presentation of the research process, the approach used for case selection, and the method used for collecting and analyzing the data.

Chapter 5 contains the empirical study of the work and subdivides in the four environmental situations derived from the integration-responsiveness framework: “multinational environment,” “transnational environment,” “international environment,” and “global environment.” The analysis of each environmental setting comprises two studied cases and results in a within-segment analysis.

After having analyzed each environmental setting on its own, *Chapter 6* will integrate the gathered insights with the existing literature. First, a cross-segment analysis is performed to lay the foundation for developing a set of tentative propositions. Subsequently, the derived propositions will be confronted with existing literature and an integrated set of propositions as well as a model of the analysis results is developed.

Finally, *Chapter 7* will briefly sum up the results and draw final conclusions out of this analysis. The chapter concludes with a discussion of the implications of the research for literature in the fields of subsidiary entrepreneurship and integration-responsiveness framework. Finally, it acknowledges several limitations of the present study and proposes relevant directions for future research.

2 Theoretical background

After having given a short introduction to the underlying research area in the previous chapter, this section will focus on the theoretical foundation of this work. This theory review comprises the relevant literature to subsidiary entrepreneurship (Chapter 2.1) and to internal differentiation (Chapter 2.2). It also lays out the base for the research problem development in the following Chapter 3.

2.1 Literature on subsidiary entrepreneurship

In this chapter, the relevant literature on subsidiary entrepreneurship is reviewed. This comprehensive review should help to give the reader a better understanding of the relatively new research area. On the one hand, the field of subsidiary entrepreneurship is still in its infant stage and the related literature tends to be manageable, but on the other hand, the amount of relevant literature has increased significantly over the last years. The present thesis is to the best of my knowledge the first work which provides a detailed and comprehensive overview.

First, theory roots and evolution of subsidiary entrepreneurship are sketched. Second, a definition of subsidiary entrepreneurship is given. Third, an overview of all relevant subsidiary entrepreneurship literature is given. This overview comprises detailed literature descriptions with regard to initiative types, resistances/barriers in the entrepreneurial process, determinants of initiatives, consequences of initiatives, and the subsidiary entrepreneurship phenomenon from different theoretical perspectives.

2.1.1 Theory roots and evolution of subsidiary entrepreneurship research

Since the 1990s, the topic of entrepreneurship for subsidiaries of multinational corporations (MNCs) has gained increasing attention from various researchers (Birkinshaw, 1995; Birkinshaw, 1996; Birkinshaw, 2000; Delany, 2000b; Zahra et al., 2000; Liouka, 2007; Verbeke and Yuan, 2007; Ambos et al., 2009). The area of interest lies at the intersection of two well-established research streams: first, international entrepreneurship research, and second, MNC/subsidiary management research (Boojihawon et al., 2007: 550). The link between *international entrepreneurship research* and the subsidiary entrepreneurship research can best be discovered by looking at the

respective ways of defining entrepreneurship. According to McDougall and Oviatt (2000: 903): “[i]nternational entrepreneurship [is...] a combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations.” This definition combines elements from the broader entrepreneurship literature as well as from the international business literature. Parts of it can also be recognized in the definition of subsidiary entrepreneurship from Birkinshaw and Ridderstråle (1999: 151): “[...] initiative is a discrete, proactive undertaking that advances a new way for the corporation to use or expand its resources. [...] Subsidiary initiative simply refers to any initiative that occurs outside the home country of the multinational corporation.”

The construct of innovativeness, proactiveness, and risk-taking to measure entrepreneurial orientation is also employed by Zahra et al. (1999a) and Lyon et al. (2000). Dimitratos and Plakoyianniki (2003), in contrast, analyze international entrepreneurship within its organizational context. According to their research, international entrepreneurship is an organization-wide phenomenon which spans over all hierarchical levels and geographic boundaries of a firm. This leads to the assumption that entrepreneurship can not only originate from new international ventures, but also from subsidiaries in multinational corporations. Despite the fact that links between MNC/subsidiary management literature and subsidiary entrepreneurship literature are not obvious, linkages can be found in various sub-streams of the MNC management literature. Venaik et al. (2002), for example, assert that entrepreneurial subsidiary actions are required to respond to a volatile external environment. Publications with respect to subsidiary roles and strategies acknowledge that subsidiaries that possess specialized resources and the necessary autonomy can capture a more innovative and entrepreneurial role within the MNC (Gupta and Govindarajan, 1991; Harzing and Noorderhaven, 2006). Other research focuses on the MNC network role and the subsidiary embeddedness in its host country as well as its linkage with the entrepreneurial potential at the subsidiary level (Forsgren et al. 1992; McEvily and Zaheer, 1999).

The development of subsidiary entrepreneurship research can also be explained from an evolutionary perspective (Figure 2). The focus of MNC literature has constantly changed over time and has developed from a hierarchical to a heterarchical point of view while the unit of analysis has shifted from the parent to the subsidiary unit (Paterson and Brock,

2002; Liouka, 2007: 16–20). The evolution started with the so-called *strategy-structure stream*. This stream analyses the MNC as a whole and focuses on strategy and structure issues. It does not analyze single subsidiary units. In that research phase, it is assumed that corporate structure is rather flexible, whereas corporate strategy is controlled by headquarters. This is supported by the idea that structure will change over time to fit strategy. The “transnational organization” from Bartlett and Ghoshal (1989) became the prominent model then and was supported by Evans et al. (1990) who called for global integration and local responsiveness. This hierarchical and center-dominated perspective of MNCs implies that strategic thinking arises from the center and is implemented by the subsidiaries. Therefore, subsidiaries are only understood as instruments which have to fulfil their assigned roles (Bartlett and Ghoshal, 1986; Porter 1986; Jarillo and Martinez, 1990).

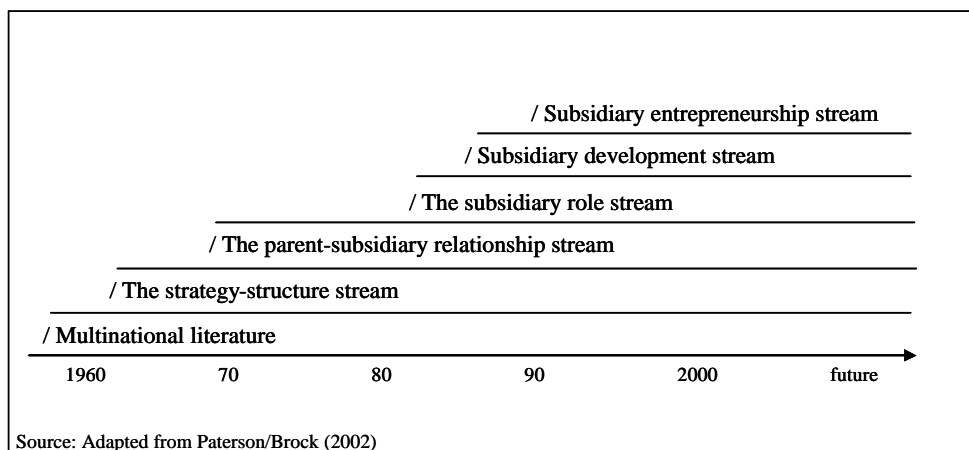


Figure 2: Evolution of multinational research streams

A first shift of perspective from the parent towards the subsidiary took place with the emergence of the *parent-subsidiary relationship stream*, but this stream still kept the hierarchical understanding. Fundamental ideas include that subsidiaries have considerable autonomy and influence, are heterogenic, and differ in their relationship towards headquarters. Research in this time mainly focused on the centralization and formalization of decision making (Hedlund, 1981; Garnier, 1982; Gates and Egelhoff, 1986) and the degree and kind of parental control (Baliga and Jaeger, 1984; Bartlett and Ghoshal, 1986). The important step towards the subsidiary as the unit of analysis and the headquarters as the external factor was made when the *subsidiary role stream* emerged. Researchers at that time discovered that subsidiaries can play different roles due to their unique resources and

degree of autonomy. Consequently, various classification systems for subsidiary roles were developed (Bartlett and Ghoshal, 1986; Jarillo and Martinez, 1990; Gupta and Govindarajan, 1991; Birkinshaw and Morrison, 1995; Taggart, 1997a). In contrast to the subsidiary role stream, the *subsidiary development stream* assumes that subsidiary roles are no longer assigned by headquarters, but rather actively determined by the subsidiary itself. The underlying idea is that subsidiaries do not only focus on their performance but also seek to develop their role and position over time. Birkinshaw and Hood (1998) explicitly analyze the factors driving subsidiary development. Those factors can be internal (e.g., initiatives of subsidiary management), external (e.g., decisions or actions by headquarters), or determined by environmental conditions. *Subsidiary entrepreneurship* is also considered as one source of subsidiary development. The topic of subsidiary entrepreneurship tends to be the next research stream due to its influence on the overall success of a multinational corporation (MNC) and the increased research interest in this field since the 1990s (Liouka, 2007).

2.1.2 Definition of subsidiary entrepreneurship

Surprisingly, despite the fact that a number of studies have analyzed the phenomenon of subsidiary entrepreneurship empirically, an exact definition of subsidiary entrepreneurship does not exist in the literature so far.

From the pure interpretation of the two words, it can be assumed that subsidiary entrepreneurship is about the phenomenon of subsidiaries behaving entrepreneurial. However, a closer look at the definition of “subsidiary” reveals some specifics: subsidiary in this context means any operational unit which is controlled by the multinational corporation and situated outside the home country (Birkinshaw, 1997: 207; Birkinshaw et al., 1998: 224). Furthermore, operational units can be interpreted as any production plant, sales unit, etc., situated outside the MNC’s home country. Therefore, subsidiaries in the parent company’s home country are in most research not considered subsidiaries in the context of subsidiary entrepreneurship. The second specific characteristic is the multinational corporation. Such a corporation comprises a set of geographically distributed subsidiaries that have different competencies and capabilities. Organizationally, an MNC consists of a parent company and its subsidiaries in the home country and abroad (Nohria

and Ghoshal, 1997). Therefore, the phenomenon of subsidiary entrepreneurship can either be studied at the foreign subsidiary site or at the parent company site.

Two different ways of defining entrepreneurial activity can be observed: first, derived from the *behavioral* perspective and second, from the *underlying process* perspective.

In the case of the *behavioral* description, researchers describe the entrepreneurship phenomenon based on existing entrepreneurship definitions and often use the recurring verbs “proactive,” “innovative,” and “risk-taking.” (Birkinshaw, 1997: 207), for example, defines subsidiary entrepreneurship following Kanter (2004) and Miller (1983) as: “[...] *discrete, proactive undertaking [of the subsidiary] that advances a new way for the corporation to use or expand its resources.*”

The same idea is followed by various other authors (Ayadurai and Sohail, 2000; Zahra et al., 2000; Boojihawon et al., 2007; Zucchella et al., 2007), who define entrepreneurial activity as an innovative, risk-taking, and proactive behavior. *Innovative* is any action which is creative, unusual, and seeks novel solutions in the form of new technologies and processes, as well as new products and services to existing problems and needs. *Risk-taking* means the willingness to commit significant resources to opportunities which have a reasonable chance of failure. *Proactive* in this context means to do whatever is necessary for realizing a new concept. This usually involves considerable perseverance, adaptability, and a willingness to take responsibility for failures. Such a subsidiary behavior is assumed to lead to entrepreneurial actions (“subsidiary initiatives”). According to Birkinshaw, the sum of entrepreneurial initiatives performed by foreign subsidiaries constitutes subsidiary entrepreneurship (Birkinshaw and Ridderstråle, 1999: 149; Birkinshaw et al., 2005: 228). However, Birkinshaw and Ridderstråle (1999: 155) are quite narrow in their definition with regard to the impact of those initiatives. They demand that ‘real’ initiatives need to: “[...] *have implications for the rest of the multinational corporation, rather than [to be] limited-scope projects that are of interest only to the subsidiary unit.*” This narrow definition solely includes initiatives which have a global impact and enhance the subsidiary’s role. It neglects initiatives which are only local in scope. Liouka (2007: 2), in contrast, widens the initiative definition in her work and also counts incremental local market initiatives: “*Subsidiary entrepreneurship is [...] ranging from incremental (but*

value-adding) change to radical innovation, which can be relevant to all types of subsidiaries.”

The entrepreneurial attitude can also be recognized in observing people’s behavior. An entrepreneurial subsidiary employee would use resources beyond his or her control to pursue an entrepreneurial idea, would do that even against resistances and in a self-driven way. In order to create an entrepreneurial culture, it is essential that all employees in the MNC are allowed to generate ideas and start new initiatives (Lee and Williams, 2007: 507). Nevertheless, employees will only pursue ideas which in their opinion create value for the MNC. See also (Birkinshaw, 1999: 15): “[...] *what marks out a subsidiary initiative is the decision to act for the good of the corporation without waiting for an invitation from head office.*”

According to the ***process perspective***, Birkinshaw defines the subsidiary initiative as an entrepreneurial process¹. The entrepreneurial initiative starts with the identification of a new product or market opportunity by a subsidiary employee, proceeds with a major selling process to the head office and other parts of the corporation, and ends with commitment or denial of resources to the business opportunity in question (Birkinshaw, 1998: 356; Birkinshaw, 1999: 15). The entrepreneurial challenge is to successfully proceed from an idea to the final commitment of funding (Birkinshaw, 1997). This process point of view can best be summarized by the following statement (Birkinshaw, 1997: 207): “*An initiative is essentially an entrepreneurial process, beginning with the identification of an opportunity and culminating in the commitment of resources to that opportunity.*” The foreign subsidiary unit is, rather than the parent company, the starting point of this entrepreneurial process: “*Innovation by foreign subsidiaries is more typically the result of autonomous initiative by subsidiaries rather than strategic directives issued from corporate headquarters.*” (Gupta and Govindarajan, 1991: 443) In this process, subsidiaries aim at exhibiting, exploiting and exploring resources to respond to an opportunity (Birkinshaw, 1999: 10; Verbeke et al., 2007).

¹ The specifics of the entrepreneurial process, existing for corporate entrepreneurship initiatives, is described in Burgelman (1983b), Bower (1986), Burgelman and Sayles (1986), Bartlett and Ghoshal (1993), Noda and Bower (1996), Ghoshal and Bartlett (1995), and Bower and Gilbert (2005).

Furthermore, subsidiary entrepreneurship is an unpredictable phenomenon which emerges from somewhere in the subsidiary network and concedes corporate leaders more or less only a spectator role. Therefore, the location of employees involved cannot be designed in advance (Williams and Lee, 2009). Possible outputs of such an entrepreneurial initiative are product modifications, new product developments, adjustments to business processes, etc. (Tseng et al., 2004).

A before mentioned example for subsidiary entrepreneurship and the resulting product introductions is Philips: Philips' first color TV was created by its Canadian subsidiary; the company's first stereo TV was developed by its Australian subsidiary; and the first TV with teletext capabilities was created by Philips' UK subsidiary. Essential in the case of Philips is that the parent company encouraged innovation in its subsidiaries and leveraged successful ones for the global network (Lightfoot, 1992; Bartlett, 2002).

Overall, the phenomenon of subsidiary entrepreneurship can be summarized by the following statement (Birkinshaw et al., 1998: 226): "*Subsidiary initiative is defined as the entrepreneurial pursuit of international market opportunities to which the subsidiary can apply its specialized resources.*"

In addition, subsidiary entrepreneurship can also be defined as a special issue of corporate entrepreneurship: While corporate entrepreneurship deals with entrepreneurial activities in a single corporation², subsidiary entrepreneurship is about entrepreneurial initiatives in foreign subsidiaries of a MNC. Birkinshaw as the 'originator' of the research field speaks in this context from subsidiary entrepreneurship as a rare form of corporate entrepreneurship: subsidiary entrepreneurship initiatives have to cope with additional resistance beyond corporate entrepreneurship initiatives, because the sponsoring unit is foreign. In this context, Birkinshaw also speaks about "the corporate immune system" (Birkinshaw and Ridderstråle, 1999).

The literature on corporate entrepreneurship differentiates between two models of within-company entrepreneurship: (1) *focused corporate entrepreneurship* (also called corporate venturing) and (2) *dispersed entrepreneurship* (also called intrapreneurship). While

² The terms of corporate entrepreneurship and intrapreneurship are often used interchangeably and both aim at explaining employees' entrepreneurial behavior (Schmelter, 2008).

corporate venturing is “incubative” entrepreneurship of a for this purpose set-up division³, intrapreneurship is driven by the actions of each and every individual of a company. Antecedent for intrapreneurship is an actively lived entrepreneurial culture. According to Kirzner (1974), dispersed entrepreneurship assumes a dual role for every employee: managing the ongoing activities and pursuing new opportunities at the same time. According to Boojihawon et al. (2007: 554), “*subsidiary initiative is a form of dispersed corporate entrepreneurship*”. Therefore, subsidiary entrepreneurship is similar to dispersed corporate entrepreneurship and intrapreneurship.

For the purpose of this research, subsidiary entrepreneurship is defined in accordance with Liouka (2007) as the entrepreneurial, innovative activity of foreign subsidiaries which either has global or local impact. For identification of the entrepreneurial character the well-known variables “innovative,” “risk-taking,” and “proactive” are used in accordance to Zahra et al. (2000). The output of such an initiative can range from product modification over new product development to business process adjustment. All of the before mentioned can be summarized with the following characteristics of an entrepreneurial initiative⁴:

- The initiative emerges from the foreign business unit (e.g., sales unit, production unit) or foreign subsidiary.
- The initiative aims at changing or improving existing products and processes or creates new ones.
- The initiative can either have a small impact (local improvement on subsidiary level) or a large impact (improvement on global level).
- The subsidiary recognizes the opportunity and approaches headquarters with the idea or starts on its own with the realization (without previous permission of headquarters).
- The initiative process is equal to the entrepreneurship process: After the identification of an opportunity, elaboration of the realization concept is done by the subsidiary. If successful, this results in resource commitment by headquarters.

³ The only task of the incubator is to identify and nurture new business opportunities.

⁴ This summary was used throughout the interviews to establish a common understanding about the topic.

2.1.3 Overview on the subsidiary entrepreneurship literature

Since the 1990s, an increasing research interest regarding subsidiary entrepreneurship can be observed. Nevertheless, this research area is still at its infant stage as mentioned by various authors (Lyly-Yrjänäinen et al., 2008; Dörrenbächer and Geppert, 2008; Liouka et al., 2006; Boojihawon et al., 2007; Birkinshaw et al., 2005).

The existing research on subsidiary entrepreneurship can be clustered into the following five categories: (1) *types of subsidiary initiative*, (2) *entrepreneurial process* including resistances and uncertainties, (3) *determinants of subsidiary initiative*, (4) *results or consequences of subsidiary initiative*, and (5) explaining the subsidiary entrepreneurship phenomenon based on *existing theories*⁵.

Initiative type	Process	Determinants	Outcome	Applied theory
<ul style="list-style-type: none"> • Birkinshaw (1997) • Birkinshaw (1998) • Birkinshaw, Fry (1998) • Delany (2000) • Verbeke, Chrisman et al. (2007) 	<ul style="list-style-type: none"> • Birkinshaw, Fry (1998) • Birkinshaw, Ridderstråle (1999) • Mahnke, Venzin et al. (2007) • Lyly-Yrjänäinen, Suomala et al. (2008) 	<ul style="list-style-type: none"> • Birkinshaw, Hood et al. (1998) • Birkinshaw (1999) • Ayadurai, Sohail (2000) • Zahra, Dharwadkar et al. (2000) • Yamin (2002) • Sohail, Ayadurai (2004) • Tseng, Fong et al. (2004) • Ciabuschi, Forsgren (2006) • Liouka, Dimitratos et al. (2006) • Krishnan (2006) • Boojihawon, Dimitratos et al. (2007) • Verbeke, Chrisman (2007) • Dörrenbächer, Geppert (2008) • Williams (2009) 	<ul style="list-style-type: none"> • Delany (2000) • Lee, Chen (2003) • Birkinshaw, Hood et al. (2005) • Liouka, Dimitratos et al. (2006) • Krishnan (2006) • Sargent, Matthews (2006) • Boojihawon, Dimitratos et al. (2007) • Zucchella, Maccarini et al. (2007) • Ambos, Andersson et al. (2009) 	<ul style="list-style-type: none"> • Johnson, Medcof (2002) • Birkinshaw, Hood et al. (2005) • Verbeke, Yuan (2005) • Johnson, Medcof (2007) • Lee, Williams (2007) • Verbeke, Yuan (2007) • Williams, Lee (2009)

Source: Author

Figure 3: Overview on the subsidiary entrepreneurship research by category⁶

Most of the existing academic research belongs to categories (3) and (4) – “determinants” and “outcome.” Research in the “determinants” category tries to investigate which factors influence a subsidiary’s initiative-taking and in what manner. Research in the “outcome” category is very diverse and ranges from explaining subsidiary role developments with the subsidiary’s initiative taking to the subsidiary’s performance improvement through entrepreneurial initiatives. Relatively few papers, in contrast, can be assigned to the

⁵ Applied theory in this context means that the research in this category aims at developing a new theory out of combining two existing theory frameworks, e.g. explaining the subsidiary entrepreneurship activities based on the research on competitive arena.

⁶ Some publications belong to more than one category.

categories (2) and (5) – “process” and “applied theory.” Therefore, future research is needed here. Publications on (1) “initiative type” are also rare. However, this category, in contrast, is the research area's foundation and therefore, new findings are generally difficult to obtain. An exemption is the work from Verbeke et al. (2007) in which the differentiation of initiatives in “renewal” and “venturing” is proposed. A further exemption is the work from Delany (2000b). He derives another classification for initiative types based on initiative's impact on subsidiary's role development⁷.

With respect to the used *research method* it can be observed that two-thirds of the papers are empirical, whereas the rest are conceptual. The empirical ones split relatively equal between papers based on case studies and those based on “large-scale” questionnaires. It is noticeable that nearly all papers investigate the research questions only from the subsidiary's point of view and leave out the parent company's perspective. Future research should be conducted to explore subsidiary entrepreneurship also from the parent company's perspective and should investigate the parent's perception and its method of leveraging subsidiary entrepreneurship for overall corporate innovation. In terms of *industry*, it can be observed that most of the subsidiaries belong to the manufacturing sector while only a few papers consider other sectors like Financial Services, IT, Advertising, and Healthcare as well. *Geographically*, most of the studied subsidiaries are situated in developed nations such as Canada and UK, whereas only a few focus on subsidiaries in developing nations such as India, Taiwan, Malaysia, and Mexico. Due to the fact that most studies concentrate on Anglo-American countries, future research should focus on continental Europe, e.g., Germany, Spain, France, and Italy.

The following literature overview (Table 1) comprises the relevant academic research papers to date, leaving out books and dissertations. The considered papers are published in journals, as book chapters or as stand-alone working papers. In the following overview each paper is assigned to at least one research category. In addition, a short summary of its research question and conclusion is given. Furthermore, the used research method, industry, country, unit of analysis, and unit questioned are summarized for each paper. The

⁷ For further explanation please refer to Figure 7.

Theoretical background

“unit of analysis” in this context refers to the perspective of the analysis⁸, whereas the unit questioned refers to the organizational location of the person interviewed.

Publication	Category	Research Question	Research Answer	Research Method	Industry (Country)	Unit analyzed	Unit questioned
Birkinshaw, 1997	Initiative type	Examination of the different existing initiative types and their facilitating conditions.	Four different initiative types (local, global, internal, and hybrid initiatives) dependent on market environment identified. Facilitating conditions and entrepreneurial process different for the four initiative types.	Empirical (Case study)	Manufacturing (Canada)	Sub	Sub
Birkinshaw et al., 1998	Determinants	Examination of the determinants of a subsidiary's contributory role and subsidiary initiative. Analysis of the linkage between subsidiary role and subsidiary initiative.	Subsidiary initiative is a discriminator between a high- and a low-contributory role, but its impact on subsidiary's role is higher in early stages of sub-development than in later ones. If market competition is perceived as weak, subsidiaries are more likely to have a high contributory role and undertake initiatives. Parent-subsidiary relationship is important for the development of subsidiary's contributory role and for the presence of sub-initiatives.	Empirical (Questionnaire)	Manufacturing (Canada, Scotland, Sweden)	Sub	Sub/HQ
Birkinshaw, 1998	Initiative type Outcome	Examination/Classification of the different internal initiatives based on the "internal market" model and assessment of its costs and benefits.	Four different types of internally-oriented initiatives can be defined along the two categories "level of HQ sanctioning" and "nature of opportunity." Subsidiary entrepreneurship bears the costs of empire building, lack of focus, costs of administrating internal market, and coping with internal unemployment.	Conceptual (Mini case studies)	n/a	Sub/HQ	Sub/HQ
Birkinshaw and Fry, 1998	Process Initiative type	Examination of subsidiary managers' strategies used in the pursuit of initiatives and the resistances they typically encounter. Assessment of implications from initiative for MNC management.	Subsidiary managers need to be proactive, pushy, and sometimes need to use Machiavellian tactics to overcome skeptical reaction from HQ managers. Internal and external initiatives differ in form and resistances faced and therefore a different set of tactics is needed for different initiative types.	Conceptual (Case study)	n/a	Sub	Sub
Birkinshaw and Ridderstråle, 1999	Process	Analysis of subsidiary initiative and its resisting forces (" corporate immune system "). Analysis of strategies used by subsidiary management to circumvent or fight the corporate immune system.	Subsidiary initiatives face substantial resistance due to ethnocentrism, suspicion towards the unknown, and resistance to change. Resistance is encountered from all sides: from headquarters, from sister divisions, and from other units.	Empirical (Case study)	Manufacturing (Canada)	Sub/HQ	Sub/HQ

⁸ For example: an analysis with a subsidiary perspective focuses on the implications, etc., of subsidiary entrepreneurship at subsidiary level, whereas an analysis with a headquarters perspective focuses on the implications at headquarters level.

Theoretical background

Publication	Category	Research Question	Research Answer	Research Method	Industry (Country)	Unit analyzed	Unit questioned
Birkinshaw, 1999	Determinants	Analysis of the organizational context (corporate and subsidiary context) which promotes or suppresses subsidiary initiative and examination of the backward impact of subsidiary initiative on the organizational context.	Subsidiary initiative is promoted by a high level of distinctive subsidiary capabilities, and is suppressed by a high level of decision centralization, a low level of subsidiary credibility, and a low level of corporate-subsidiary communication. Sub initiative leads to an enhancement of credibility, head office openness, communication, and distinctive capability.	Empirical (Questionnaire + case studies)	Manufacturing (Canada, Scotland, Sweden)	Sub	Sub
Ayadurai and Sohail, 2000	Determinants	Examination of environmental turbulence (environmental hostility, dynamism, and complexity) on the entrepreneurial behavior and performance of multinational subs	Environmental turbulence tends to have a positive relationship with entrepreneurial behavior and performance of subsidiaries.	Empirical (Questionnaire)	Various industries (Malaysia)	Sub	Sub
Delany, 2000b	Outcome	Examination of the linkage between subsidiary role development and subsidiary initiative taking	Subsidiaries are seeking to develop their mandates through initiative-taking. Therefore, each initiative represents a gradual step forward from the current mandate. Three types of initiatives can be differentiated: domain developing, domain consolidating, and domain defending initiatives.	Conceptual (Case study)	Manufacturing (Ireland)	Sub	Sub
Zahra et al., 2000	Determinants	Examination of the effects of both the corporate context and local environmental context on subsidiary entrepreneurship.	The analysis suggests that both corporate and local environmental contexts are positively associated with subsidiary entrepreneurship.	Empirical (Questionnaire)	Manufacturing (USA)	Sub	Sub
Yamin, 2002	Determinants	Examination of the relationship between organizational isolation and subsidiary entrepreneurship; analysis of differences between international and national subsidiaries in terms of subsidiary entrepreneurship.	Key advantage of a multinational organization is that its dispersed structure inadvertently creates conditions conducive to entrepreneurial and innovative activities by their subsidiaries.	Conceptual	n/a	Sub	n/a
Johnson and Medcof, John W., 2002	Applied theory	Examination of subsidiary entrepreneurship from the extended agency perspective .	All subsidiaries lacking an initially strong mandate will face significant resistances against its initiatives. Entrepreneurial spirit and a move towards outcome-based performance measures are necessary to break those. As the initiative proves valuable, subsidiary autonomy will increase.	Conceptual	n/a	Sub & HQ	n/a
Lee and Chen, 2003	Outcome	Examinations of the role entrepreneurial initiatives play in achieving a required extent of local adaptation and hence successful learning of internationalization.	The provision of entrepreneurial initiatives by sub's management is likely to affect the achievement of local adaptation and hence the attainment of entry goals. The accumulation of entrepreneurial initiatives is likely to become a basis for company's learning of inter-nationalization and may affect subsequent entry decisions.	Empirical (Case study)	Manufacturing (Taiwan)	Sub	Sub

Theoretical background

Publication	Category	Research Question	Research Answer	Research Method	Industry (Country)	Unit analyzed	Unit questioned
Sohail and Ayadurai, 2004	Determinants	How are subsidiary entrepreneurship, autonomy, and financial controls linked to number of years in operation and to parent's country of origin .	Length of subsidiary operation and parent's country of origin with impact on the extent of subsidiary entrepreneurship.	Empirical (Questionnaire)	Industrial, Financial, and IT sector (Malaysia)	Sub	Sub
Tseng et al., 2004	Determinants	Exploration of the determinants of subsidiary initiatives, especially headquarters-subsidiary relationship, subsidiary resources, and subsidiary's network characteristics.	All determinants have significant influence, where the sub-variables degree of procedural justice, capabilities of the subsidiary relative to others, and local responsiveness of the subsidiary do influence subsidiary entrepreneurship in a positive way.	Empirical (Questionnaire)	Manufacturing Non-financial services industry (Taiwan)	Sub	Sub
Birkinshaw et al., 2005	Applied Theory Outcome	Analysis of the interplay between subsidiary's competitive arena , entrepreneurship and subsidiary performance.	The competitive environment influences subsidiary's entrepreneurial behavior and its performance.	Empirical (Case study)	Manufacturing (Scotland)	Sub	Sub
Verbeke and Yuan, 2005	Applied Theory	Investigation of the implications of subsidiary initiatives for the governance of multinational corporations from a transaction cost perspective .	A new conceptual framework about governing subsidiary entrepreneurship is developed.	Conceptual	n/a	Sub/HQ	n/a
Ciabuschi and Forsgren, 2006	Determinants	Examination of subsidiary's entrepreneurship orientation .	The autonomy variable must be complemented by an analysis of subsidiary's visibility. Sub's risk-taking propensity is dependent on the organizational risk. Sub's entrepreneurship orientation is contingent on the 'power struggle' within the MNC.	Empirical (Case study)	Manufacturing Sweden	Sub	Sub
Liouka et al., 2006	Determinants Outcome	Analysis of the constituents of subsidiary entrepreneurship and its effect on subsidiary performance. Examination of multinational context and environmental context on the subsidiary-entrepreneurship-performance association.	Entrepreneurial orientation and subsidiary's market learning orientation are important constituents of subsidiary entrepreneurship. Those constituents also lead to a superior subsidiary performance. Subsidiary level factors have a strong influence on subsidiary performance, environmental and multinational context factors with minor influence.	Empirical (Questionnaire)	Business Services, Electronics, Chemicals/Pharma, Other (UK)	Sub	Sub
Krishnan, 2006	Determinants Outcome	Exploration of the phenomenon of intrapreneurial initiative and strategic choice in multinational software subsidiaries. It focuses on the role initiatives play in the early stage of a business development.	Subsidiary initiative plays visible role in obtaining business at the early stages of sub's evolution and is critical for sub's repositioning. Barriers to initiative are administrative heritage, difficulties in business potential evaluation, lack of funds, and attrition of qualified people. High levels of subsidiary initiative are associated with low level of integration and high level of autonomy.	Empirical (Case study)	Software (India)	Sub	Sub

Theoretical background

Publication	Category	Research Question	Research Answer	Research Method	Industry (Country)	Unit analyzed	Unit questioned
Sargent and Matthews, 2006	Outcome	Analysis of the role of subsidiary initiative as a driver of subsidiary evolution/ upgrading and examination of its importance in comparison to head office assignment.	Subsidiary entrepreneurship is one of several important drivers of subsidiary evolution/upgrading. The observed set splits relatively equal in parent-driven, parent/subsidiary driven, and only subsidiary-driven upgrading.	Empirical (Questionnaire)	Electronic, Automobile, Other (Mexico)	Sub	Sub
Johnson and Medcof, John W., 2007	Applied theory	An integration of agency theory and socialization models is developed and used to explain the types of governance and organizational structures associated with subsidiary initiatives	Hub structure user of behavior-based contracting and encounters fewest amount of initiatives; Federation structures user of outcome-based contracting and encounters local initiatives; Network structure user of goal internalization and encounters global initiatives.	Conceptual	n/a	Sub/HQ	n/a
Verbeke et al., 2007	Determinants Initiative type	Analysis how initiative determinants differ for venturing initiatives versus renewal initiatives .	Determinants impact venturing initiatives differently than renewal initiatives. For example, corporate context determinants are expected to have a higher impact on renewal initiatives than on venturing ones.	Conceptual	n/a	Sub	n/a
Boojihawon et al., 2007	Determinants Outcome	Examination of subsidiary's entrepreneurial culture and identification of its main characteristics and factors which may affect it. Analysis of locus of subsidiary entrepreneurship.	The entrepreneurial culture consists of three characteristics: global vision, entrepreneurial orientation and entrepreneurial network management. The following influences/manifestations impact the entrepreneurial culture and are affected by it: subsidiary autonomy, target market servicing, responsiveness to local environmental conditions. With regard to the locus of entrepreneurship, the following three typologies are identified: subsidiary-driven, head-quarters-driven, and jointly driven entrepreneurship.	Empirical (Case study)	Advertising (UK)	Sub	Sub
Lee and Williams, 2007	Applied theory	Identification and characterization of the MNC entrepreneurial community . Examination of its nature, antecedents, and consequences. In addition, exploration of the link between entrepreneurial community and the wider phenomenon of dispersed entrepreneurship and MNC evolution.	The internationally dispersed practices are a necessary environmental pre-condition for the formation of entrepreneurial communities. High-boundary porosity enables members to form such communities. The focal point of such a community will relocate over time and after dissolution its residuals provide the basis for new communities which embody the knowledge created in the previous communities.	Conceptual	n/a	Sub	n/a
Verbeke and Yuan, 2007	Applied theory	Application of Penrose's insights to the quantity of managerial services required for firm-level organic expansion to subsidiary entrepreneurship.	The more complex and difficult the entrepreneurial activity is measured (institutional, organizational, and corporate management level context), the more managerial services are needed to successfully implement those initiatives.	Conceptual	n/a	Sub	n/a

Theoretical background

Publication	Category	Research Question	Research Answer	Research Method	Industry (Country)	Unit analyzed	Unit questioned
Mahnke et al., 2007	Process	Examination of the uncertainties /problems the entrepreneurial initiative has to cope with and derivation of strategies to solve those.	Initiatives will face three kinds of uncertainties: communicative, behavioral, and value uncertainty. Possible strategic actions to reduce those uncertainties are delegation of authority to local experts, establishment of self-enforceable financial incentives, a credible commitment to promotion rules and formation of entrepreneurial clans.	Conceptual	n/a	Sub/HQ	n/a
Zucchella et al., 2007	Outcome	Analysis of the entrepreneurial capability development in terms of proactiveness and innovativeness. In addition, examination of underlying local market conditions.	Observed subsidiaries show entrepreneurial behavior (innovative, risk-taking, and proactive). Local management with crucial role in opportunity scanning and innovative response to customer needs in an increasingly complex and regulated environment.	Empirical (Case study)	Dialysis industry (Italy)	Sub	Sub
Dörrenbächer and Geppert, 2008	Determinants	Examination of the linkage between key foreign subsidiary managers' socio-political/biographical background and subsidiary initiative. Analysis of pursued negotiation strategies with HQ.	Subsidiary managers' personal interests, socio-political and biographical background have strong impact on subsidiary initiative. Career orientation has strong impact on general motivation and initiative selection, whereas professional biography strongly determines the pursued resource mobilization strategy.	Empirical (Case study)	Manufacturing (France)	Sub	Sub
Lyly-Yrjänäinen et al., 2008)	Process	Analysis of global key account's role in diffusing subsidiary initiative and in decreasing the effects of the corporate immune system in global parent organizations.	The use of a global key account as a vehicle for diffusing subsidiary initiatives in global parent organizations seems to be an interesting alternative for subsidiaries struggling with reluctant global parents or rival subsidiaries.	Empirical (Case study)	Manufacturing (Finland)	Sub/HQ	Sub/HQ
Ambos et al., 2009	Outcome	Investigation how subsidiary's past initiatives contribute to subsidiary's bargaining power and how headquarters responds.	Subsidiaries are not able to increase their influence through initiatives unless they get headquarters attention. Initiatives directly effect subsidiary's autonomy, but with the caveat to evoke headquarters monitoring.	Empirical (Questionnaire)	Different industries (Australia, Canada, UK)	Sub	Sub
Williams, 2009	Determinants Applied theory	Examination of subsidiary-level factors (inter-unit networking, subsidiary learning from internal and external sources, and shared strategic goals) that promote global initiatives in MNCs.	MNCs pursuing global initiatives have subs that are constantly willing to learn and have managers who share the corporate goals. These MNCs also encourage tacit knowledge sharing between peer subs through inter-unit networking.	Empirical (Questionnaire)	16 distinct industries (19 countries)	Sub	Sub

Publi- cation	Cate- gory	Research Question	Research Answer	Research Method	Industry (Country)	Unit ana- lyzed	Unit ques- tioned
Williams and Lee, 2009	Applied theory	Examination of subsidiary entrepreneurship based on the concept of the political arena . Gain an understanding how remote employees become stimulated to act as entrepreneurs due to the internal political arena.	The political arena antecedents are the corporate immune system, inappropriate control, subsidiary requirement differences, and cognitive barriers to knowledge sharing. Different types of entrepreneurs (Austrian-like and Schumpeterian-like) emerge as a consequence of the different ways in which political arena is resolved.	Con- ceptual	n/a	Sub/ HQ	n/a

Table 1: Overview on subsidiary entrepreneurship research papers

Source: Author

2.1.3.1 Types of subsidiary initiatives

Most of the work regarding different initiative types roots back to the work from Birkinshaw, 1997, in which he discovers four different groups of initiatives based on locus of opportunity and pursuit (Figure 4): (1) *local market initiatives*, (2) *global market initiatives*, (3) *internal market initiatives*, and (4) *hybrid initiatives*. Locus of opportunity defines the source within the subsidiary network from which the entrepreneurial idea arises, whereas locus of pursuit defines the relevant market the idea involves. For all initiative types (except for the hybrid one), locus of opportunity and locus of pursuit are the same. Locus refers to one of the three “markets” in which a subsidiary operates and out of which entrepreneurial initiatives might evolve. First, the *local market* is the host market of the subsidiary and consists of its local competitors, suppliers, customers, and governmental bodies. Second, the *internal market*, in contrast, is the compilation of head office operations and all corporate-controlled subsidiaries/affiliates worldwide. Third, the *global market* is more or less the residuum market and includes all competitors, customers and suppliers which belong neither to the local nor the internal market.

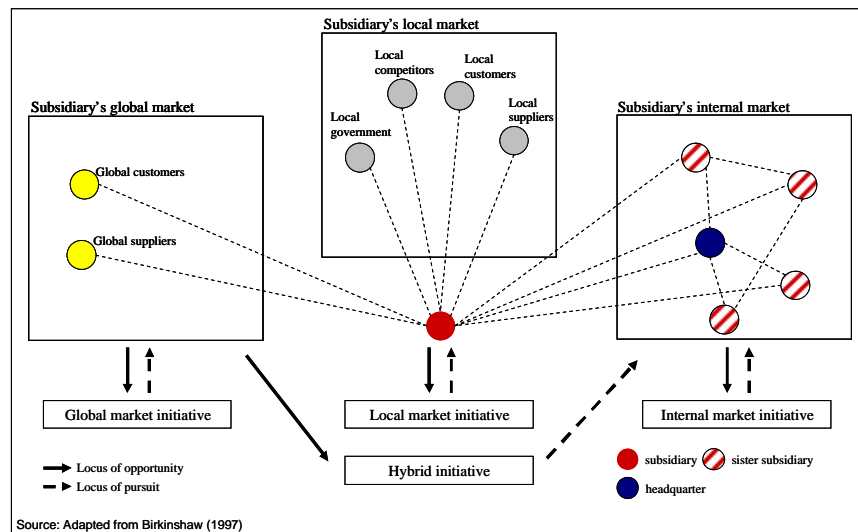


Figure 4: Conceptual model of subsidiary's market and initiative interface

According to Birkinshaw (1997: 218–219) and Birkinshaw (2000: 22–23), as it can be seen in Figure 4, *(1) local market initiatives* evolve out of a subsidiary's local market opportunities (e.g., identified through discussions with local customers) and lead in a first step to new products or services for the local customer base. However, the local opportunities might become global for the whole MNC if customers can also be found abroad. Conditions facilitating local market initiatives are the following: first, there must be a moderate level of subsidiary autonomy combined with strong parent-subsidary relations. Second, a well-established set of capabilities that enable the subsidiary to act adequately to arising opportunities must exist. In the beginning of an entrepreneurial initiative, the subsidiary needs enough autonomy to allocate sufficient resources in order to develop the opportunity without interference from headquarters. However, the subsidiary needs parental support for higher resource commitments and project sponsorship later in the process. Therefore, a careful balance between autonomy and integration is mandatory. The initiative process is externally focused, because new products and services are developed in response to market requirements. Later, the proven concept is transferred to the parent company for building legitimacy in the whole company.

Example: Subsidiary A identifies that customers in its home country ask for a new product or adaption of an existing product to local taste, etc. The subsidiary develops the new product on its own and expands its existing offering with own financing capabilities. After successful introduction into the subsidiary's home country, a transfer to other subsidiaries might occur.

(2) **Global market initiatives**, in contrast, evolve out of non-local market opportunities (Figure 4). However, this often involves the extension of existing customer or supplier relationships. The initiative process is, as with the one for local initiatives, externally oriented. Only minor headquarters involvement is needed, except for significant investments. The facilitating factors are similar to those of local initiatives, but a higher level of autonomy and a more comprehensive capability set is needed. Global initiatives are often aimed at building new products or services around existing business lines and are developed in order to establish a new “center of excellence” (Birkinshaw, 2000: 23–24).

Example: Through communication with its supplier in another country, subsidiary B identifies that customers abroad ask for a new product or adaption of an existing product. The subsidiary is able to deliver such a product, develops it on its own, and expands its existing offering with own budgets.

The (3) **internal market initiatives** are somewhat different from local and global ones: they arise through recognition of market opportunities *inside* instead of *outside* the organization (Figure 4). These initiatives are sought to reconfigure and rationalize company’s resources, activities, and processes. Two critical conditions for successful internal market initiatives are a high-level of subsidiary credibility⁹ and headquarters global orientation. The openness of headquarters management for ideas coming from subsidiaries is especially relevant, due to the inward oriented style of such initiatives. Another reason is that the overall initiative process is inward-looking and therefore it is indispensable to obtain corporate approval upfront. This results in an intense selling process, vertically as well as horizontally (Birkinshaw, 2000: 25–28).

Example: Subsidiary C identifies that it can produce a product much cheaper than another subsidiary currently does. C actively approaches the parent company with a proposal to change the existing production logic, so that in the future, subsidiary C will produce the product.

The (4) **hybrid initiatives** combine elements of internal and global ones (Figure 4): initiative owners seek to pursue opportunities outside the subsidiary’s home market and

⁹ This is often realized through strong personal relationships.

have to convince head office managers of the project necessity. Similar to internal market initiatives, facilitating factors include the subsidiary's credibility at head office, a strong parent-subsidiary communication, and a relatively low level of subsidiary autonomy. Hybrid initiatives require a very high level of selling effort, because subsidiaries often compete against each other. The overall initiative process is nearly the same as for internal initiatives. However, hybrid initiatives typically get management support from the beginning, whereas for internal initiatives support needs to found during the process. (Birkinshaw, 2000: 28–30).

Example: A new market opportunity is spotted by headquarters, but the realizing unit is not yet defined. Subsidiary D proactively applies for realization.

According to Birkinshaw (1997: 226), Birkinshaw (1998: 356–357), and Birkinshaw (2000: 44–45), initiatives can also be classified by their ultimate initiative goal and the underlying entrepreneurial process in *externally-oriented* and *internally-oriented* initiatives. *Externally-oriented initiatives* evolve out of the various opportunities in a subsidiary's local and global market. Therefore, local and global market initiatives belong to this category. The focus usually is on revenue enhancement and market development. Head office approval is typically implicit and funding occurs by local development funds or bootlegged resources. Official approval from headquarters is typically sought after the business becomes successful. Externally-oriented in this context means that initiatives are subject to environmental selection mechanisms such as customer acceptance. *Internally-oriented initiatives*, in contrast, try to optimize the existing network through efficiency enhancement by challenging existing routines and identifying unmet opportunities. Internal market and hybrid initiatives belong to this category. The focus of these initiatives is on cost reduction and network optimization. Funding is realized by formal approval, accompanied by strong up-selling activities. Internally-oriented further means that initiatives are subject to corporate (internal) selection mechanisms such as legitimacy.

Furthermore, during his research Birkinshaw (1998) identified four different kinds of internal-oriented initiatives “*Reconfiguration Initiative*,” “*Maverick Initiative*,” “*Bid Initiative*,” and “*Leap-of-faith Initiative*” and developed a way of classifying them. As shown in Figure 5, he differentiates initiatives by their degree of headquarters support and by the nature of the business opportunity. Headquarters support can be “sanctioned” or

“not sanctioned.” “Sanctioned” means that rules or procedures exist which the subsidiary can or has to follow. “Not sanctioned,” in contrast, means that head office managers are either unaware of or not interested in the initiative. The nature of the business opportunity splits in initiatives evolving out of the “existing internal-market setting” versus initiatives arising from a newly “emerging business area.” In the first case, initiatives owners seek to reconfigure the existing activities within the firm, while in the latter case, initiative owners try to enhance the allocation of new activities.

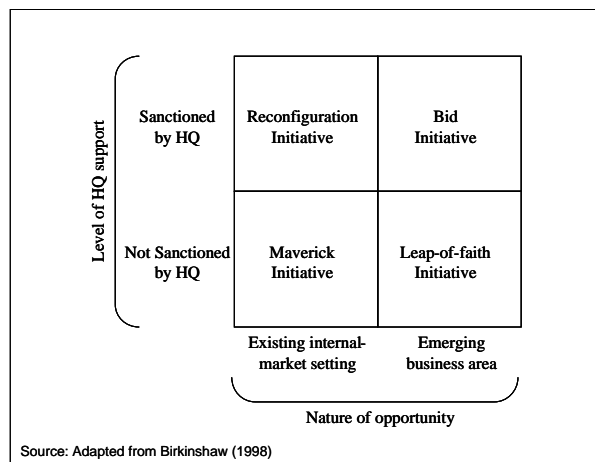


Figure 5: Types of internal-oriented initiatives

The “*Reconfiguration Initiative*” and “*Maverick Initiative*” both seek to enhance internal efficiency, but differ in headquarters support: while “*Reconfiguration Initiatives*” are sanctioned by headquarters, “*Maverick Initiatives*” are not. The “*Reconfiguration Initiative*” is best described as an effort of a subsidiary unit to challenge the existing configuration of activities with the goal of improving business efficiency. Such initiatives can reconfigure physical as well as intangible activities and normally result in changes of the current subsidiary setting. They often lead to subsidiary competition, resulting in a losing and a winning subsidiary. The “*Maverick Initiative*”, in contrast, seeks to improve internal market efficiency without head office sanctioning, which makes these initiatives very difficult and rare (Birkinshaw, 1998).

“*Bid Initiatives*” and “*Leap-of-faith Initiatives*” are directed towards newly emerging businesses opportunities and subsidiaries compete for realizing them. They differ only in headquarters sanctioning. “*Reconfiguration Initiatives*” are based on opportunity identification by subsidiary units, while “*Bid Initiatives*” are jointly identified by

headquarters and a subsidiary unit. While the emerging business opportunity is mostly externally-oriented, subsidiaries have to win the right internally to execute the opportunity. This might involve strong lobbying towards decision makers and other influential entities within the organization. Two different lobbying strategies can be observed: the push and the pull strategy. Push strategies heavily involve subsidiary's top management who actively try to win the right for realizing the opportunity. If the pull strategy is followed, subsidiary's top management promotes its capabilities to influential managers throughout the firm, seeking to be approached by decision makers. "*Leap-of-faith Initiatives*," in contrast, start without headquarters sanctioning and are like a bet by subsidiary managers on the emergence of a certain business opportunity. "*Bid Initiatives*," in contrast, are started by subsidiary management without headquarters knowledge and management tries to get funding and legitimization after the initiative is started (Birkinshaw, 1998).

One extension of the previously described work on initiative types was done by Verbeke et al. (2007) who differentiate between *renewal* and *venturing initiatives*. Renewal initiatives tend to directly and intentionally affect subsidiary's existing business, whereas venturing initiatives aim primarily at creating new businesses within a subsidiary. Therefore, renewal initiatives involve a change in a subsidiary's strategy by changing the existing production process, sales approach, etc. while venturing initiatives aim at creating something new and therefore will not directly impact the subsidiary's existing strategy. Therefore, Verbeke et al. (2007: 588) demand "*[h]owever, because of the nature of the change involved, in the case of renewal, having to address what already exists, and in the case of venturing, being able to largely ignore what already exists, we posit that these two types of entrepreneurial initiatives in subsidiaries are very different and deserve separate attention.*"

2.1.3.2 *Resistances against and uncertainties of entrepreneurial initiatives*

The existing work in this segment covers two different fields: Birkinshaw and Fry (1998), Birkinshaw and Ridderstråle (1999), and Dörrenbächer and Geppert (2008) focus on the resistances, specifically the "corporate immune system" entrepreneurial subsidiary initiatives will face, whereas Mahnke et al. (2007) focus on the uncertainties which subsidiary initiatives have to cope with throughout their entrepreneurial process. However, the uncertainties might also result in barriers for an initiative that need to be overcome in the first place.

Resistances against an entrepreneurial initiative

According to Birkinshaw (1997), the resource allocation process faces several resistances and differs for externally- and internally-oriented initiatives¹⁰. To make resources available for externally-oriented initiatives, a formal corporate approval is needed. Resources for internally-oriented initiatives, in contrast, are more or less implicitly committed by headquarters. For example, subsidiaries with local market initiatives normally proceed as long as possible without involving headquarters and use local budgets or bootlegged ones. Also, depending on the initiative type, initiative owners have to deal with different resistances. According to Birkinshaw (2000: 38-40), the possible resistances range from strict funding criteria to pure political maneuvering. Birkinshaw and Ridderstråle (1999) explore in their work the process of entrepreneurial subsidiary activities and the forces that resist them, which they refer to as the “corporate immune system.” The tendency of the immune system is, according to Yamin (2002: 136), “[...] to *repel or resist initiatives even though they may promise an improvement in performance.*” Birkinshaw and Ridderstråle (1999) reveal that the corporate immune system is a complex and multi-level phenomenon which consists of two intertwining layers: (1) the underlying interpreted *predispositions* and the (2) visible *manifestations* of the corporate immune system (actions taken or lack of actions).

The authors identify in the first layer a set of three interpreted *predispositions*, “*ethnocentrism*,” “*suspicion of the unknown*,” and “*resistance to change*.” These predispositions are consistent to the ones of the “Not Invented Here (NIH) syndrome”¹¹. Birkinshaw and Ridderstråle (1999) identify “ethnocentrism” as the most common predisposition which, in the case of subsidiary entrepreneurship, can be defined as “*the attitude of those at the centre towards those at the periphery.*” It seems that headquarters managers judge headquarters-driven innovations as more successful than subsidiary-driven ones. They also tend to view foreign subsidiaries only as innovation recipients and not as originators. The predisposition “suspicion of the unknown” manifests itself in headquarters reluctance to listen to subsidiary driven ideas, because headquarters does not feel familiar with them. Finally, the predisposition “resistance to change” often occurs from headquarters managers, if they judge initiatives as threats to their personal status or

¹⁰ For an explanation of externally- and internally-oriented initiatives please see 2.1.3.1.

¹¹ The NIH syndrome is the tendency of a group to reject ideas from outsiders, because they believe that only insiders possess the relevant knowledge set for successful ideas (Katz and Allen, 1982).

standing in the organization. Altogether, these predispositions form a strong barrier for subsidiary initiatives that need to be overcome.

According to Birkinshaw and Ridderstråle (1999), the second layer consists of actions and non-actions resulting from predispositions. The three *manifestations* are *rejection, delay, or request for greater justification by headquarters managers; lobbying and rival initiatives by competing divisions; and lack of recognition of initiative by other divisions*. Birkinshaw and Ridderstråle (1999) not only revealed resistances along the vertical chain of command (e.g., Burgelman, 1983a), but also from sister divisions and other units.

Uncertainties of an entrepreneurial initiative

According to Mahnke et al. (2007: 1279), the multinational presence on the one hand enlarges the ability and capacity of the firm to reap returns from entrepreneurial initiatives, but on the other hand complicates the governance of multi-level entrepreneurial processes. The entrepreneurial process is not only locally dispersed, but the different steps also occur at different levels of the organization: opportunity identification, formulation of proposal, authorization, implementation, and the appropriation of rents are different events involving different people. Therefore, it is a key challenge for headquarters to align the interests of the involved members and to assure cognition across time and space. Due to the multi-level character of subsidiary entrepreneurship, multiple interests of the involved parties often collide and uncertainties for the entrepreneurial initiative emerge. The different, sometimes competing goals, motives, and political agendas can also potentially undermine entrepreneurial activities and limit the MNC's ability to capitalize value from those initiatives. Mahnke et al. (2007) classify three types of uncertainty – *communicative, behavioral, and value uncertainty* – which may influence all phases of the entrepreneurial process. However, the authors especially focus on uncertainties in the opportunity recognition and legitimization phase due to their high information asymmetry.

Communicative uncertainty is defined by Mahnke et al. (2007) as the uncertainty about the appropriate audience of an entrepreneurial proposal and the right amount of information that need to be delivered. Entrepreneurs deal with questions such as who they need to convince (single person versus group), how an appropriate audience can be found, when and how the idea should be presented, and what the right timing of such a proposal is. It is assumed that the more local the entrepreneurial idea is, the more difficult it is to

communicate it effectively. It is assumed that communicative uncertainty will lower the acceptance of an entrepreneurial proposal and consequently reduces subsidiary entrepreneurship.

Behavioral uncertainty occurs if the different parties involved in the entrepreneurial process do not know how to behave due to information asymmetry. This might be caused by not fully revealing all relevant information or distortion of information about nature and size of an entrepreneurial opportunity. The entrepreneur might fear to lose control and ownership of his ideas if he shares it with others, and therefore withholds relevant information. Headquarters managers, in contrast, might fear that entrepreneurs oversell their ideas to gain funding approval and therefore hedge against such a purposeful distortion of idea presentation. The authors assume that the higher the fear of information asymmetry, the higher is the level of behavioral uncertainty and consequently the lower is the MNC's acceptance of an entrepreneurial idea (Mahnke et al., 2007).

Value uncertainty arises from the uncertainty about the value assessment of an entrepreneurial initiative by headquarters and mainly arises if different entrepreneurial proposals compete for selection. According to Mahnke et al. (2007), local entrepreneurs might hoard their ideas instead of proposing them if they are uncertain about the selection and value appropriation process. Value uncertainty also arises from the fact that promising entrepreneurial ideas can advance careers, whereas failed ones can damage careers. Thus, subsidiary and headquarters managers have an incentive to opportunistically determine entrepreneurial rents and as this probability rises, value uncertainty increases which in consequences will lower MNC's acceptance of an entrepreneurial initiative.

In response to the three types of uncertainty, Mahnke et al. (2007) propose different strategic actions such as delegation of authority to local experts, establishment of self-enforceable financial incentives, credible commitment to promotion rules, and formation of entrepreneurial clans.

2.1.3.3 Determinants of subsidiary initiatives

Research for determinants of subsidiary initiatives can be classified in two different groups: (1) the authors Birkinshaw et al. (1998), Birkinshaw (1999), Zahra et al. (2000),

Tseng et al. (2004), Liouka et al. (2006), and Verbeke et al. (2007) investigate the influence and importance of corporate, subsidiary, and environmental **context factors** on subsidiary entrepreneurship. (2) The authors Yamin (2002), Sohail and Ayadurai (2004), Ciabuschi and Forsgren (2006), Krishnan (2006), Boojihawon et al. (2007), Zucchella et al. (2007), Dörrenbächer and Geppert (2008), and Williams (2009) investigate **other determinants** (e.g., organizational isolation, network characteristics, etc.) of subsidiary entrepreneurship.

Most of the research investigates the impact of the determinants on the emergence of subsidiary initiatives, on the performance of an entrepreneurial initiative, or on the overall company's performance. The work of Liouka (2007) is the first which solely studies the impact of the determinants on opportunity identification of the entrepreneurial process. None of the other authors differentiate between process steps.

(1) Context factors

The authors in the first group differentiate between corporate, subsidiary, and environmental context factors. They try to explore the relationship between these factors and the existence of subsidiary entrepreneurship as well as to rank the different context factors by their importance for subsidiary entrepreneurship.

According to Verbeke et al. (2007), **corporate context factors** are understood as “*structural and behavioral determinants of subsidiary initiatives that either serve as inducements for subsidiary managers to act in certain ways or represent corporate management's preconceptions that influence their assessments of subsidiary actions.*” **Subsidiary context factors**, in contrast, are those determinants which are characteristic for the subsidiary's organizational structure and culture and can be managed by the subsidiary. **Environmental context factors** are all determinants which refer to subsidiary's country- and industry-level factors as well as market context.

Corporate context factors

Verbeke et al. (2007) try to give an exhaustive overview on the five corporate context factors used in past research: (1) decentralization of decision making, (2) subsidiary's management credibility, (3) level of headquarters and subsidiary communication, (4)

headquarters management style: global versus ethnocentric, and (5) level of intra-firm competition for resources.

According to Zahra et al. (2000: 4), the “*corporate context refers to the strategic directives of the headquarters and the control mechanisms used by the headquarters to evaluate managerial performance*” which they translate in the ascertainable factors of *global subsidiary mandate*, *autonomy*, *strategic controls*, and *financial controls*. Liouka et al. (2006) use the factors “subsidiary role” and “subsidiary autonomy” to model the corporate context in their work. The factor “subsidiary role” seems to be similar to the factor “subsidiary mandate” used by Zahra et al. (2000: 4). However, Liouka’s formalization focuses more on the position of a subsidiary within the MNC, whereas the strategic mandate of a subsidiary tends to describe the role of a subsidiary and the scope of its operations: the mandate will evolve over time according to company’s overall strategy, subsidiary’s resources and skills, and the interactions between the parent and the subsidiary company.

If a subsidiary has a *global mandate*, it is actively involved in decisions about products and markets. The positive linkage between a global subsidiary mandate and a high degree of subsidiary entrepreneurship is also corroborated by Zahra et al. (2000). Their explanation is that a global mandate exposes a subsidiary to very different groups and systems which stimulate entrepreneurship: first, a subsidiary’s value-chain activities are disposed around the globe, exposing the subsidiary to multiple sources of local knowledge and new ideas. Second, the subsidiary has to interact with other units situated in different innovation systems and therefore the subsidiary is exposed to other local practices. Third, subsidiaries with a global mandate actively use their interactions with local customers and vendors to retrieve innovative ideas. Finally, the subsidiary has a greater role in planning, designing, manufacturing, and marketing its products, which makes it easier for the subsidiary to identify and realize new innovative ideas. In accordance to other researchers, Zahra et al. (2000) verify in their analysis a positive relationship between a subsidiary’s *autonomy* and subsidiary entrepreneurship. Autonomy is understood as a subsidiary manager’s freedom to act independently from headquarters and to pursue any entrepreneurial initiative they consider as important. The positive relationship between *strategic controls* and subsidiary entrepreneurship is also proven right in their work. In the case of *financial controls*, the results of Zahra et al. (2000) do not support the hypothesis that financial controls are

negatively correlated to subsidiary entrepreneurship. The relationship was assumed to be negative due to the fact that financial controls tie managers' compensation to the achievement of short-term goals. Therefore, managers are more likely assumed to be risk averse and stay away from long-term strategic projects with uncertain outcome. These results are antithetic to previous results (Barringer and Bluedorn, 1999; Hitt et al., 1996) regarding the relationship between financial controls and innovation projects as well as R&D projects. One possible explanation might be that financial controls cannot be properly used in the international context due to currency rate fluctuations and different accounting standards. Another reason might be that the variable financial control is dominated by the variables autonomy and strategic controls such that there might be a compensating effect (Zahra et al., 2000).

Subsidiary context factors

According to Verbeke et al. (2007), the four subsidiary context factors are *availability of specialized resources*, *strong subsidiary leadership*, *entrepreneurial culture*, and *good relations with headquarters*. In particular, the availability of distinctive resources at subsidiary level was proven to have a positive impact on the probability of subsidiary entrepreneurship (Birkinshaw, 1999). The underlying explanation is that such capabilities provide the relevant expertise on which entrepreneurial initiatives are built. Contradictory results were found for the relationship between the factor "strong subsidiary leadership" and subsidiary entrepreneurship probability (Birkinshaw et al., 1998; Birkinshaw, 1999). Regarding the relationship between a "subsidiary's entrepreneurial culture" and subsidiary entrepreneurship, only in the work from Birkinshaw et al. (1998) is some evidence found, whereas there is strong support for the relationship in the work from Liouka et al. (2006: 24): "*this research proves the existence of specific 'entrepreneurial capabilities' at the subsidiary level as key elements of an 'international entrepreneurial culture'.*" The entrepreneurial culture in Liouka's work was measured by a subsidiary's innovation propensity, risk attitude, market orientation, learning orientation, networking orientation, and motivation. Verbeke et al. (2007) further propose that a good relationship between headquarters and subsidiaries will increase the probability of subsidiary entrepreneurship. A quantification of this proposition is still missing, but it can be considered as valid according to the before mentioned positive impact of the corporate context factor "corporate and subsidiary communication" on subsidiary entrepreneurship.

Environmental context factors

Zahra et al. (2000) consider as an environmental context factor the degree of “environmental turbulence,” which is measured by the variables of environmental dynamism, hostility and complexity. For all three variables, a positive linkage to subsidiary entrepreneurship was assumed and proven. Environmental dynamism means that innovation and technological changes are fast-paced. The hostility of an environment results from proliferation of rivals, an increased state protectionism, and intensified competition. An environment is considered as complex if customer needs are extremely diversified and a high level of interconnectedness of different external forces exists.

Verbeke et al. (2007: 592) summarize the following environmental context factors used by other researchers: (1) level of industry globalization, (2) dynamism of the local business environment, (3) governmental support, (4) strategic importance of the host country to headquarters, and (5) relative cost of input factors. Birkinshaw et al. (1998) indeed observed a positive relationship between the level of industry’s globalization and the probability of entrepreneurial initiatives, but surprisingly observed a negative relationship between the level of local dynamism and subsidiary entrepreneurship. One explanation might be that a high dynamism makes it difficult for a subsidiary unit to tie strong relationships with local customers and suppliers, which are a vivid source of innovative ideas. The other variables are not yet included in an empirical study.

All research on context factors derive that certain factors have an impact on the probability of subsidiary entrepreneurship. It seems that subsidiary context factors are more important than corporate and environmental context factors (Birkinshaw, 1999), but a comprehensive analysis of all context factors against each other and with regard to their linkages is still missing.

(2) Other determinants

Most of the authors in this group investigate in their work other determinants which are not directly linked to one of the three previous described groups. Dörrenbächer and Geppert (2008) explore the impact of socio-political and biographical actor characteristics on subsidiary entrepreneurship. Yamin (2002) focuses on the linkage between organizational isolation of a subsidiary and subsidiary entrepreneurship. Sohail and Ayadurai (2004) investigate the interrelation between subsidiary entrepreneurship and the

length of the subsidiary operation as well as parent's country of origin. The only exception is Williams (2009), who investigates the influence of three subsidiary-level factors on the probability of global initiatives. However, his subsidiary-level factors originate in the knowledge-based view and are not similar to the previous mentioned subsidiary context factors. A further exception is the work from Boojihawon et al. (2007). The authors examine a subsidiary's entrepreneurial culture¹², which is one of the subsidiary context factors, in detail.

Dörrenbächer and Geppert (2008) assume in their work that the basic concept of social agency holds true with regard to subsidiary entrepreneurship. According to them and in line with Ferner (2000) and Birkinshaw (2000), foreign subsidiary managers fulfill three different tasks: first, local managers sense and interpret local opportunities. Second, local managers build local resources. Third, local managers contribute to and actively participate in the development of global strategy. The extent to which foreign subsidiary managers translate these tasks in individual subsidiary initiatives seems to depend upon the subsidiary manager's particular *socio-political and biographical background*. According to Dörrenbächer and Geppert (2008), all relevant factors (a manager's *nationality*, *career ambitions*, and *career orientations*) have a strong impact on the general motivation to pursue entrepreneurial initiatives, the kind of initiatives taken, and the way the initiatives are pursued. Besides that, corporate and subsidiary context factors also impact subsidiary managers' behavior with regard to entrepreneurial initiative taking. All the findings for subsidiary entrepreneurship can also be aligned to the existing corporate entrepreneurship research highlighting the relevance of middle managers' perception for corporate entrepreneurship (Hornsby et al., 2002).

Yamin (2002) analyses theoretically the relevance of '*organizational isolation*' for subsidiary entrepreneurship by comparing MNC subsidiaries with subsidiaries from national firms and their respective propensity to act entrepreneurial. According to him, MNC subsidiaries are more 'organizationally isolated' from headquarters than subsidiaries from national firms: this can be explained by headquarters' higher degree of incomplete control and coordination as well as a higher level of imperfect organizational replication.

¹² The entrepreneurial culture is one factor of the subsidiary context factors, but due to the explicit focus of the authors on this factor and not considering the other subsidiary context factors in their work; their research is considered under "other determinants."

Headquarters' ability to effectively control its subsidiaries is lower for multinationals than for national firms because for each foreign subsidiary a differentiated control approach is needed due to their different environmental settings. This inevitably leads in reality to a higher control 'gap' for multinational than for national subsidiaries.

As a result, Yamin (2002) states that a higher degree of 'organizational isolation' corresponds to a higher level of entrepreneurial orientation. The multinational differs from the national subsidiary first by its higher degree of organizational freedom to pursue entrepreneurial activities, second by its greater pressure to adapt to its local market, and third by its internationally dispersed form, which enhances its ability to define and develop initiatives on its own. Therefore, multinational subsidiaries will display a greater degree of entrepreneurial orientation than national ones. The idea that entrepreneurship is a precursor of innovation leads to his second assumption: MNC subsidiaries have a greater ability to perform innovation successfully than national subsidiaries. This argument is similar to the assumption that a higher degree of autonomy enables subsidiary entrepreneurship. However, the difference is that Yamin's statement is based upon a lack of control, whereas the autonomy statement is about headquarters actively giving the right to innovate to its subsidiaries.

Sohail and Ayadurai (2004) investigate in their work the interrelation between subsidiary entrepreneurship and the *length of subsidiary's operation* as well as the *parent's country of origin*. The authors discover for both determinants a relationship: "younger" subsidiaries seem to be more entrepreneurial than more established ones as well as European and Asian subsidiaries seem to be more entrepreneurial than U.S. ones.

Williams (2009) analyzes the linkage between certain *subsidiary-level factors* and the probability of global initiatives. His work is based on the knowledge-based view. Three subsidiary-level variables are developed which help to explain the propensity that an MNC pursues global initiatives: (1) inter-unit networking, (2) subsidiary learning willingness, and (3) shared strategic goals between subsidiary and headquarters managers. For all three variables, a positive relationship with the "propensity of global initiatives" is found, although it is less significant for the variable "inter-unit networking."

Boojihawon et al. (2007) analyze the relationship between a *subsidiary's entrepreneurial culture* and the different forms of subsidiary entrepreneurship. Their findings suggest that “*entrepreneurial culture in multinational subsidiaries can be viewed to be the main underlying notion encompassing entrepreneurial activity.*” (Boojihawon et al., 2007: 562). Furthermore, the authors differentiate among four different types of subsidiary entrepreneurship. According to Figure 6, these are defined by headquarters and the subsidiary's influence¹³ on subsidiary's entrepreneurial activity:

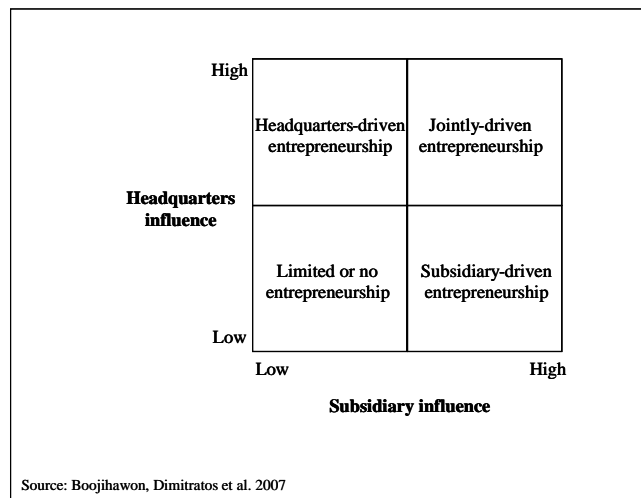


Figure 6: Type of subsidiary entrepreneurship

(1) *Limited or no entrepreneurship* occurs if there is no evidence of global vision, entrepreneurial orientation, or entrepreneurial network management at the subsidiary and headquarters level (Figure 6). This means that the subsidiary's role and strategy are solely defined by headquarters, which is often observed in centralized organizations (Boojihawon et al., 2007).

(2) *Subsidiary-driven entrepreneurship* is only motivated by a subsidiary's vision and entrepreneurial orientation (Figure 6) wherefore it must possess the necessary level of autonomy and capabilities. Subsidiaries in this group reported limited attachment to corporate strategy and perceived headquarters as “hands-off.” However, subsidiary executives are actively promoting an entrepreneurial culture in their unit to respond to internal and external opportunities. Entrepreneurship is seen as an organizational concept

¹³ Headquarters and the subsidiary's influence on subsidiary entrepreneurship are modeled as two orthogonal dimensions, each varying in the degree of influence from low to high.

that needs to be continuously reinforced through culture and managed through structures and processes (Boojihawon et al., 2007).

(3) *Headquarters-driven entrepreneurship*, in contrast, is established through active promotion of a global vision and entrepreneurial orientation by headquarters (Figure 6). The network is indeed centrally organized, but flexible enough to allow innovative activities and maximize capabilities. Though headquarters is actively involved in leading and developing, subsidiaries have to acquire approval for their entrepreneurial activities. Therefore, a subsidiary's management operationally distributes headquarters-given entrepreneurial culture in their local unit and ensures consistency with overall strategy (Boojihawon et al., 2007).

(4) *Jointly driven entrepreneurship* exists if both headquarters and subsidiaries support in a joint manner entrepreneurial subsidiary activities (Figure 6): an entrepreneurial culture is supported by all organizational levels and communication between units is frequent and vivid. The parent encourages a collaborative global vision and entrepreneurial orientation in order to effectively service global and local needs and to facilitate an active knowledge transfer. The overall aim is to maximize the MNC's entrepreneurial capabilities (Boojihawon et al., 2007).

Boojihawon et al. (2007) derive that a subsidiary's entrepreneurial culture is the overarching mechanism that sparks entrepreneurial initiatives. According to them, subsidiary's entrepreneurial culture consists of *global vision*, *entrepreneurial orientation*, and *entrepreneurial MNC network management*. Furthermore, the authors find some evidence for three manifestations which directly impact subsidiary's entrepreneurial culture: *subsidiary autonomy*, *target market servicing*, and *responsiveness to local environmental conditions*.

2.1.3.4 Consequences of subsidiary entrepreneurship

The research about the results and consequences of subsidiary entrepreneurship activities covers different topics: A few authors investigate the relationship between entrepreneurial subsidiary activity and improved subsidiary/headquarters performance (Birkinshaw, 1998; Birkinshaw et al., 2005; Liouka et al., 2006). Others examine the impact of entrepreneurial

behavior on a subsidiary's (role) development (Delany, 2000a; Delany, 2000b; Sargent and Matthews, 2006; Krishnan, 2006; Ambos et al., 2009). Lee and Chen (2003) also investigate the relationship between entrepreneurial subsidiary activities and a company's ability to adapt to local adaptation.

The relationship between subsidiary entrepreneurship and improved performance

The influence of entrepreneurial behavior on the overall success of a multinational corporation has been recognized by several authors (Bartlett and Ghoshal, 1986; Birkinshaw, 2000), and it has been shown that corporate entrepreneurship is positively linked to a higher corporate performance (Zahra and Covin, 1995; Covin and Slevin, 1991). It is also the case that *"mounting evidence suggests that the entrepreneurial activities of subsidiaries play a key role in determining the success of their parent multinational corporations (MNCs)."* (Zahra et al., 2000: 2) as well as *"[...] autonomous action at 'subsidiary' levels has strategic consequences beneficial to the organization as a whole."* (Yamin, 2002: 133). Surprisingly, though, only a few studies have started to analyze the link between entrepreneurial subsidiary initiatives and improved performance.

Birkinshaw (1998), for example, focuses on the costs of entrepreneurial subsidiary initiatives but at the same time admits that *"[t]he fact is that we simply do not know if subsidiary initiatives [...] are really good for the multinational firm."* (Birkinshaw, 1998: 363). Furthermore, subsidiary entrepreneurship does not only have a positive impact on MNC's performance, but also might bear substantial costs. According to Birkinshaw (1998: 361–363), the following four cost positions might emerge from subsidiary entrepreneurship: (1) *costs of empire building*, (2) *costs of lack of focus*, (3) *costs of administrating the internal market*, and (4) *costs for coping with internal unemployment*. The costs of empire building might occur if a subsidiary manager is only interested in building his own empire with the help of initiatives and is not acting in the interest of the whole multinational firm. A too high level of subsidiary entrepreneurship can result in too many and diverse initiatives which will erode overall strategy and business focus. Further costs emerge from managing the initiatives and keeping the internal market under control as well as from personnel restructuring.

The investigation of the relationship between entrepreneurial subsidiary activity and superior performance is partly done by Birkinshaw et al. (2005). In a first step, the authors

investigate the link between subsidiary's competitive arena and its degree of entrepreneurship. In a second step, the link between subsidiary's competitive arena and higher subsidiary performance (measured by increased effectiveness) is analyzed. Both relationships are proven positive which might lead to the indirect conclusion that entrepreneurial behavior might lead to improved subsidiary performance. However, no explicit investigation is done in this work.

The work from Liouka et al. (2006) is, as far as I know, the only one which investigates the effect of subsidiary entrepreneurship on subsidiary performance¹⁴ as well as the influence of context factors on this relationship. The authors empirically prove that entrepreneurial competencies at the subsidiary level are positively linked to the subsidiary's performance. Furthermore, the authors discover that subsidiary autonomy (one of the corporate context factors) does not have a direct effect on subsidiary performance but positively moderates the relationship between subsidiary entrepreneurship and a subsidiary's performance. However, a minimum level of autonomy seems to be needed to activate subsidiary entrepreneurship.

The relationship between subsidiary entrepreneurship and subsidiary development

Delany (2000b) states that the reason for a subsidiary to pursue initiatives is to develop, consolidate, and defend its role and position in the parent-subsidiary relationship. This is similar to Krishnan (2006) who proposes that entrepreneurial initiatives are used by subsidiaries for credibility building and repositioning in the organization's network. Ambos et al. (2009) shed light on the effects of subsidiary initiatives on the parent-subsidiary relationship as well as on the subsidiary's influence in the organization. Surprisingly, they derive that subsidiaries are only able to increase their influence via initiative-taking if they have headquarters' attention. Sargent and Matthews (2006) partly prove that entrepreneurial subsidiary initiatives might be an important driver for subsidiary evolution besides corporate and environmental reasons.

Delany (2000a), Delany (2000b) proposes that subsidiaries are able to gradually increase their role and mandate over the course of eight stages via initiative taking: “[this study

¹⁴ The subsidiary's performance was measured by the subjective measures of perceived management satisfaction with subsidiary performance to the subsidiary's and headquarters' expectations and relative to the subsidiary's main competitors (Liouka et al., 2006).

has] confirmed this pattern of the gradual development of the subsidiary building on previous successful initiatives.” (Delany, 2000b: 227). Important to note is that subsidiaries will move from stage to stage and will not be able to skip stages: “The need for gradual movement through each stage of development, without skipping stages, building on performance credibility, was a common finding in the research and seems to represent the usual way than an ambitious subsidiary management team progresses.” (Delany, 2000b: 232)

According to Figure 7, the eight stages are clustered in three different types of subsidiary mandates: (1) the basic mandate, (2) the enhanced mandate, and (3) the advanced mandate. All subsidiaries¹⁵ start with a basic mandate and focus their activity on one part of the value chain. The market of basic mandate subsidiaries is mainly the internal and only partly the local one. Subsidiaries with an enhanced mandate tend to have activities in a number of parts of the value chain and are slightly involved in strategic questions. These subsidiaries focus their activities on the local market and partly start to act in the global one. Subsidiaries with an advanced mandate are product specialists or strategic independent units and have the freedom and resources to develop business lines and ideas on their own. These subsidiaries will be active in all markets from the internal up to the external, global one (Delany, 2000a).

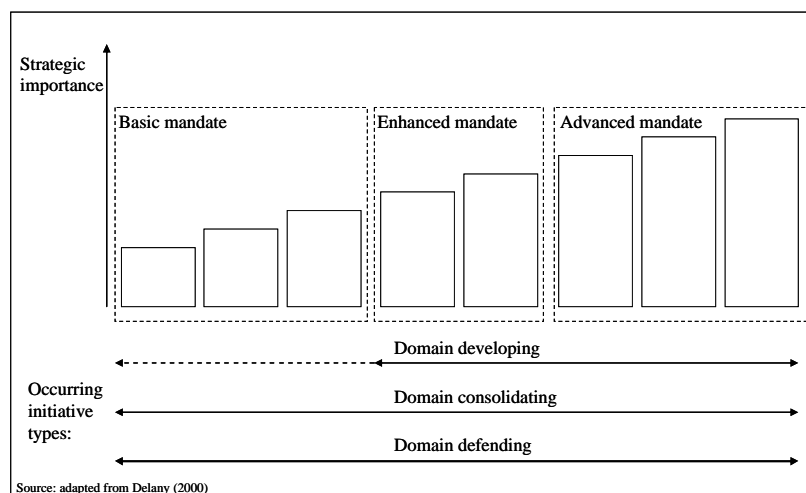


Figure 7: Subsidiary development through initiative taking

¹⁵ The only exceptions are acquired subsidiaries which might enter the development process at a point commensurate with its strategic importance within the new parent (Delany, 2000b: 233).

Delany (2000b) further identify that three different types of entrepreneurial subsidiary initiatives occur (Figure 7): (1) domain developing, (2) domain consolidating, and (3) domain defending initiatives. Domain developing initiatives aim at pursuing a new business opportunity in the local market, bidding for corporate investments, extending the mandate or reconfiguring operations. Domain consolidating initiatives more strongly aim to secure the existing status quo via performance improvement initiatives or involvement in corporate decisions. Domain defending initiatives focus on preserving the status quo and avoiding a stage downgrading. Possible initiatives aim at retaining operations and reporting or possibly finding a new patron. Domain developing initiatives tend to occur from stage four onwards, whereas domain consolidating and defending initiatives occur across all stages. One explanation is that subsidiaries with a basic mandate are very restricted in their activities and have little chance to identify opportunities in the global or internal markets. Nevertheless, domain developing initiatives might occur in stage one to three, but seldom do (Delany, 2000a).

2.1.3.5 Subsidiary entrepreneurship from different theoretical perspectives

Researchers also investigated the subsidiary entrepreneurship phenomenon through the lens of various existing theories: Birkinshaw et al. (2005) investigate the interplay between competitive environment, subsidiary entrepreneurship, and performance. Their theoretical fundamentals are Porter's insights to competitive strategy (Porter, 1980). Verbeke and Yuan (2007) apply Penrose's insights to the analysis of entrepreneurial activities in multinational corporations and aim at deriving the right amount of managerial services needed for successful subsidiary entrepreneurship. Williams and Lee (2009) base their explanation of the subsidiary entrepreneurship phenomenon on the concept of the political arena and further try to explain how remote employees can be stimulated to act as entrepreneurs through resolution of internal political arenas. Johnson and Medcof (2002) and Johnson and Medcof (2007) use the agency theory to explain the phenomenon of subsidiary entrepreneurship. Lee and Williams (2007) analyze the subsidiary entrepreneurship phenomenon from the community perspective and Verbeke and Yuan (2005) develop a tool to manage all governance-related conditions of subsidiary initiatives based on the transaction cost perspective.

Porter's competitive environment perspective

According to Figure 8, Birkinshaw et al. (2005) explain that subsidiaries in an MNC face two competitive arenas: (1) the *external competitive arena*, which includes local customers, suppliers, and competitors; and (2) the *internal competitive arena*, which comprises internal customers, suppliers, and competitors. One big difference between the two environments is that the external competitive environment tends to be local, whereas the internal competitive environment tends to be global for the subsidiary. Birkinshaw et al. (2005) integrate these two competitive arenas, because a subsidiary will not exclusively face one or the other.

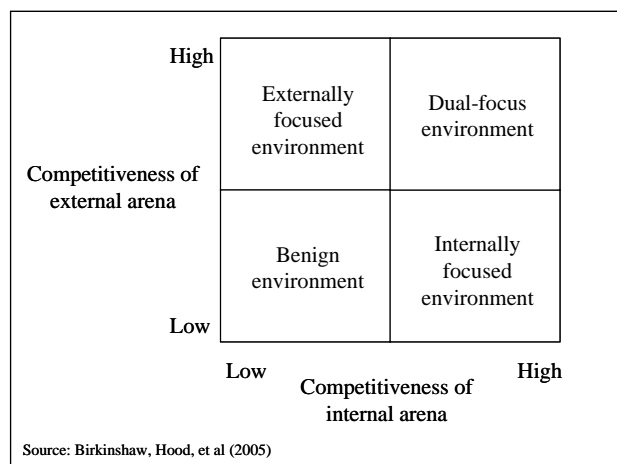


Figure 8: Internal and external competitive arenas¹⁶

Similar to how it is seen in Figure 8, a subsidiary faces a *benign competitive environment* if both the internal and external competitive arenas are weak. The authors speak from an *externally focused competitive environment* if the internal competitive arena is considered as weak, and the external competitive arena as strong. A subsidiary facing such an environment tends to be relatively disconnected from headquarters and operates in its own unique field of expertise. The mirror image of this case is the *internally focused competitive environment*. The subsidiary faces a strong internal competitive arena and a weak external one. Therefore, a subsidiary's competitive environment is mainly defined through internal relationships. If both arenas are considered as strong, the authors speak about a *dual-focused competitive environment*.

¹⁶ A "high" level of competitiveness is given at the combined presence of discerning customers, top-quality suppliers, and close competitors. (Birkinshaw et al., 2005: 231).

Birkinshaw et al. (2005) analyze to what extent the competitive environment influences the degree of subsidiary entrepreneurship and the performance of a subsidiary. The authors can support their hypothesis that the more focused a subsidiary on its external competitive arena, the higher the degree of subsidiary entrepreneurship. However, they can only partly support that this is also linked to a superior performance.

Penrosean perspective

Verbeke and Yuan (2007) apply Penrose's insights to the analysis of entrepreneurial subsidiary activities. The Penrosean perspective formulates that for a successful business expansion, it is necessary to have the specific quality and sufficient quantity of managerial services. According to Verbeke and Yuan (2007), past subsidiary entrepreneurship research has only focused on the element of the right resource quality and has not considered the element of the right quantity. Consequently, the authors develop a framework about the quantity of managerial services needed to enable subsidiary entrepreneurship (Figure 9). The underlying proposition of the framework is that the more difficult the character of expansion and the less similar the new activities are to previous ones, the more managerial services are needed.

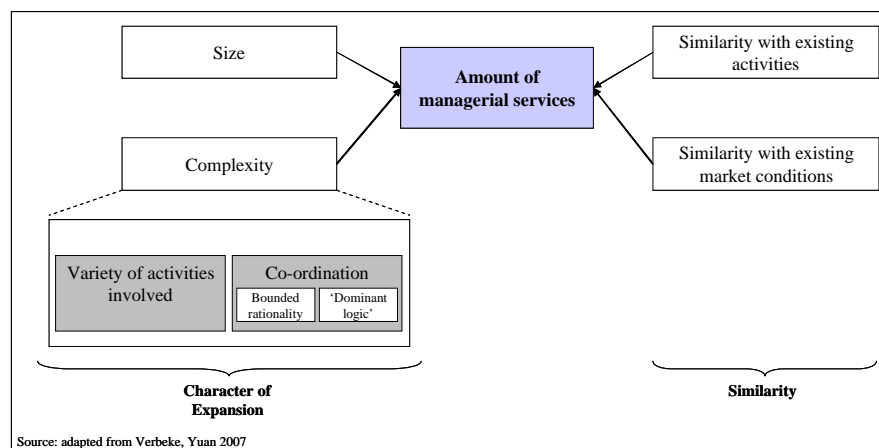


Figure 9: Volume of managerial services needed for subsidiary entrepreneurship

While Penrose identifies three determinants (character of expansion, similarity with existing activities and market conditions, and method of expansion) that influence the amount of managerial services needed for change, Verbeke and Yuan (2007) only consider the former two as relevant for subsidiary entrepreneurship (Figure 9). According to Verbeke and Yuan (2007), the two variables "character of expansion" (left part of figure) and "similarity" (right part of figure) determine the amount of managerial services.

“Character of expansion” can be further split into the two sub-elements “size” and “complexity,” while “similarity” consists of “similarity with existing activities” and “similarity with existing market conditions.” The determinant “complexity” is on the one hand driven by the “variety of activities involved” and on the other hand by the “coordination” problem. The coordination problem itself consists of the two sub-problems “bounded rationality” and “dominant logic.”

Verbeke and Yuan (2005) identify that one major reason for friction between subsidiaries and headquarters is the amount of co-ordination needed: the co-ordination effort increases with an increasing bounded rationality and an increasing dominant logic problem. Three different factors influence the bounded rationality construct faced by headquarters: institutional, organizational, and corporate management context. Institutional context reflects the institutional distance between institutions in the home country and host country and is measured by the differences in social knowledge, mindsets, social values, and laws and regulations. A higher institutional distance might lead to different judgments by the subsidiary and parent company and therefore leads to a higher degree of needed coordination. Organizational context includes all organizational mechanisms to reduce the bounded rationality constraints such as specific decision-making processes, internal pricing tools, etc. For the proper use of these tools, a higher amount of managerial services is needed. Corporate management context refers to the aggregated top management team capabilities such as cognitive abilities, experience, and expertise, which make headquarters more or less receptive to subsidiary initiatives. If the degree of headquarters skepticism increases, a higher level of coordination is needed. Consequently, a higher amount of managerial services is needed. Overall with respect to the amount of managerial services needed, it can be said that a higher level of bounded rationality constraints increases coordination needs and therefore increases the amount of managerial services needed.

According to Verbeke and Yuan (2007), the coordination problem is also fueled by the dominant logic problem. This, in contrast to the bounded rationality problem, evolves in the implementation and not in the initiation phase. Dominant logic in this context refers to the way of doing business with regard to business and critical resource allocation decisions. Problems especially arise during the integration of entrepreneurial activities in existing business routines. Integration involves adjustments of existing routines as well as

the establishment of new business logic. Such activities will require a substantial volume of coordination and therefore a relevant amount of managerial services.

Political arena perspective

Williams and Lee (2009) examine the stimulation of subsidiary entrepreneurship from a political perspective (Figure 10). Various management issues at corporate, subsidiary, and individual levels might cause the formation of an internal political arena¹⁷. The confrontation often results in a political game in which subsidiaries will try to increase their power base to become more influential. This leads to initiative taking. Two forms of subsidiary entrepreneurship can arise out of this political arena situation: (1) if the conflict is enduring, employees will identify and exploit opportunities from the constantly changing conditions (Austrian-like entrepreneurship¹⁸). (2) If the conflict is reconciled and consensus exists, Schumpeterian-like entrepreneurship might occur. Therefore, the political arena plays a critical role for the emergence of subsidiary entrepreneurship.

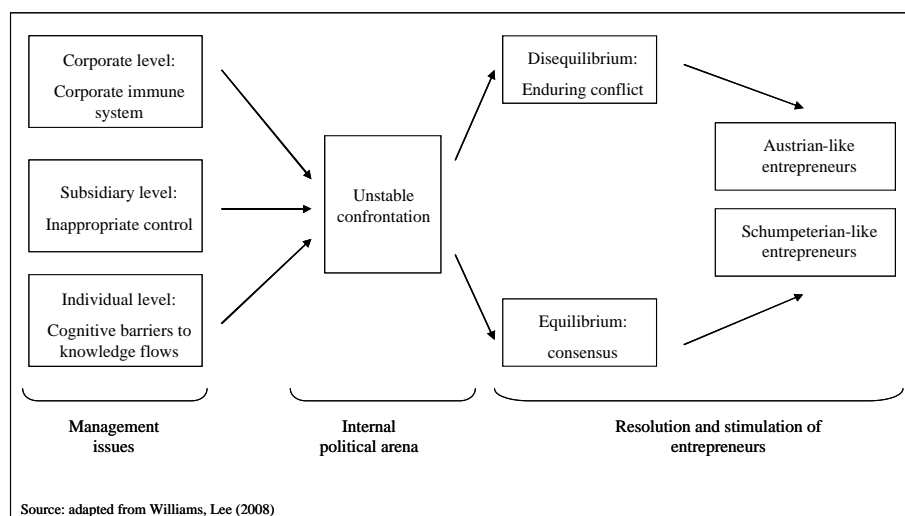


Figure 10: Political arena of subsidiary entrepreneurship

Agency theory perspective

Johnson and Medcof (2002) and Johnson and Medcof (2007) approach the subsidiary entrepreneurship phenomenon from the agency theory perspective. According to them, the

¹⁷ "A political arena is an internal organizational situation characterized by conflict between individuals." (Williams and Lee, 2009: 6).

¹⁸ "For Schumpeter the entrepreneur is the disruptive, disequilibrating force that dislodges the market from the somnolence of equilibrium; for us [Austrian-like] the entrepreneur is the equilibrating force whose activity responds to the existing tensions and provides those corrections for which the unexploited opportunities have been crying out." (Kirzner, 1993)

parent company can be seen as the principal and the subsidiary unit as the agent. The only needed adaptation of the framework is that the principal in the case of subsidiary entrepreneurship tends to be more risk-averse than is foreseen in the original theory. Two kinds of contracts can be signed between headquarters and subsidiaries: (1) behavior-based contracts, which demand a certain behavior from the agent for payment and (2) outcome-based contracts, which demand a certain outcome which must be delivered from the agent. Johnson and Medcof (2002) deduce that a greater percentage of outcome-based contracts will cause a higher probability of subsidiary initiatives as well as dispersed entrepreneurship: “[...] *outcome-based contracts [...] are more likely to motivate agent initiative.*” (Johnson and Medcof, 2007: 475). Consequently, a greater percentage of behavior-based contracts will cause a lower amount of subsidiary initiatives as well as focused entrepreneurship: “*Behavior-based contracts are useful in cases of innovation that is directed by the principal but does not engender self-initiated agent innovation.*” (Johnson and Medcof, 2007: 475). The contract forms are expanded in their later study by goal internalization¹⁹. According to the authors, goal internalization acts like outcome-based contracts (stimulates self-initiated entrepreneurial activity) but at the same time reduces goal incongruence between principal and agent.

In a next step, Johnson and Medcof (2007) link three different organizational R&D configurations ((1) hub, (2) federation, (3) network) to the “controls” used and the emanating initiative types. (1) A hub is defined by strong relationships between headquarters and R&D units and weak relationships to other units. This structure tends to utilize behavior-based contracts and consequently seldom observes self-initiated innovations. (2) The federation is characterized by weak relations between headquarters and dispersed R&D units as well as weak relations between R&D units themselves. Federation structures tend to use outcome-based contracting which motivates agent driven local initiatives. (3) The R&D network has active and flexible links between headquarters and research units as well as to all other units. Coordination between all units is realized via continuous interaction. This structure tends to use goal internalization which motivates agent driven global initiatives.

¹⁹ “[...] *their intention is to have organizational members internalize the values of the organization and to adopt them in an intrinsic way as their own.*” (Johnson and Medcof, 2007: 475).

Community perspective

Lee and Williams (2007) approaches in his work subsidiary entrepreneurship from the community perspective and develops a first conceptual model (Figure 11). In this model, entrepreneurial communities are set up for the sake of entrepreneurial initiatives and they source their members from the different practices. The outcome of these entrepreneurial communities is new knowledge and entrepreneurial initiatives that meet market opportunities and demands. According to Lee and Williams (2007), the three key characteristics of an MNC entrepreneurial community are: (1) high level of boundary porosity, (2) shared entrepreneurial thinking, and (3) mix of members from all parts of the organization.



Figure 11: Subsidiary entrepreneurship from the community perspective

Such communities perform a life cycle from their genesis over stages of development until their final dissolution. According to Lee and Williams (2007), each multinational corporation does have internationally dispersed individuals who develop entrepreneurial initiatives out of opportunities and might consequently form entrepreneurial communities. The emergence of such communities is enabled by an adequate level of boundary porosity, which is the ease with which the entrepreneurial actors can join each other and form a community. After successful formation, a regular flow of members occurs: new members join, while others leave. This leads to a constant change and refinement of the community's focal point. This phase of development either results in idea progression through investment approval or in abandonment due to disapproval. In the case of success,

new communities easily form around the new offerings and the interface of the MNC enlarges.

The purpose of communities is to discover and evaluate new opportunities and to develop the necessary capabilities. This is enabled by MNC's ability to assemble entrepreneurial knowledge that exists among the dispersed units into the center via communities. Members in such entrepreneurial communities share the same entrepreneurial mission and come from different units and countries.

2.2 Literature on the integration-responsiveness framework

This section will focus on the integration-responsiveness framework, the second theoretical pillar of this thesis. This thesis will investigate based on the integration-responsiveness framework if a link between headquarters' strategy towards subsidiary entrepreneurship and its environment can be identified. In the first subchapter (2.2.1.), the key elements of the integration-responsiveness framework are described. In (2.2.2), the different levels of the integration-responsiveness framework are detailed and their respective field of application is derived. Finally, the pros and cons of the I/R-framework are discussed (2.2.3).

2.2.1 The integration-responsiveness framework

The integration-responsiveness framework has a longstanding tradition in international business research and dates back to the work from Doz (1976), Prahalad and Doz (1987), Prahalad and Doz (1987), and Bartlett and Ghoshal (1989). The authors followed the work done by Fayerweather (1969) in the 1960s on internationally active companies, but focused in their work on the conflicting environmental factors and formulated the "integration-responsiveness framework" (Morschett, 2007).

The core idea of the I/R-framework (Figure 12) is "*that two salient imperatives simultaneously confront a business competing internationally.*" (Roth and Morrison, 1990: 541) This means that an MNC has to balance both the need to respond to local market demands ("*forces for local responsiveness*") and the need to globally integrate its operations ("*forces for global integration*") (Bartlett and Ghoshal, 1987; Haugland, 2009).

Local responsiveness is mainly influenced by the situational contingencies at the subunit level, whereas global integration is mainly driven by headquarters' intention to internalize its operations (Ghoshal and Nohria, 1989). Integration aims at exploiting benefits across national borders, while responsiveness aims at adapting operations to local conditions. Therefore, the two factors work in opposite directions (Benito, 2005). Despite their opposing character, the two factors are not understood as extreme positions of a continuum, but rather as two separate dimensions that can be displayed in a matrix (Morschett, 2007; Zentes et al., 2008):

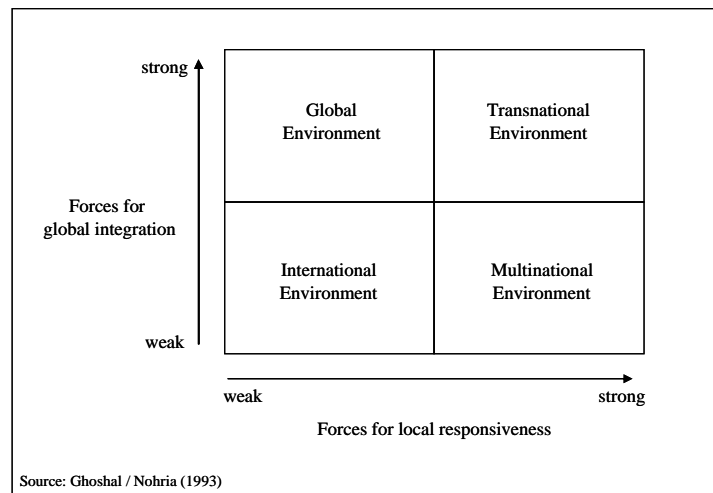


Figure 12: Classification of the business environment according to the I/R-framework

Local responsiveness

“Forces for local responsiveness”, the horizontal axis in Figure 12, describes the need to adapt a subsidiary’s operations to local market situations that might vary across markets and countries: each local unit faces specific local customers, governments, suppliers, and competitors. For example, customers demand products that meet their specific local demands with regard to taste, standards, brand recognition, and other perceived needs (Birnik, 2007; Fan et al., 2009). Furthermore, local governmental regulations may demand an adapted business approach as well as specific resource settings. Therefore, the need for local adaption varies and depends on the situation in the respective country (Prahalad and Doz, 1987; Ghoshal and Nohria, 1993; Zentes et al., 2008). If an MNC wants to increase its local responsiveness in a country, internal managerial practices must be changed to fit local demands (Paik and Sohn, 2004).

According to Prahalad and Doz (1987) the following factors should be considered when evaluating the level of “forces for local responsiveness”: (1) differences in customer needs, (2) differences in distribution channels²⁰, (3) availability of substitutes²¹, (4) market structure²², and (5) local regulations.

Global integration

“Forces for global integration,” the vertical axis in Figure 12, focuses on the pressures driving global integration. Particularly, economies of scale and scope drive an MNC’s intention to globally integrate its operations. Forces also include possibilities to leverage local knowledge corporate wide. The interrelation between countries forces MNCs to coordinate and integrate their global activities (Birnik, 2007; Morschett, 2007; Zentes et al., 2008).

According to Prahalad and Doz (1987), global integration integrates the needs for both “*global strategic coordination*” and “*global operational integration*.” For evaluating the need for global strategic coordination the following factors should be considered: (1) importance of multinational customers, (2) importance of multinational competitors, (3) investment intensity²³. The need for global operational integration is derived by looking at the following factors: (A) technology intensity²⁴, (B) pressure for cost reduction, (C) universal needs²⁵, and (D) access to raw materials and energy²⁶.

To summarize, “*The purpose of the IR framework is to assess the ‘relative importance’ of the two sets of conflicting demands.*” (Prahalad and Doz, 1987: 20)

²⁰ This includes differences in pricing, product positioning, promoting, and advertising (Prahalad and Doz, 1987: 20–21).

²¹ For example, if product functions are met by a local product with a different price-performance relationship (Prahalad and Doz, 1987: 21).

²² This considers the importance of local versus multinational competitors; such as if local competitors control a significant portion of the market and the industry is fragmented (Prahalad and Doz, 1987: 21).

²³ If a business is considered as investment-intensive with regard to R&D or manufacturing, the need to leverage these investments by globally integrating increases (Prahalad and Doz, 1987: 19).

²⁴ Technology intensity as well as proprietary technology encourages a corporation to bundle its production operations at a few selected sites (Prahalad and Doz, 1987: 19).

²⁵ This means that a product faces a universal need across markets and requires little to no local adaptation (Prahalad and Doz, 1987: 20).

²⁶ The access to or the availability of resources at specific locations might force a company to bundle its operations at such a location (Prahalad and Doz, 1987: 20).

2.2.2 The different levels of the integration-responsiveness framework

The framework consists of different levels (Figure 13): (1) external environment, (2) strategic orientation of the MNC, and (3) role of the foreign subsidiary/integration in the MNC. The model was originally used to operationalize the first two levels and plenty of studies exist on the level of the external environment (Roth et al., 1991; Ghoshal and Nohria, 1993; Morrison and Roth, 1993; Birkinshaw and Morrison, 1995) as well as on the strategic orientation of the MNC (Macharzina, 1993; Leong and Tan, 1993; Morschett, 2006). However, the model was expanded by Jarillo and Martinez (1990) and Taggart (1997b) who used the I/R-framework to analyze existing strategies at the level of the foreign unit (Zentes et al., 2008). Surprisingly, the different levels are neglected by various researchers or are implicitly assumed to be congruent. Morschett (2007), Zentes et al. (2008), and a few other authors give a comprehensive overview on the three different levels and their interrelation:

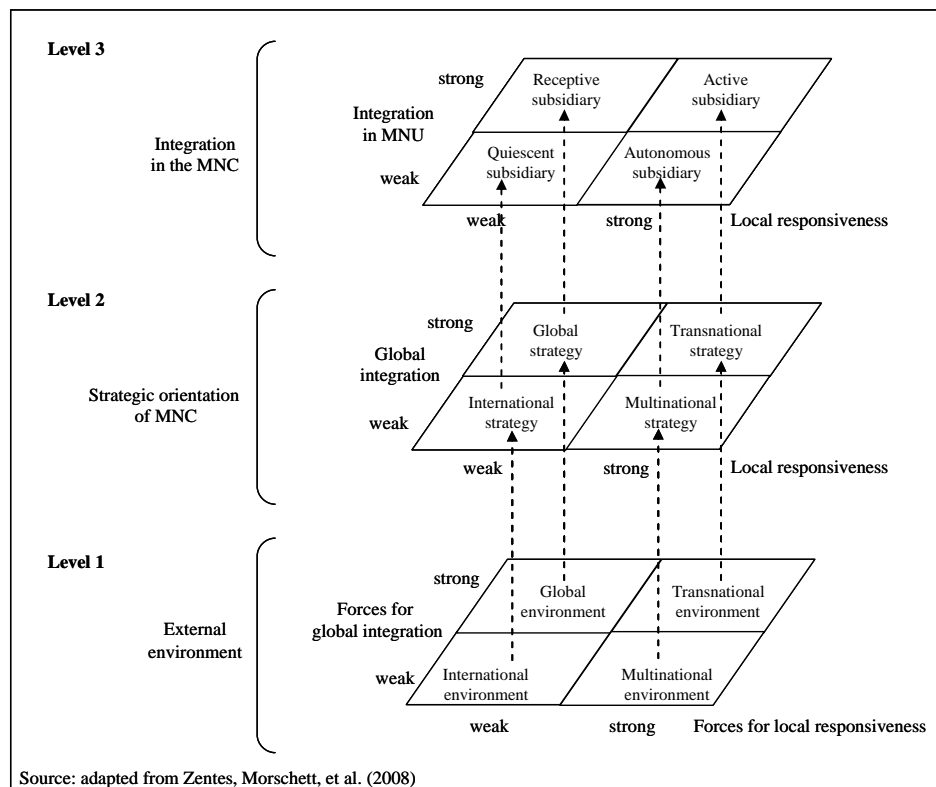


Figure 13: The relations between the different levels of the I/R-framework

(1) First level: forces of external environment

Ghoshal and Nohria, for example, use the framework “to classify MNC environments in terms of the twin demands of global integration and national responsiveness.” (Ghoshal and Nohria, 1993: 25) derive four possible environments (Figure 13): (1) the *global*

environment, which is characterized by strong forces for global integration and weak forces for local responsiveness, (2) the *multinational environment* – weak forces for global integration, strong forces for local integration, (3) the *transnational environment* – strong forces global integration and local responsiveness, and (4) the *international environment* – weak forces for global integration and local responsiveness.

The underlying assumption of the I/R-framework for the first level is that the two dimensions are sufficient to cover all relevant external factors. However, consequences of the environmental situation are mainly discussed at corporate strategy level: “*the primary use of the ‘I-R grid’ was to map industries, and therefore to indicate what strategy a firm should pursue.*” (Westney and Zaheer, 2009: 348)

(2) Second level: strategic orientation of the MNC

Various researchers also used the I/R-framework for mapping the different types of MNC strategies. According to Bartlett and Ghoshal (1989), Venaik et al. (2000), and Westney and Zaheer (2009), the following four organizational forms with the following characteristics can be observed (Figure 13): (1) the *global organization* is mostly concentrated geographically in a few locations while most of its decision-making is centralized. Therefore, subsidiaries tend to be rather weak and tightly linked to headquarters. Innovation tends to be centrally located for global markets. The overall strategy is founded on realizing economies of scale. (2) *The multinational organization* tends to treat their subsidiaries as autonomous entities and its operations are highly decentralized. Nevertheless, central functions like marketing, financial controls, engineering know-how, etc. are globally coordinated. The overall strategy tends to be focused on responsiveness to local markets. (3) In a *transnational organization*, global efficiency, local responsiveness, and worldwide knowledge exchange is simultaneously sought to achieve, and therefore the strategy is balanced accordingly. The organization comprises interdependent subsidiaries that vary by role and capabilities. Those companies often employ distributed innovation. (4) The *international organization* tends to be operated from a home base and little coordination between headquarters and foreign markets occurs. The strategy is based on home country leadership. National companies tend to have operations along the whole value chain, but headquarters controls technology and management systems. Therefore, knowledge flows from the center.

(3) Third level: strategy of the foreign unit

Jarillo and Martinez (1990) seem to be the first researchers who adapt the I/R-framework to analyze the strategies of subsidiaries in multinational corporations. Due to the fact that their work is directly based upon the work from Bartlett (1986), only three types of subsidiary strategies are considered²⁷: (1) a subsidiary pursues an *autonomous strategy* if it performs most activities of the value chain and sells most of its output in its home country. Subsidiaries with an autonomous strategy tend to be part of a multinational organization. (2) A subsidiary follows an *active strategy* if many activities of the value chain are located in its country, but are carried out in close coordination with the rest of the organization. This strategy is often followed by subsidiaries in a transnational organization. However, not all subsidiaries within a transnational organization follow active strategies. (3) A subsidiary pursues a *receptive strategy* if only a few functions of the value chain are performed in the subsidiary's home country, and if the functions are highly integrated with the rest of the organization. These subsidiaries can often be found in global organizations.

The obvious gap (explanation of the fourth sector) in the work from Jarillo and Martinez is closed by Taggart (1997b) who show that a fourth cluster of subsidiaries exist: those who pursue a *quiescence strategy*. These subsidiaries have few links to headquarters or other units. Most of the technology development is done centrally and if new knowledge is gathered, it is seldom shared with other units. Furthermore, headquarters applies no strong control over quality, production, or stocks. Subsidiary managers tend to adopt solutions given by headquarters rather than new solutions that fit the respective market.

2.2.3 Discussion of the integration-responsiveness framework

The integration-responsiveness framework is the dominant model for examining strategy in the international context (Prahalad, 1975; Doz, 1976; Prahalad and Doz, 1987; Harzing, 2000; Sambharya et al., 2005) and was developed at a time when contingency approaches dominated theory building²⁸. Contingency approaches indeed lost some of their influence over time, but the approaches are still frequently used in international business research

²⁷ Bartlett (1986) considers in his early publication only three types of organizations: "the global organization," "the transnational organization," and "the multinational organization." Jarillo and Martinez (1990), focus in their work only on three of four possible segments.

²⁸ The foundation of the contingency approach is the work from Lawrence and Lorsch (1967), who developed the idea that organizational structures and strategies must be adapted to environmental characteristics.

(Haugland, 2009). Furthermore, *“Within the IO [industrial organization] school, the integration-responsiveness (IR) framework has become an invaluable tool in characterizing both industry pressures and the strategic responses of businesses.”* (Morrison and Roth, 1993: 798) According to Andersen and Joshi (2008), the I/R-framework is a frequently adopted model to study the relationship between international expansion and the choices of strategic orientation and features a strong analytical foundation.

The important strength of the concept is its clarity and completeness despite its conciseness and that it accounts for significant variations across companies. Furthermore, the I/R-framework allows conceptualizing international strategy through alternate contextual settings, rather than a one-dimensional continuum (Roth and Morrison, 1990): *“By identifying two orthogonal sets of environmental forces, the Integration-Responsiveness framework made it possible to map industries into a more conceptual space and allowed greater scope for managerial choice than did a single continuum.”* (Westney and Zaheer, 2009: 347) Certainly the framework also has a few limitations: first, a lack of conceptual clarity exists with regard to the relative importance and completeness of the underlying classification factors. Second, while some empirical support for the framework exists, further empirical validation is certainly needed. Finally, the framework provides little content specification of the respective strategy in each segment (Roth and Morrison, 1990). However, all of these arguments of criticism are mainly solved by various researchers who empirically validated the robustness of the model: Johnson Jr. (1995), Taggart (1997b), and Luo (2001).

The I/R-framework bears a few additional critical points that need to be kept in mind if using the framework: it cannot be used easily to typologize companies based on the environmental forces. In fact, the model is a contingency framework, which means that a certain environmental setting indicates a certain MNC strategy, but it is not necessarily that case that it must hold true. Furthermore, some publications simplify the argumentation at level three and assume that all subsidiaries will follow the same strategy, which in most cases is a wrong assumption (Zentes et al., 2008). However, recent publications agree on the idea that MNCs are differentiated networks at which the specific environmental factors of a subsidiary unit have a significant influence on subsidiary's strategy and heterogeneity between foreign units is given. (Zentes et al., 2008: 196). It is important to always keep in

mind that the model helps to give an indication but does not necessarily hold true for all companies.

Lin and Hsieh (2010) consider the I/R-framework as the “most dominant and robust” framework in the context of modeling a headquarters and subsidiary’s strategy in the multinational context. Nevertheless, Haugland (2009) criticizes this definite statement by mentioning that the two dimensions cannot properly be traced back to any specific theoretical contribution and are more or less taken for granted. Furthermore, Haugland complains that the frequent use of the I/R-framework constitutes a “kind of theory” but often the appropriateness of using the framework is not tested. However, research puts much effort in proving the validity of the framework and the strategy typologies (e.g., Roth and Morrison, 1990; Ghoshal and Nohria, 1993; Taggart, 1997b; Harzing, 2000; Venaik et al., 2002). Solely Leong and Tan (1993) are unable to identify distinct clusters within the I/R-framework. Besides that, Zentes et al. (2008) observe that although interrelations between levels are empirically much less significant than expected, there still is a relationship. Overall, the framework can be considered as well accepted and dominant for analyzing strategies in the international context, but the possible pitfalls and limitations should be kept in mind to avoid wrong-leading implications.

3 Definition of research problem

After having given an overview on the subsidiary entrepreneurship literature and an introduction to the I/R-framework, this chapter combines both theoretical pillars and formulates the research problem of the underlying thesis.

As described in the previous chapter, subsidiary entrepreneurship has been attracting increasing interest from researchers and practitioners since the late 1990s (Sohail and Ayadurai, 2004), and despite the fact that subsidiary initiatives seem to be somewhat rare, they bear significant value for the MNC. Therefore, various authors state that further research on this topic is needed: Birkinshaw (1997), Liouka et al. (2006), Lyly-Yrjänäinen et al. (2008). However, the topic is not only relevant for academic researchers but also for practitioners: *“The role of the subsidiary company in the multinational corporation (MNC) continues to be an issue of great interest to international business researchers, and a matter of great importance of MNC executives.”* (Birkinshaw et al., 2005: 227)

Most of the research regarding subsidiary entrepreneurship has studied the phenomenon from the subsidiary’s point of view but seldom from headquarters perspective (see 2.1.3). One explanation is that studying the phenomenon in detail (e.g., initiative types, process, etc.) demands that analysis is conducted at the subsidiary level. The “founder” of this research area especially focuses on studying subsidiary entrepreneurship from the subsidiary perspective: *“Why study initiative in MNC subsidiaries rather than in the parent company? The simple answer is that despite the compelling logic for tapping into local markets through the subsidiary network, many corporations approach to neglect the creative potential of their subsidiaries.”* (Birkinshaw, 1997: 208) However, in order to get a complete picture of the subsidiary entrepreneurship phenomenon and not to study only one side of the coin, it is also necessary to analyze the topic from headquarters perspective. This is supported by Mahnke et al. (2007: 1294): *“As our discussion makes clear, the modern MNE [multinational enterprise] and its subsidiaries form an important network where entrepreneurial activities increasingly occur at different places, compelling the HQ to reconsider effective organizational designs and reward systems. Therefore, empirical documentation of the various mechanisms that the HQ employs to harmonize the varying interests of subsidiary managers and those of the MNE is an essential next step.”* In addition, recent publications admit that the headquarters point of view has not received

sufficient academic attention: “[...] *how past initiatives play out in the rest of the MNC, i.e., how they are viewed by headquarters and what implications they have for the subsidiary’s position in the corporate network. However, these issues have received little or no direct attention in the academic literature to date.*” (Ambos et al., 2009: 4) Consequently, this thesis aims at closing the existing research gap and intends to focus on studying the subsidiary entrepreneurship phenomenon mainly from the headquarters perspective. This leads to the following first leading research question:

RQ1: How does headquarters’ strategy towards subsidiary entrepreneurship look like?

In order to gain a full understanding of the subsidiary entrepreneurship phenomenon from the headquarters perspective, the previous research question needs to be divided in sub-elements (Figure 14). (1) First, the specific business situation and environment need to be considered, including the company’s competitive situation and market positioning as well as key characteristics of the respective market. (2) Second, the role of the subsidiary unit and the parent-subsidiary relationship need to be examined because it can be assumed that a certain headquarters’ management style might come along with a certain subsidiary entrepreneurship strategy. (3) Third, the phenomenon of subsidiary entrepreneurship itself needs to be examined and described with regard to its degree and type of initiatives. According to Birkinshaw (1997), Birkinshaw and Fry (1998), and Delany (2000b), different types of entrepreneurial subsidiary initiatives exist and therefore this research also examines which forms of initiatives and which degree of subsidiary entrepreneurship occurs. (4) Fourth, headquarters’ attitude towards subsidiary entrepreneurship is assumed to be one of the main drivers for its subsidiary entrepreneurship strategy and has not been the focus of previous research, to the best of my knowledge. Therefore, this thesis aims in particular to shed light on the headquarters attitude towards subsidiary entrepreneurship. (5) Fifth, the headquarters attitude is expected to translate in a certain governance structure consisting of a certain incentive scheme fostering/hindering entrepreneurial subsidiary initiative-taking and a certain control scheme ensuring strategic fit between entrepreneurial subsidiary activities and overall strategy. (6) Finally, knowledge utilization and results usage resulting from such initiatives is examined. The ultimate question here is whether companies leverage the insights from an entrepreneurial subsidiary initiative for the overall organization. According to Figure 14, all six elements in combination allow to assess the subsidiary entrepreneurship phenomenon from the headquarters perspective.

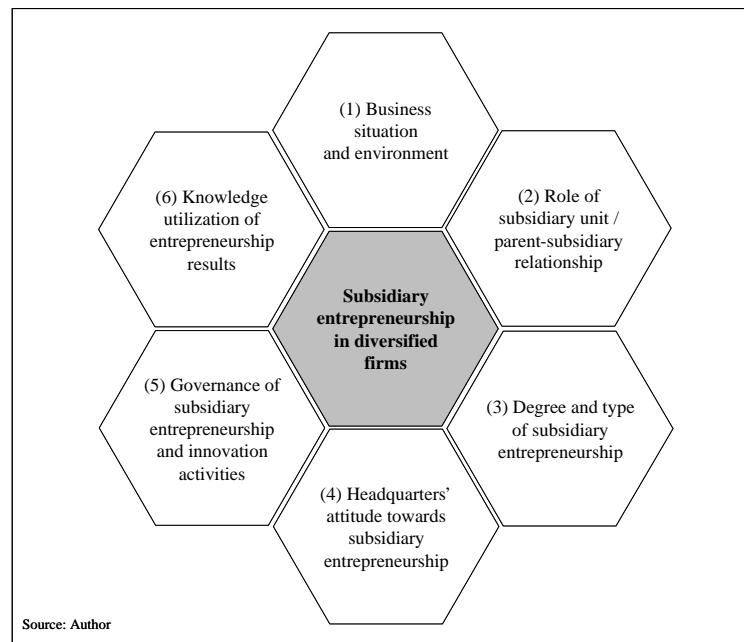


Figure 14: Sub-structure of the research question

In addition, subsequent questions emerge: Can similar patterns of headquarters' subsidiary entrepreneurship strategy be observed across companies? Are those patterns linked to the environmental background of the respective organization?

A dominant concept for examining a certain company strategy in the international context has been the integration-responsiveness framework. The underlying logic of this framework is that multinational organizations face two conflicting environmental forces: "forces for local responsiveness" and "forces for global integration." The contingency character of the framework further suggests that companies in a certain environment will often pursue a strategy that fits the respective environment (Bartlett and Ghoshal, 1989; Morschett, 2007). It can be assumed that companies pursue explicitly or implicitly a strategy to deal with the phenomenon of subsidiary entrepreneurship. It can be further assumed that headquarters' subsidiary entrepreneurship strategy might also show a pattern with regard to company's environmental situation. Consequently, it is of high interest to investigate whether a contingency between the environment of an organization and its approach towards subsidiary entrepreneurship can be observed. This leads to the second leading research question of the underlying thesis:

RQ2: Which different patterns in headquarters' strategy towards subsidiary entrepreneurship can be observed and how can they be explained based on MNCs environmental situation?

In line with the previous argument, the I/R-framework is the theoretical foundation of the underlying thesis. According to the previous chapter, the contingency character of the I/R-framework suggests that companies in a certain environment often pursue a strategy which fits their respective environment. Therefore, in each environmental segment a slightly different strategy can be observed (Bartlett and Ghoshal, 1989; Morschett, 2007). Consequently, I assume that a company's strategy regarding subsidiary entrepreneurship also varies for each of the four different environmental situations in the I/R-framework. It seems likely that companies in different environmental settings will deal differently with entrepreneurial subsidiary activities.

Another question is which levels of the I/R-framework have to be considered for the present thesis. The first level (environmental background) needs to be included because the analysis aims at analyzing the contingency between the environment and headquarters' subsidiary entrepreneurship strategy. Therefore, the environmental context is the departure point of the analysis. The second level (MNC's strategic orientation) of the I/R-framework focuses in the original version on headquarters strategic orientation. However, this analysis wants to explore only a fraction of the overall strategy and therefore the focus of the second level will be changed for the purpose of the present thesis: the second level will now focus on MNC's subsidiary entrepreneurship orientation / strategy instead of MNC's overall strategy. The third level of the I/R-framework can be disregarded for the present analysis because the focus of the analysis is headquarters' point of view and the unit of analysis is the overall organization and not a single subsidiary unit. As a result, this leads to the following proposed model of headquarters' subsidiary entrepreneurship strategy (Figure 15):

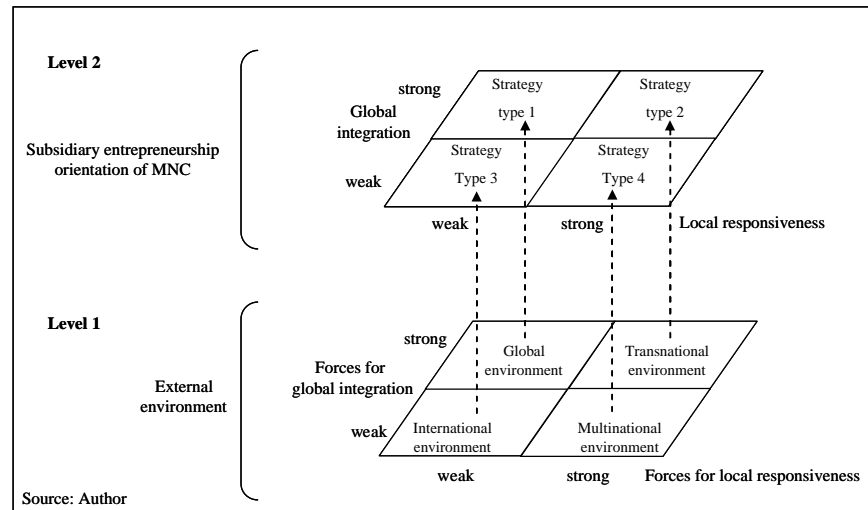


Figure 15: Proposed integration of subsidiary entrepreneurship and I/R-framework

According to Figure 15, four different ways of dealing with subsidiary entrepreneurship can be expected. Companies in the *multinational environment* might tend to strongly “favor” subsidiary entrepreneurship because such activities might help to increase the company’s local responsiveness. It can also be expected that entrepreneurial subsidiary initiatives are pursued very independently from each other and integration /coordination of initiatives is only done partly. Companies in the *transnational environment* might be similar to companies in the multinational environment with regard to their positive attitude towards subsidiary entrepreneurship. However, it can be expected that headquarters will try harder to coordinate and integrate entrepreneurial activities. It can also be expected that these companies will try to leverage entrepreneurial activities for the overall organization. Companies in the *global environment* are in some ways the mirror image of those in the multinational environment. Therefore, I would expect that these companies “accept” entrepreneurial subsidiary behavior but will not actively push such a behavior. The reason is that those companies do not face a high need for local responsiveness and therefore are not so dependent on local initiatives. However, it can be expected that those companies, like the ones in the transnational environment, try to integrate and coordinate all existing initiatives to realize global integration. Companies in the *international environment*, in contrast, would not depend strongly upon subsidiary entrepreneurship and would not strive for integrating such activities globally to the same extent as other environments. Therefore, entrepreneurial subsidiary behavior is expected to occur on a very local base. Altogether, four very different subsidiary entrepreneurship strategies are expected to be observable.

4 Empirical approach

This section presents this dissertation's research methodology (subsection 4.1) and research design (subsection 4.2).

4.1 Research methodology

The following subchapter briefly describes the methodological foundations of case study research and specifies them for the research on subsidiary entrepreneurship in this dissertation. First, the case study strategy as a qualitative research method is presented and differentiated from other research strategies. Second, the application of multiple case studies in this dissertation is presented.

Research strategy: the case study

The appropriate research methodology is defined by the specifications of the observed phenomena. For this purpose, Yin, 1984 designed a framework (Table 2) which should help researchers to select the right research approach out of experiment, survey, archival analysis, history or case study:

Research strategy	Type of research question	Control over behavioral events required?	Focus on contemporary events?
Experiment	How, why	Yes	Yes
Survey	How, what, where, how many, how much	No	Yes
Archival analysis (i.e. economic study)	How, what, where, how many, how much	No	Yes/no
History	How, why	No	No
Case study	How, why	No	Yes

Table 2: Differentiation of research strategies

Source: adapted from Yin (1984)

According to Yin (1984), three conditions determine the selection of the appropriate research method (Table 2): (1) type of research question, (2) researcher's control over the actual behavioral events, and (3) focus on contemporary as opposed to historical phenomena. Applying the research differentiation table, the present thesis mainly studies questions of "how" and "why" (how does headquarters approach towards subsidiary

entrepreneurship look like? How does it differ for companies in different environmental settings? Why does it differ? etc.). The researcher also had no control over actual behavioral events, because she could not influence the existing structures in each MNC. Furthermore, the study focuses on contemporary events and tries to picture the current status quo. Therefore, the case study methodology is the best suited approach for the present thesis. Furthermore, case studies are especially used if a research field is still at its beginning. Case studies are often used for developing a first understanding of the research area and afterwards complemented by large-scale validation (Siggelkow, 2007). Due to the fact that subsidiary entrepreneurship research is still at its infant stage and specifically no previous research on linking subsidiary entrepreneurship and the integration-responsiveness framework exists, this thesis uses the case study approach to develop a first comprehensive understanding of the topic.

The case study, as a qualitative research method, has a long tradition, but it has experienced greater scientific acceptance and application only during the past decades (zu Knyphausen-Aufsess, 1996).²⁹ The case study analysis enables the researcher to closely examine the data within a specific context and allows an investigation of real-life phenomenon. Yin (1984: 23) defines the case study research method “*as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.*” Consequently, the case study is an empirical method that investigates a contemporary phenomenon within a real life context whose boundaries between phenomenon and context are not evident and in which multiple sources of evidence are used (Pettigrew, 1990).

The case study method can be applied for four different research strategies: (1) descriptive case study which describes a current phenomenon holistically in its real context (zu Knyphausen-Aufsess, 1996; Yin, 2006), (2) explicative case study which analyzes the relationship between cause and effect in real context and can be used for exploratory and

²⁹ However, case studies as a research method often face prejudices and criticisms, such as lack of representativity and generalizability (Silverman, 2000; Wolf, 2003; Wrona and März 2005; Siggelkow, 2007). The present thesis does not involve in the scientific discussion about the pros and cons of qualitative versus quantitative research.

confirmatory research strategies (zu Knyphausen-Aufsess, 1996; Yin, 2006)³⁰, (3) exploratory case study, which aims at gaining insights and at supporting hypotheses and theory building (Meyer, 2003; Eisenhardt, 1989; Eisenhardt and Graebner, 2007)³¹, and (4) confirmatory case study, which aims to verify or falsify existing hypothesis or theories (Meyer, 2003). In this thesis the case study approach is exploratory: *“If only limited theoretical knowledge exists concerning a particular phenomenon, an inductive research strategy that lets theory emerge from the data can be a valuable starting point.”* (Siggelkow, 2007: 21)

Research Approach: Multiple case studies

Several different types of case studies exist which depend on the breadth of the variables, the extent of quantification, and the sample size used (Rumpf and Zaby, 1997). In addition, case study approaches can also be distinguished according to their theoretical foundation before entering the field and the generalizability of their results. This leads to the following three most widely applied case study approaches: (1) single case study, (2) Eisenhardt’s open multi-case study approach, and Yin’s theory-based multi-case study approach (Table 3):

	Single Case (Harvard Business School tradition)	Eisenhardt’s open multiple case study approach	Yin’s theory based multi-case study approach
Aim	Detecting contingency	Theory building	Theory enhancing
Number of variables	Many	Several	Limited set
Level of detail	Deep open analysis, mainly qualitative data	Detailed open analysis, qualitative and quantitative data	Specific, focused analysis, qualitative and quantitative data
Number of cases	1	Approximately 4-10	Not specified
Theoretical foundation	Ex ante not existing	Ex ante mostly not existing	Ex ante already analyzed
Generalization	Not feasible	Feasible	Feasible
Researchers	e.g. Dyer and Wilkins (1991), Harvard Business School tradition	e.g. Eisenhardt (1989), Eisenhardt (1991) Pettigrew (1990)	Yin (1984)

Table 3: Characteristics of different case study approaches

Source: von Schroeter (2004)

³⁰ According to zu Knyphausen-Aufsess (1996: 223), the difference between theory generation with explorative case studies and pure story telling is that the researcher is guided by a research question in the first case.

³¹ For detailed insights on applying case studies for theory building, please see Eisenhardt (1989), Eisenhardt (1991), and Eisenhardt and Graebner (2007). For further information on grounded theory building please also see Allan (2003).

The single case study focuses on unique, representative, extreme or not accessible cases which are analyzed over a longer period of time. It aims at falsifying theoretical insights or to provide new insights in unexplored phenomena (Yin, 2006; Borchardt and Göthlich, 2007). The multiple-case study approach, in contrast, compares cases and highlights resulting insights through similarities and differences between the cases (Borchardt and Göthlich, 2007). Therefore, several authors consider results from multiple-case studies as more convincing, trustworthy, and robust (Eisenhardt, 1989; Yin, 2006). However, certain tensions between the two multiple-case study approaches exist with regard to the up-front theoretical research needs (Allan, 2003): While Yin (2006) proposes that case study research benefits from prior theoretical research, Glaser and Strauss (2009) postulate that a valuable grounded theory approach does not build on theoretical up-front research. Yin's approach is for this thesis considered as the most appropriate one, because the analysis is highly specified and an ex ante developed framework should be verified or falsified through the different case studies.

4.2 Research design

In accordance with the research question of this dissertation and the chosen research methodology, the research design will be deducted and explained in the following subchapter. This encompasses the outline of the research process, case selection, and finally data collection and analysis.

Outline of research process

In the current thesis, Yin's theory based multi-case study approach was used and the research process was designed according to Yin's proposed process:

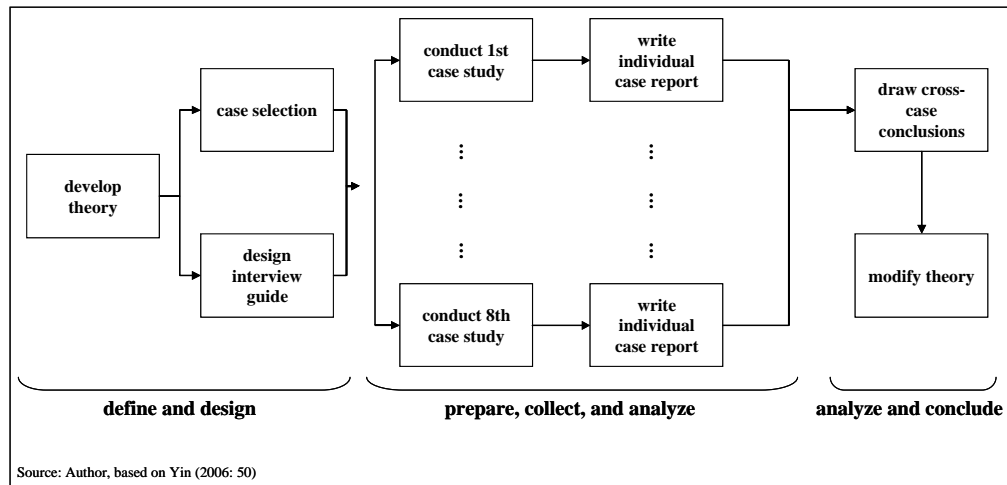


Figure 16: Research process

According to Creswell (2008) and others, like it can be seen in Figure 16, the research process was organized in three subsequent phases. First, the research topic was defined based on an extensive literature screening. This also included a first draft of the expected observations and the design of the expected resulting framework. Second, the empirical research was prepared, collected, and analyzed. Finally, the cross-case and cross-segment analyses were performed and the developed framework adequately modified.

Case approach and selection

In a multiple case study, case selection is typically done according to a certain replication logic with a specific focus in mind (purposive sampling), whereas in quantitative research, cases are selected based on statistical methods (probability sampling) (Borchardt and Göthlich, 2007; Strauss and Corbin, 1991). The selection in this study was guided by the four different environmental settings evolving out of the I/R-framework. Furthermore, Yin (2006) demands that in a comparative case study analysis, each case is a study in its own and therefore an independent unit of analysis. Consequently, each case is subject to replication in further single case studies. The number of cases to be studied depends on the researchers' decision (Yin, 2006). For this thesis, in each segment two case studies were examined to develop a better understanding of each segment's characteristics. The underlying case selection approach is shown in the following figure:

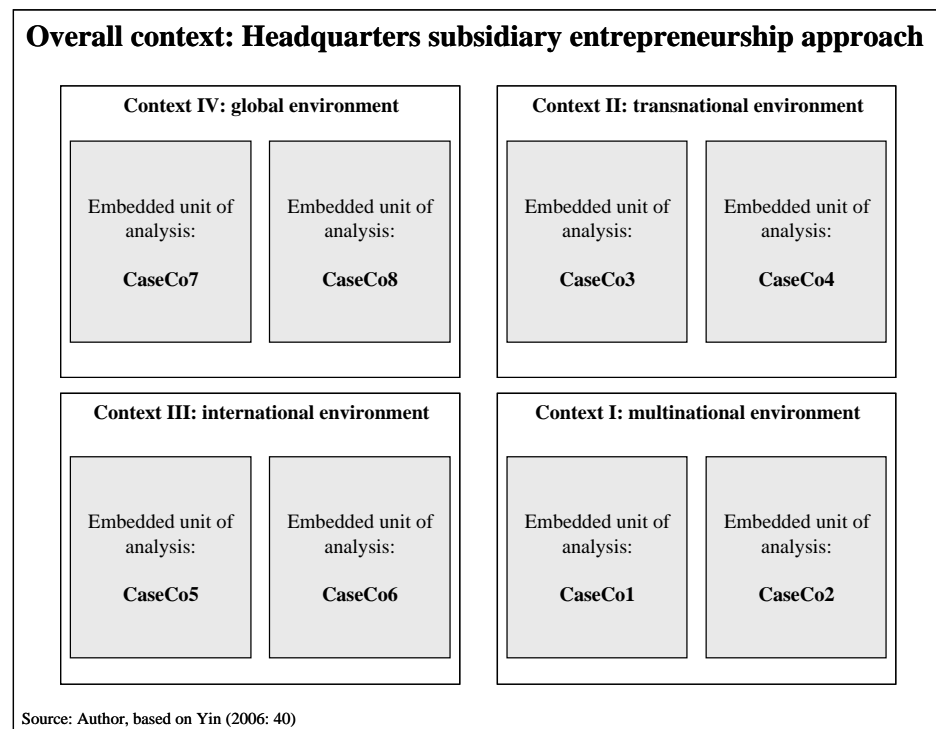


Figure 17: Design of this dissertation's case study approach

The case selection in this thesis was divided into two steps: (1) classification of the company's environmental setting, followed by (2) selection of two case studies in each segment. Given that the present study focuses on MNCs with headquarters in German-speaking countries and wants to explore entrepreneurial activity, the case selection was based on European Communities (2008). The report provides information on the largest 1,000 EU companies and 1,000 non-EU companies sorted by their investment in R&D. The hypothesis for focusing on companies who are spending a significant amount of their money on R&D is that those companies will more likely encounter entrepreneurial activities than others. Each company in this report belongs to a certain ICB-sector which corresponds to its industry classification. Each ICB-sector was allocated to one of the four environmental settings based on allocations made by other researchers (Ghoshal and Nohria, 1993; Bartlett and Ghoshal, 1992; Randoy and Li, 2000; Prahalad and Doz, 1987). The allocation was verified by triangulation with experts and other researchers. Finally, each case study company's allocation was discussed and approved with the respective interviewee. In each environmental segment two companies were randomly selected and asked for their participation in the study.

Data collection and analysis

Other relevant factors for successful case study research are the appropriate data collection methods and instruments. These include data types, data sources, and collection methods (Yin, 2006). Both data types, qualitative and quantitative data, can be included in case study research. While qualitative data mainly gives evidence on the character of a phenomenon, quantitative data allows conclusions about amplitude and magnitude (Campbell, 1975; Flick, 1995). Possible data sources are either public, such as press articles, internet data, databases, and academic publications; or internal, such as non-public data provided by the studied object (Zaugg, 2002). The data collection methods for case studies are document and literature analysis, interview, and observation whereof the interview is the most common tool: *“One of the most important sources of case study information is the interview.”* (Yin, 2006: 89). Interviews can be either conducted with a standardized questionnaire or an interview guide. The advantage of an interview guide is that it fulfills the principles of openness and neutrality required for qualitative data gathering, but allows a structured and purposeful conversation and is open to unexpected information (Yin, 2006; Meyer, 2003; Mayring, 2001). Consequently, the interviews in this thesis were conducted based on an interview guide³² and qualitative and quantitative as well as internal and external data were reviewed.³³

In addition, researchers using the case study approach have to ensure the three quality criteria reliability, validity, and objectivity (Albers et al. 2007; Lamnek, 2008; Bortz et al., 2005). The observation of these quality criteria can enhance the quality of the research by avoiding its potential weak points (Yin, 2006). According to Yin, *reliability*³⁴ of the research can be achieved by a structured way of proceeding and by exactly documenting the research process and its result: *“The general way to approach the reliability problem is to make as many steps as operational as possible and to conduct research as if someone were always looking over your shoulder.”* (Yin, 2006: 38) Therefore, the research approach was discussed with other researchers to ensure reliability and performed

³² Please see page 217 sqq and page 235 sqq.

³³ Due to the requested anonymization from all case study companies, resources of desktop research cannot be disclosed.

³⁴ Reliability: “The objective is to be sure that if a later investigator followed the same procedures as described by an earlier investigator and conducted the same case study all over again, the later investigator should arrive at the same findings and conclusions.” (Yin, 2006: 37).

according to Figure 16. **Validity**³⁵ was realized through data and method triangulation, documentation of chains of evidence, or the discussion of preliminary case study results with the research participants (Yin, 2006). **Objectivity**³⁶ was achieved by having the same person conducting interviews with a relatively standardized set of questions, guaranteeing execution objectivity, and by recording the interviews with an audio device, ensuring evaluation objectivity (Yin, 2006). Consequently, all interviews were recorded, transcribed, and documented.

The analysis of the data was performed systematically and in multiple iterations: First, all externally available information on the case study companies and especially their entrepreneurial approach was collected and analyzed. Second, structured interviews with the interview guide were held and recorded. Third, the interviews were transcribed and condensed over several iteration steps, systematically condensing the high volume of information to the key insights of each case. Fourth, the resulting insights from the in-person interviews and the desktop analysis were combined and challenged with several other researchers.

The analysis also divided in sequential steps: First, each case was analyzed itself by describing it and performing a short within-case analysis. Second, the two cases in each environmental segment were compared to each other by performing a cross-case, within-segment analysis. Finally, a cross-segment analysis was performed; this results in delineation and approval of the assumed contingency model.

³⁵ Validity is the degree of successful operationalization of the desired constructs (Yin, 2006).

³⁶ Objectivity is the fact that the analyses are based on reality and not on specific imaginations of the researchers (Yin, 2006).

5 Case studies

After having described the selection of the case studies in the previous chapter, this section will focus on the description and analysis of the eight studied companies. The analysis of the cases is subdivided into the four segments of the integration-responsiveness framework: (5.1) “*the multinational environment*,” (5.2) “*the transnational environment*,” (5.3) “*the international environment*,” and (5.4) the “*global environment*.” In each segment, the relevant case studies are described and a first within-case analysis is derived. Subsequently, a cross-case analysis is performed in each segment.

Each case description is divided into the following six sub-sections: (1) CaseCo’s business situation and environment, (2) role of the subsidiary unit and description of the parent-subsidiary relationship, (3) degree and type of subsidiary entrepreneurship, (4) headquarters’ attitude towards subsidiary entrepreneurship, (5) governance of subsidiary entrepreneurship and innovation activities, and (6) knowledge utilization of subsidiary entrepreneurship results.

5.1 Case study segment: “Multinational environment”

The following case study companies (CaseCo1 and CaseCo2) belong to the segment “Multinational environment.” This categorization was verified via triangulation and discussion with interview partners as well as other sparring partners. Characteristically for those companies is that the differentiating factor “forces for local responsiveness” tends to be high, whereas the factor “forces for global integration” tends to be low. However, one or the other criteria behind the overall rating might be closer to another section. Nevertheless, the overall rating for those companies puts them into the “Multinational environment.”

Looking at “forces for local responsiveness” as the first factor, the companies tend to face a low degree of product standardization, a relatively high need to adapt to distinct local market conditions, and different marketing and distribution channels across geographies. The need to adapt the foreign unit to its local country also needs to be relatively high. With respect to the second factor, “forces for global integration,” it can be said that the need to integrate across national boundaries, the possibilities for scale economies, as well as the level of R&D intensity all tend to be low.

In this subchapter the case of CaseCo1 (5.1.1) as well as the case of CaseCo2 (5.1.2) is described and briefly analyzed. Subsequently a cross-case analysis of these two case studies is performed (5.1.3).

5.1.1 CaseCo1

In the following two subchapters CaseCo1 is sketched. In subchapter 5.1.1.1, a description of the case, based on external data and information gathered in interviews is given. Afterwards, the within-case analysis in subchapter 5.1.1.2 highlights the relevant insights of this case and sets the foundation for the cross-case and cross-segment analyses.

5.1.1.1 Case description

(1) Company description/company environment

CaseCo1 is a multinational organization within the Multinational environment and employs nearly 38,000 people. The corporation operates roughly 40 production sites in about 15 countries. Taking sales sites into account, CaseCo1 owns about 70 subsidiaries in more than 40 countries. The company has a worldwide market share of ~7% and is number three in its market segment. CaseCo1 sells their products under either one of their global brands, or one of their special or regional ones. About 80% of their sales are generated outside of Germany.

CaseCo1's market environment was much more regionalized in the past than it is today. Today, companies have developed a more global footprint and are now trying to sell their products worldwide. Price has become the main determining factor for the purchasing decision. Salaries/wages and raw materials are the biggest cost blocks in the production process. The cost of raw materials has increased significantly in recent years. Manufacturing is quite labor intensive and, in response, many major companies have established production sites in low-cost regions. Although switching costs are very low, buyer power is considered relatively low due to a high level of market fragmentation. Both supplier power as well as the threat of new entrants is seen as moderate. The moderate level of the latter is attributable to customer's brand loyalty, replacement cycle driven demand, and high ramp-up investments. Overall, the market is quite concentrated and highly competitive. It has developed from a push- into a pull-market.

(2) Role of the subsidiary unit and the parent-subsidiary relationship

CaseCo1 is organized by functions with the exception of two subsidiary units which are since recently decentralized organized. All subsidiary units possess a sales function. Some also possess a production function, and only two units are fully empowered and mirror nearly the whole value chain. From the strategic role perspective, all subsidiary units are seen as “profit centers,” “result adding units,” and “contributors.” Headquarters view is that the relationship between parent and subsidiary is “intensive” and that subsidiaries obtain very high management attention above a pure collection of numbers:

With regard to the parent-subsidiary relationship, it cannot be said that subsidiaries are only loosely managed by financial ratios.

Furthermore, some units have established themselves as competence centers for a specific product. The motivation for the acceptance of competence centers by headquarters can be divided into internal and external reasons:

Internal reasons	External reasons
<p>Reputation of the subsidiary unit:</p> <p><i>[T]he site has established an adequate reputation for manufacturing and product development activities.</i></p> <p><i>[...] the subsidiary is known for working fast, flexible, and cheap at headquarters.</i></p>	<p>Future importance of subsidiary market for CaseCo1:</p> <p><i>[...] the future importance of the respective subsidiary market. Therefore, in most cases we speak about future growth markets for the overall organization.</i></p> <p>Fast changing market dynamics in subsidiary market:</p> <p><i>Fast changing markets need certain decentral organization/treatment, because locally needed actions can be directly realized by the subsidiary unit with a higher priority than headquarters would do. This pure realization by headquarters might unintentionally prolong the process.</i></p>

The existing form of competence centers was not planned but has rather developed over time and proved valuable. This is different for the two special role units: Here, the supervised decentralization was planned by headquarters with the aim to increase their empowerment. Those two special subsidiary units obtained, similarly to the competence

centers, more autonomy and functions due to their historical development, the importance of their market for the corporation, and the local differences of their marketplace. According to headquarters, “future importance” is by far the most important reason.

(3) Degree and type of subsidiary entrepreneurship

From headquarters’ perspective, the degree of subsidiary entrepreneurship differs: On a scale from 1 (minimum) to 6 (maximum). It is relatively high (5-6) for local initiatives (only impacting the local unit) and moderate (4) for global initiatives (impacting the whole organization). But headquarters perception is also that subsidiary units fulfill what they are asked to, but rarely beyond:

The subsidiaries meet headquarters’ expectations, but seldom deliver beyond.

According to headquarters, subsidiary units differ in their entrepreneurial activities. The differences depend on the unit’s maturity, historical connection to the organization, degree of competence level, skill set and enthusiasm of people involved, and duration of its affiliation to the group. Competence level and duration of affiliation are considered as the most relevant determinants, in headquarters’ opinion:

New subsidiary sites, for example, did not yet have the chance to display and establish special competencies like existing sites. Furthermore, it is very often the case, that competencies are further established, where other competencies already exist, because sites with competencies will be more often included in new problems than sites without competencies.

The longer the affiliation of a subsidiary and the more important the subsidiary market for the overall organization, the higher the innovation willingness and ownership of the subsidiary for the overall organization.

In case several subsidiary units come up with innovative ideas, prioritization is done by market relevance. The accountability for initiatives varies between the different kinds of innovations: Product/platform innovations are centrally performed and controlled, whereas feature or product adjustment innovations as well as process innovations might often happen in subsidiary units.

As a result, not all types of subsidiary entrepreneurship actions exist within CaseCo1. Adjustment and improvement innovations of existing products (e.g., feature innovations or market adaption innovations), as well as change and improvement innovations of local subsidiary unit processes (e.g., production processes) happen quite regularly:

A product, for example, has three different quality levels, ranging from an entry-level up to a high-end model. The sales group of a country realizes, for example, that the customers in their country expect 1-2 features extra in the entry-level model than planned by headquarters. The country might realize the needed adaptation on its own, if the respective production is also located in its country.

A good example is the existing production system. The system does not have directives for each detail of the production process, but rather sets the framework. The optimization is incumbent upon the subsidiary unit.

In the case of new product developments, subsidiary units deliver ideas and might test some of their ideas upfront. Nevertheless, the decision about, and realization of, those ideas is made by headquarters.

Platform topics are generally taken over by the respective product division at headquarters after successful initialization.

The case that one subsidiary unit actively lobbies to re-allocate the production from another subsidiary to its location does not happen and is incumbent upon headquarters.

(4) Headquarters' attitude towards subsidiary entrepreneurship

Overall, CaseCo1 “favors” entrepreneurial behavior of its subsidiary units as long as it is conducted within strategic guidelines. In headquarters' opinion, entrepreneurial subsidiary behavior guarantees a fluent stream of innovative ideas, but may also have the possible downside of changing the strategic direction. Such an example is that subsidiaries often need to find solutions when they cannot be found at corporate level. This leads to a definitional vacuum for subsidiary units and conflicting solutions might occur. Counteraction of CaseCo1 is to ensure an intensive dialogue between headquarters and subsidiary units, and to ensure that ideas are recognized early by headquarters. Overall, CaseCo1's experiences in the past with entrepreneurial subsidiary initiatives are mostly

positive. Nevertheless, subsidiary's freedom to pursue entrepreneurial initiatives by itself depends on the respective initiative.

Again, it needs to be differentiated between entrepreneurial locally and globally impacting initiatives. The local initiatives are solely implemented and realized by the subsidiary unit, whereas headquarters requests that global initiatives are re-routed to corporate units. Subsidiary units so far do not have the mission to initiate or even realize such initiatives.

Headquarters views subsidiary units as crucial for company innovation and has consequently set-up a central organization with a frequent exchange between subsidiary units and headquarters. According to headquarters, a central management of entrepreneurial initiatives maximizes their value:

The value is especially high, if ideas and initiatives are centrally bundled.

Subsidiary units are continually changing their products and processes due to high cost and innovation pressure in the market. Despite the fact that the underlying product platforms are changed every five to ten years, after three to four years, the variance of existing products has increased tremendously. Even different products in different locations can then be found. This damages the possible complexity frame and bundling advantages are lost. It may, therefore, not be in the best interest of the organization if changes by and ideas of the subsidiaries are not recognized by headquarters.

Therefore, one's own initiative and raising suggestions for improvement are generally valued positively, but this is directly linked with the need of coordination. This cannot be completely assured by the subsidiary due to its high workload and therefore the need for a central management of such activities exists.

It is also difficult for subsidiary units to estimate the underlying sales potential of an initiative. As a result, the assistance of central units is often required. CaseCo1's positive attitude has, however, intensified over time; this is attributable to a new organizational structure and positive experiences in the past with such initiatives. The main reasons for adopting a new, more decentralized operating model are the increased international footprint of the organization as well as the increased importance of specific markets.

Headquarters' attitude towards subsidiary entrepreneurship is in all facets characterized by clear leveraging subsidiary ideas as long as they remain within set guidelines. Subsidiary entrepreneurship is rated as rather important with regard to sales, and rather insignificant, in contrast, with regard to product development. In terms of competitiveness, headquarters rates subsidiary entrepreneurship as a clear differentiator against its competitors, and differentiates in the case of subsidiary entrepreneurship's influence on corporate strategy between short-term and long-term changes. Entrepreneurial subsidiary activities are seen as rather insignificant for short-term changes, but, in contrast, may have an influence on long-term changes through delivery of new ideas. Besides that, subsidiary entrepreneurship is valued as an efficiency-increasing tool on the local subsidiary level. It regularly happens that subsidiaries change their local processes to achieve their objectives and new budget constraints. Therefore, efficiency improvements are easily realized by subsidiary entrepreneurship. According to headquarters, CaseCo1 further tries to establish the subsidiarity principle, which should help to increase subsidiary's entrepreneurialism:

[T]he corporation tries to realize the subsidiarity principle. This means that the personal contribution and the desire for innovative behavior of subsidiary units should be fostered.

(5) Governance of subsidiary entrepreneurship and innovation activities

Headquarters is not involved in each subsidiary idea and initiative to the same degree. Personnel and financial support are the two most popular forms of headquarters involvement. The degree of support depends on the relevance of the initiative for the organization.

The more radical, widespread and costly an innovation, the more centrally it is organized, supervised, and realized.

The degree of involvement directly correlates with the degree of initiative's importance for the overall organization.

The incentive scheme for entrepreneurial initiatives consists of awards and contests for strategically prioritized topics, centrally organized benchmarking projects, a worldwide suggestion scheme, and financial incentives for employees. The worldwide suggestion scheme is a software-based system which is well-recognized by all employees. Headquarters' challenge is to filter the fruitful ideas rather than purely increase idea

generation. Therefore, the incentive scheme at CaseCo1 is a mixture of awards and compensation.

The proposal for funding is either directed towards headquarters or the respective product division. The allocation of funding also depends on the financial amount needed; especially in the case of high-cost initiatives, headquarters pre-checks funding decisions. Before funding is granted, business forecasts are performed. Moreover, control (in terms of design, pricing, etc.) is incumbent upon the respective product divisions. A stringent strategic control still needs to be developed, however:

To ensure alignment with the corporate sales and business strategy, a few escalation mechanisms are indeed established, but the very new decentralized organization of country 1 and 2 demands a further concretion and detailing of such control-respective directional-control mechanisms.

The innovation process in CaseCo1 is divided into two different phases: First, idea search/generation and second, idea realization/product development. The second phase is organized according to the well-known stage-gate process which includes milestones, and is centrally defined and controlled.

The degree of subsidiary involvement depends on idea type and phase. In the first phase, any subsidiary unit can come up with ideas. If the idea is deemed as valuable for the corporation, headquarters takes over in most cases. If the idea is very specific to the subsidiary unit, it is developed further within its unit. In the second phase only a few affected subsidiary units are involved. Further units get involved in a later stage when the new product is launched.

To predict future trends as well as possible, CaseCo1 uses a scenario model. In this model, the future is divided into four horizons: horizon 1 (actual year), horizon 2 (forthcoming two years), horizon 3 (next three years), and horizon 4 (further four years). The model also differentiates between three types of trends: First, market trends per region and per product group; second, product technology trends; and third, production technology trends. Input for the model is gathered from product divisions, corporate development, and subsidiary units. With the help of this model, upcoming F&E projects are prioritized.

(6) Knowledge utilization of subsidiary entrepreneurship results

Idea and initiative aggregation are done with the help of contests:

Ever and anon internal competitions are organized. Subsidiaries transmit, in the context of these competitions, their ideas, topics to headquarters. This is a method to centrally aggregate locally raised improvement potentials. It is a bit like a best practice sharing, but in the sense of a contest.

Headquarters views the functional organization of CaseCo1 as an enabler for knowledge aggregation: Each central function has counterparts in the subsidiaries and conducts regular meetings to enable personal exchange between relevant people. Knowledge exchange is, therefore formalized via those meetings. A database or software-based system for knowledge exchange/aggregation is missing, but, according to headquarters, the existing form of organization leads to intrinsic motivation for knowledge exchange:

[I]t is not so much administratively formalized, but it is in the self-interest of each unit, to inherit improvement initiatives and to transfer them to other subsidiaries. It's rather an intrinsic motivation and not externally caused through software systems etc.

No standardized tool exists; it's rather a fluent and lively aggregation.

CaseCo1 also regularly publishes a company magazine which is distributed to all employees and printed in several languages. It is highly accepted among the staff. Ideas and initiatives from subsidiary units are presented via this medium.

It is a very good medium in which local units and subsidiaries might position. The medium is also highly accepted and effective.

According to headquarters, regular knowledge exchange between subsidiary and central units is desired. In reality, however, daily business often takes too much time, causing knowledge exchange to often be conducted through personal contacts of the exchanging partners. Consequently, headquarters tries to become a catalyst and organizes regular meetings for executive managers in order to facilitate the informal exchange between subsidiary units:

Altogether, the function-specific meetings as well as the executive manager meetings serve to encourage informal networks and reduce barriers of contact/communication.

5.1.1.2 *Within-case analysis*

CaseCo1 is a conventional centrally organized corporation in which all subsidiaries possess a sales function, while a few also have a production function. There are two exemptions: competence centers and special role units. The difference between these two is that competence centers developed by chance, whereas special role units were assigned by headquarters. Although the reasons are similar for both, differences in their importance can be observed: Reputation is the most important reason for the emergence of competence centers, whereas the future importance of a subsidiary market is the driver behind the establishment of special role units. CaseCo1 tends to have quite a conventional understanding of the parent-subsidiary relationship in which subsidiaries are the executing, and not the developing, creating units. This close understanding has relaxed a bit over time due to changed market requirements (increasing globalization of business) and good experiences with more empowered and decentralized subsidiaries.

The degree of entrepreneurial subsidiary activities in CaseCo1 tends to be “moderate”. Subsidiary units differ in their entrepreneurial activities, and although most units fulfill their roles, they rarely go beyond. Accountability for initiatives varies among the different types of innovations: Product/platform innovations are centrally performed and controlled, whereas product adjustment innovations and process innovations are directly done by subsidiaries. Crucial developments are therefore incumbent upon headquarters, whereas minor developments can also be done by subsidiary units. Nevertheless, subsidiary units seem to be highly relevant for idea generation and launch story development.

CaseCo1 definitively favors entrepreneurial subsidiary actions and rates them as crucial for company innovation. Headquarters’ opinion, however, is that a central management of entrepreneurial subsidiary initiatives increases their value, and subsidiaries should only be entrepreneurially active within set guidelines. The existing system could be described as “*managed or guided subsidiary entrepreneurship*.” It seems that headquarters’ positive attitude has intensified over time due to its positive experiences, its increased international footprint, and the increased importance of specific market places. Overall, CaseCo1 tries to manage its organization according to the subsidiarity principle: increase the innovative actions of its subsidiaries and support them centrally if needed.

In terms of governance and involvement, it can be said that central units do not become equally involved in all subsidiary ideas/initiatives, and their degree of support depends on idea relevance for CaseCo1. The two most popular forms of involvement are financial and personnel support. The existing incentive scheme is a mixture of awards, contests and compensation. Funding of initiatives is either done by subsidiary units, headquarters or the respective product division.

Initiative knowledge aggregation is done with the help of contests, functional organization, regular networking meetings, and the company newspaper. Despite the fact that knowledge exchange is desired by headquarters, daily business often takes too much time, and knowledge exchange is left behind. As a result, headquarters acts as a catalyst and helps to increase informal knowledge exchange via regular executive meetings. It seems that knowledge exchange can happen by chance. CaseCo1 does have some building blocks of a knowledge-aggregation and -distribution system but has not yet linked them strategically.

5.1.2 CaseCo2

The following two subchapters describe CaseCo2. In subchapter 5.1.2.1, a description of the case based on external data and information gathered in interviews is given. The internal case analysis in subchapter 5.1.2.2 will then highlight the relevant insights of this case and will set the foundation for the cross-case and cross-segment analyses.

5.1.2.1 *Case description*

(1) Company description/company environment

CaseCo2 is a multinational organization within the multinational environment and employs nearly 15,000 people. The company has approximately 250 sites in nearly 30 countries. It offers four different product segments, whereof two segments (product A and product B) are comparably strong, with each having a sales share of ~35 %. Product C is responsible for ~20% of sales, whereas product D generates ~10 %. CaseCo2 is the market leader in most of its product segments. The segments are further organized along four geographic regions, whereof two regions are responsible for about 70% of sales. The second smallest region still delivers ~20% and the smallest region accounts for ~10% of company sales.

Overall, the company can be described as a decentralized organization which has primarily grown through acquisitions. A tremendous strength of CaseCo2 is its strong market position (market leader) in most of its markets.

CaseCo2's business environment is a local one: There are many regional producers and only a few internationally operating ones. The market can be characterized as highly regional and fragmented. The company itself claims that at times its closest competitor in a market will typically have a maximum of two plants in total. As a result, competitors are often a sixth of CaseCo2's size. One reason might be that delivery beyond a certain radius around a production facility does not make sense economically, requiring a dense local production network. Another reason is that barriers of entry into this market are high because high initial investments are needed, whereas replacement investments are relatively low. Buyer power in this market is relatively low, given its highly fragmented nature. Supplier power, in contrast, can be qualified as medium due to industry's high resource dependency (especially for energy) during production. Market demand strongly follows wider economic cycles.

(2) Role of the subsidiary unit and the parent-subsidiary relationship

The corporation pursues a strong regional focus and has established a decentralized organization with lean headquarters structures. Even the reporting is organized along this regional footprint. Headquarters can also be described as the bracket around its subsidiaries. It holds everything together and provides support as necessary:

Actually a lot self-contained units or organizations exist which are adequately supported by the holding.

Corporate Services strongly supports and assists the holding. On the other hand, [it is] very demanding with regard to the result at the end of the day.

It is in headquarters' opinion that the specialty of the marketplace is the main reason for this organization form: It is a very traditional market and might differ from country to country. As a result, subsidiaries must be able to act autonomously and locally, especially in regard to sales.

According to a subsidiary unit manager, the corporation could be described as a decentralized organization that consists of multiple entrepreneurial businesses. He highlights the corporation's growth strategy as the main reason for this:

The company itself is a very interesting case [...] because it's grown through acquisition. It's a sort of big group of entrepreneurial businesses which have been acquired by the group. Each of the subsidiaries is often started in a very entrepreneurial organization. The group itself is a very decentralized organization and it manages in a very common frame of guidelines in a global strategy.

The corporation is organized geographically: on the one hand, the four regional executive managers connect their geography to the corporation, and on the other hand, the managers connect the countries in their respective regions. With Corporate Services, however, which supports all regional units, a matrix organizational element also exists. The company itself describes the relationship between Corporate Services (headquarters) and the regional units as an intensive dialogue between equally-weighted partners. Nevertheless, autonomous subsidiary activities are only possible in the context of set guidelines:

[It is] a very intensive dialogue, which is strongly characterized by the equality between holding and subsidiary units. However, the dialogue must be within certain limits to avoid chaos. Certain guidelines exist which build the framework of our collaboration. However, our subsidiaries act very independently and autonomously beyond and in the context of these guidelines.

It is a very fair and cooperative dialogue we execute.

[T]he collaboration is characterized by a high degree of autonomy and open discussions in certain limits.

In headquarters' opinion, the relationship between parent and subsidiary unit varies with the degree of freedom a subsidiary unit has. Differences can be explained by the size of the subsidiary, headquarters' experiences in the past with the subsidiary, geographical distance between headquarters and the subsidiary, the subsidiary's maturity, marketplace maturity, and the subsidiary's economic success. In general, the bigger and more experienced a subsidiary is, the more autonomy and freedom it normally gets:

This means that there is a very small organization, whereas in the other case a large and experienced organization exists. This also means a different intercourse with each other. This also means different

autonomy degrees, because it can be assumed that established units are worthy to act more autonomously. For new or recently acquired units the degree of autonomy is certainly lower, because we first need to know and understand each other.

Another factor besides size and headquarters experience is parent's distance to the subsidiary unit, which is seen as an important determinant for the degree of subsidiary autonomy. The more remote a subsidiary unit, the more autonomy it normally possesses. A reason for this, as seen by headquarters, is the amount of effort it takes to visit and control the remote subsidiary site. Parent staff can therefore not be as supportive and remote subsidiary units must be more self-contained and self-active than units which are geographically closer to headquarters.

In addition, the maturity of the subsidiary and of its marketplace is relevant for the degree of autonomy the subsidiary owns. In most cases, innovations by mature subsidiaries in mature markets are innovations for the overall organization, whereas innovations of a developing subsidiary are in most cases just knowledge transfers from mature subsidiaries. Consequently, some subsidiary units are innovation "leaders" while others are just innovation "implementers" or "followers." Finally, subsidiary units with better financials and higher margins tend to have a higher degree of autonomy and freedom from headquarters. According to a subsidiary unit manager, the shareholding strategy might be an additional differentiator:

Another difference as well could be the shareholding of the subsidiary. Company's approach is often to either buy-out one hundred percent a business which then becomes part of the group or often the existing management team will hang on to a percentage shareholding for a period of time. That definitively affects the relationship between headquarters and the subsidiary.

(3) Degree and Type of subsidiary entrepreneurship

The intensity of subsidiary entrepreneurship differs in headquarters' opinion with respect to the underlying process: Entrepreneurial activity in the corporation is seen as relatively high (5-6) with respect to operational processes and product developments/improvements. It tends to be much lower (1-2) with respect to organizational processes such as financial and organizational ones. From the subsidiary unit's perspective, the degree of entrepreneurial behavior is in between (4-5).

The determining factors for differences in subsidiary entrepreneurial activities are similar to those for subsidiary role differences: maturity/size of subsidiary organization and market, history of subsidiary unit, and relevant people at subsidiary level. According to headquarters, central input will be relatively high and subsidiaries will have a low level of autonomy as long as a unit is underway to establish its business. Over the course of time, they will gain more autonomy and consequently become more entrepreneurial:

[...T]he different levels of market maturity are crucial for this purpose. Focus of actions in newly entered markets is instalment activities, whereas the organization in established markets may focus on innovations.

Over the course of growing and maturing, the subsidiary units obtain more and more autonomy and autarky in the organization.

It can also be generalized that larger subsidiaries tend to be the innovation drivers because those subsidiaries are already mature enough. Small subsidiaries, however, often have to cope with special problems in their respective markets and need to be entrepreneurial as well. Therefore, size is not the only differentiator.

Other differentiators include the history and the respective people of a subsidiary relevant for its entrepreneurial behavior. Subsidiary units tend to be more entrepreneurial and autonomous, in headquarters' perspective, if those units were standalone companies before they were acquired than if they had grown organically.

Sure, subsidiary units are more independent, if they were potentially acquired and a mid-sized organization before [...].

It also strongly depends on the acting people. How innovative are they? How creative are they?

All four kinds of subsidiary entrepreneurship activities can be identified by headquarters in their organization. The improvement and adaption of existing products regularly occur when new governmental guidelines are released. In most cases, the units will check with headquarters if a solution to the problem already exists within the organization. If not, the subsidiary unit will take the lead and start an improvement process. Examples are the improvement of the ordering system by the UK subsidiary (improvement of company

processes), and the Hungarian subsidiary introducing its new energy carrier in the production process (improvement of resource usage). Also, the development of a completely new product might be done by a subsidiary unit. This was the case with a 50% subsidiary in Bavaria.

From headquarters' perspective, the level of entrepreneurial activity is high because CaseCo2's organization is too lean and no respective R&D units exist. As a result, subsidiary units are crucial for company innovation. Each unit makes some innovation besides its daily business. Headquarters is only actively involved in managing those activities to facilitate knowledge exchange and to support the projects with experts:

The holding (headquarters) is too lean to be leading in innovations, because no central R&D unit exists. So each division generates a bit innovation for its area besides its daily business.

[I]t is the task of the holding and corporate services to link the whole thing and to detect which synergies exist and which problems might arise, and then to consult and involve respective people throughout the organization. [...] We try to network.

Headquarters' perspective is shared by the subsidiary unit. The subsidiary unit manager stressed that spotting and realizing the opportunity is local business, but ensuring the fit within the underlying strategy is headquarters' role.

Innovation tends to be based on experience within the group itself. [...] The local needs really are the drivers behind this. There is a strong exchange between local organization and head office.

I think spotting the opportunity is local, but the strategy is certainly driven by headquarters. [...] But actually making that happen and looking where those opportunities are is very much down to the local unit. We have to look for those specific opportunities that are appropriate for our market place.

(4) Headquarters' attitude towards subsidiary entrepreneurship

For headquarters, the upsides of entrepreneurial subsidiary activities outweigh the downsides. The ability to react appropriately to different local market needs and competitive situations, as well as the fact that more people involved also generate more ideas, are mentioned as upsides. According to headquarters, the following downsides might arise: risk of having too many duplicates in development ideas and projects, lack of

resource pooling (e.g., experts for a topic are not involved because the subsidiary unit is not aware of him/her), risk of knowledge loss if the knowledge is only stored locally, and disregard of potential synergies. Nevertheless, the corporation favors entrepreneurial subsidiary behavior in an organized manner.

It is favored and we like to see such a behavior [...], certainly, in the context of our instruments and in a constructive, critical balance and measured by objective criteria.

This point of view is generally shared by the subsidiary manager with the difference that in the subsidiary unit's perspective it is rather an "accepts" than a "favors":

It certainly accepts what goes on in terms of entrepreneurial attitude with subsidiaries as long as [...] it's first of all within the strategy of the group [...] and we don't duplicate work.

The parent company allows the subsidiary units a relatively high degree of freedom to pursue ideas which might only be relevant for the unit itself. However, it permanently monitors the progress of those projects in order to stay informed. It also has the right to become actively involved in a later stage when the project might become more relevant for the parent company.

We accept that it is valuable for the local unit and therefore the local unit should realize it. However, they should continue to report to us about the project [...] we still have the chance to support the project or we continue with monitoring [...] and let the subsidiaries do it on their own.

Over the last years international, collaboration has become more important. This change was driven by headquarters and subsidiaries. Both sides have recognized that by working together, they are able to realize more than each can achieve on its own. Consequently, projects, especially "sipro", are staffed internationally. This ensures that different perspectives are part of the project from the beginning. Past experiences have led to this change in strategy. A vivid example was given for the transfer of a new product, which was developed almost entirely in Germany: international subsidiaries that were to launch the same product in their markets were very skeptical about the product and its launch, and it took a lot of time and energy to convince them. If they had been involved from the beginning of the project it could have avoided some of the later conflicts. Therefore, relevant recipients are now involved from earlier on in the project to avoid such problems.

I believe that the innovation processes at our company definitively became more international. Both local units and headquarters realized that we can accomplish more if we work together.

[...W]e switched over to set-up project teams that consist of relevant country representatives who are interested in and relevant for a certain topic.

Relevant in this context is that those who ensure the implementation in the most important countries are involved as quickly as possible, if the project proves successful.

A subsidiary manager summarizes that the company seems to be a network of entrepreneurial businesses that feel comfortable with their entrepreneurial footprint and have learned to leverage the existing organization:

[...T]he company seems to be a network of almost entrepreneurial businesses by acquiring firms [...] and it inherits almost that entrepreneurial attitude. [...] They are quite used to dealing with people who want to get on and build businesses and grow businesses. They absolutely managed to put themselves into a position to get the best from that sort of environment.

(5) Governance of subsidiary entrepreneurship and innovation activities

The management of innovation projects is done according to the existing project management manual. Innovation projects are classified as either “sipros” (strategically important projects which are, or might become, important for the overall organization) or “nipros,” (nationally important projects which are only relevant at the local level). The underlying process definition for both types is the same; the degree of headquarters involvement differs. For “nipros,” funding is mainly provided by the subsidiary unit. For “sipros,” the parent becomes a major partner for financing the project and external experts, as well as providing support with internal experts. A key factor to all innovation projects is the involvement of subsidiaries from the beginning which ensures companywide support. Moreover, for each innovation project, a corporate caretaker is appointed who needs to be informed on the progress of the project and ensures its alignment to the overall company strategy. Regular reporting is also done.

According to a subsidiary unit, the existing project management approach is very helpful in expediting processes, getting relevant expertise, and avoiding duplication. The existing concept is already close to a think tank concept:

[...T]he cooperation between us and the group is almost like a think tank concept and it avoids parallel or double work and it also facilitates the exchange between the group and the subsidiaries themselves.

Three years ago, the corporation tried to gather ideas through an innovation contest for the first time. Each country was asked to hand in innovative ideas backed up with a short description and some sketches. Ideas were accepted from all areas. The best ideas were rewarded with a prize. Unfortunately, the whole innovation contest was not very fruitful, causing the parent's opinion on contests to be rather mixed: Alternative methods are preferred to successfully leverage the innovation potential of the company rather than the ineffective innovation contests.

The question for me is, do I have to organize an innovation award or is the company able to explore and gather the existing creative and innovative potential throughout the organization in other ways?

Nevertheless, innovation prizes still exist on a local level. Subsidiary units use them to gather improvement and innovative ideas for their local operation:

It certainly happens on a local level within the factories. We have incentive schemes for people even on a small local level at the factory level to come up with new innovative ideas and they are rewarded with a financial prize.

Headquarters believes that due to the company's slowly changing industry environment, a smaller amount of innovative ideas is needed than for companies competing in the faster changing industries. Nevertheless, some tools are established to collect innovative ideas throughout the company. For instance, focus group meetings, which mainly include internal staff, regularly take place to brainstorm future trends and ideas. Meetings with relevant sales, production, and product management employees from all subsidiary units also take place twice a year. Key to the discussions is changes in marketplaces, standards, competitor situations, and customer needs. Besides that, relevant employees also have a performance-based salary component which takes innovative projects into account.

(6) Knowledge utilization of subsidiary entrepreneurship results

Results and experiences of initiatives are stored in a knowledge-database which can be searched via keywords. CaseCo2 is also underway to introduce the Microsoft Office SharePoint System to its company.

Frequent reports and the existence of corporate project counterparts ensure that the parent company is always aware of all relevant information. In headquarters' opinion, this system is already at its pareto-optimum. The exchange between subsidiaries is in most cases facilitated by headquarters. The parent company acts as a knowledge hub:

The experience sharing within the group is really done by corporate services. There is a small team in corporate services that gets feedback on projects and [...] trades that information between various subsidiaries. [...] Corporate services do have that information and make it happen. And, equally, these experts can tribute with these project teams on a national or an international basis to pull that information together.

It's kind of a central hub of a knowledge base.

The aim of headquarters' exchange facilitation is to avoid duplicates and to replicate and transfer successful innovations to other subsidiary units:

One aspect is that we would like to avoid duplicates with our activities.

If an innovation exists which is eventually already a successful product in a market with adequate financial returns, we will strongly aim to realize this innovation in other countries as well.

5.1.2.2 Within-case analysis

CaseCo2 has lean corporate structures and is organized geographically. The company has grown through acquisitions and is also described as a conglomerate of multiple entrepreneurial businesses. The parent-subsidiary relationship is characterized by an intensive dialogue between equally-weighted partners within set guidelines. There are, however, differences in the parent-subsidiary relationship: with regard to innovations, it can be said that some subsidiaries are the innovation leaders while others are innovation followers. From my perspective, the parent company's main role is to set a framework of guidelines which acts as a strategic umbrella over the conglomerate of entrepreneurial subsidiary activities.

The degree of entrepreneurial subsidiary activity tends to be high. This might be explained by looking at company's growth strategy: CaseCo2 has mainly grown inorganically by acquiring companies which were standalone innovative businesses before. Those

subsidiaries tend to be much more entrepreneurial than organically grown ones. As a result, I would say that self-confidence of a subsidiary unit is also an important lever for entrepreneurial activity. Furthermore, the degree also tends to be high due to the very lean corporate structure and the missing R&D unit. It is therefore crucial for company innovation that each unit makes some innovation besides its daily business. I have the impression that the subsidiary units are definitively the driver behind company innovation. Headquarters' task only seems to be to ensure the strategic fit of those activities. With regard to initiative types it can be said that all four kinds (product improvement, product development, process improvement, and resource usage) happen at CaseCo2. The only exemption is that no subsidiary driven improvement of central processes (financial/organizational) occurs.

CaseCo2 definitively favors entrepreneurial subsidiary behavior and the upsides (local adaptation, innovation generation), in their opinion, outweigh the possible downsides (duplicates, lack of resource pooling, knowledge loss). Headquarters' attitude is to allow the subsidiaries a relatively high degree of freedom to pursue their ideas while it permanently stays informed about progress and possible arising problems. It seems that CaseCo2 feels comfortable with its entrepreneurial footprint and has learned to leverage the potential of such an organization. The attitude has further internationalized over the last years because parent and subsidiary units have recognized the potential of combined innovation power.

The governance of innovation projects differs: Headquarters strongly supports and involves itself in "sipros", whereas "nipros" are mainly driven by local units. A corporate caretaker, however, is still appointed to every project, regardless if it is a "sipros" or a "nipros" project. His main task is to ensure project alignment with its company's global strategy. For idea generation, the company regularly holds focus groups and organizes meetings with subsidiary employees. CaseCo2 tried an innovation contest once, but it was not very successful. It is still, however, a common tool on the local level. I have the impression that CaseCo2 has created an open culture which allows open dialogue between headquarters and subsidiaries. Furthermore, the exchange between headquarters and subsidiaries is as vivid as a think tank operates. The parent company also acts as a knowledge hub which facilitates cross-exchange between subsidiaries.

5.1.3 Within-segment analysis

In the following subchapter similarities and differences between studied companies in the “multinational environment” are investigated. This analysis forms the foundation for the cross-segment analysis in the following chapter (6.1).

Company description/company environment

The two case study companies in the “multinational environment” differ quite significantly. The main differences can be seen in their organizational form, growth path, competitive environment, and barriers of entry. CaseCo1 is mainly organized by functions. It has predominately grown organically and competes in an already consolidated industry in which barriers of entry are moderate. CaseCo2, in contrast, is organized geographically. It has predominantly grown through acquisitions and competes in a fragmented industry in which barriers of entry are rather high. Both companies have four product divisions and obtain market leading positions in their respective markets. Given the fragmented nature of both markets, buyer power is considered low for both companies.

	CaseCo1	CaseCo2
Company description	~38,000 employees Centrally organized by functions Four product divisions Number three in its market Mainly grown organically	~15,000 employees Organized along geographies Four product divisions Market leader in most of its markets Mainly grown through acquisitions
Market environment	Market demand driven by replacement need Highly competitive market, developed from a regional into a more globalized market Consolidated industry Developed from a push- into a pull-market Labor-intensive production Buyer power low Supplier power moderate Barriers of entry moderate	Cyclical market demand (seasonality) Market demand driven by economic cycle Highly regional market (many regional and only a few global players) Fragmented industry Raw-material (energy) intensive production Buyer power low Supplier power moderate Barriers of entry high

Table 4: CaseCo1/2 comparison: company setting and company environment

Source: Author

Role of the subsidiary unit and the parent-subsidiary relationship

At CaseCo1, different subsidiary roles were either attributed by headquarters or developed to some extent by chance. Subsidiaries are classified as either normal subsidiaries, competence centers, or special role subsidiaries. Still, all of them are highly valued – "contributors" is a popular term used. At CaseCo2, in contrast, such strong subsidiary role differences cannot be observed. Nevertheless, informal terms are used based on the subsidiary's contribution to innovation.

A strong difference in the parent-subsidiary relationship can be observed between both CaseCo's: CaseCo1's overall relationship is characterized as "intense" with high management attention; "intensity" focuses on the "dialogue" for CaseCo2. Overall, it seems that the relationship in CaseCo2 is much more entrepreneurial than in CaseCo1. Also, the developmental approach towards empowered and autonomous subsidiaries differs: CaseCo1, as a former centrally organized organization, recognized subsidiary empowerment as a valid approach to increase and improve its footprint in future relevant markets. Therefore, CaseCo1's developmental approach can be described as a centrally driven subsidiary empowerment strategy to realize future growth. CaseCo2, in contrast, developed through acquisitions and consists of many former standalone businesses. It is a decentralized organization consisting of multiple entrepreneurial businesses. CaseCo2's developmental approach was therefore a decentralized but now centrally managed entrepreneurship strategy.

Differences also exist in the factors that determine the subsidiary's role and relationship to its parent: For CaseCo1 one of the major relevant factors is future market importance, whereas for CaseCo2 main factors are shareholding strategy and past experiences. It seems that CaseCo1 actively steers subsidiaries based on the future relevance of the respective market while CaseCo2 more reactively manages its autonomous subsidiary businesses.

	CaseCo1	CaseCo2
Subsidiary role	Three different subsidiary types <ul style="list-style-type: none"> ○ Normal subsidiary ○ Competence center subsidiary ○ Special role subsidiary 	Subsidiaries differ with regard to their innovation contribution <ul style="list-style-type: none"> ○ Innovation "leaders" ○ Innovation "implementers"

	CaseCo1	CaseCo2
	Seen as: “profit centers.” result adding units.” “contributors” Competence centers developed by chance whereas special role units were actively planned by headquarters	○ Innovation “followers” Empowered to act autonomously and locally No per se role differences except sales versus production role
Parent-subsidiary relationship	“Intensive” relationship Subsidiaries obtain high management attention Close interaction above pure number collection and discussion	“Intensive dialogue” between equally weighted partners Headquarters bracket around its subsidiaries Decentralized organization consisting of multiple entrepreneurial businesses
Reasons for role and relationship differences between subsidiaries	Reputation of subsidiary, historical development Future importance of subsidiary market (main reason for HQ driven empowerment) Market dynamics in subsidiary market	Headquarters past experiences Subsidiary’s economical success Subsidiary’s market maturity Subsidiary size Geographical distance Shareholding strategy

Table 5: CaseCo1/2 comparison: subsidiary role and parent-subsidiary relationship

Source: Author

Degree and type of subsidiary entrepreneurship

Both case study companies have a relatively high level of entrepreneurial subsidiary activity for certain topics. Similarly, subsidiary entrepreneurship tends to be high for local product and process improvements and developments. However, entrepreneurial activity is in both cases much weaker with regard to global impact initiatives like central organizational processes.

Main differences between CaseCo1 and CaseCo2 exist with regard to occurring subsidiary entrepreneurial initiative types: At CaseCo1, mainly local impact entrepreneurial initiatives can be observed. Those local impact initiatives are local product adjustments to the respective market needs as well as improvements of the subsidiary’s local processes. Global impact initiatives like new product developments do not occur in subsidiaries. Nevertheless, subsidiaries deliver ideas for new product developments which are then realized by headquarters. At CaseCo2, in contrast, all four kinds of entrepreneurial subsidiary initiatives occur. One explanation for the differences between CaseCo1 and CaseCo2 might be the different subsidiary weights. It seems that subsidiaries at CaseCo1

gradually achieved more autonomy over time and have gained the power to start local adjustments just recently. At CaseCo2, in contrast, many former self-standing companies were integrated into the organization. Therefore, it can be assumed that these integrated companies kept their entrepreneurial attitude in all topics after integration.

	CaseCo1	CaseCo2
Degree of subsidiary entrepreneurship	Relatively high for local initiatives (5-6) Moderate for global initiatives (4)	Relatively high for operational processes and product developments/improvements (5-6) Much weaker for central organizational processes (1-2)
Reasons for degree differences between subsidiaries	Subsidiary's maturity Historical connection to the organization Duration of affiliation to the group Degree of competence level Skill set and enthusiasm of subsidiary people involved	Subsidiary's maturity History of subsidiary unit (organically grown or acquired) Size of subsidiary organization and market Relevant people at subsidiary level
Types of subsidiary entrepreneurship	Three kinds: <ul style="list-style-type: none"> ○ Adjustment and improvement innovations of products ○ New product development (only idea delivery) ○ Change and improvement innovations of local subsidiary processes 	All four kinds: <ul style="list-style-type: none"> ○ Improvement/adaption of existing products ○ Development of new products ○ Improvement/adaption of existing processes ○ Resource improvements

Table 6: CaseCo1/2 comparison: degree and type of subsidiary entrepreneurship

Source: Author

Headquarters' attitude towards subsidiary entrepreneurship

CaseCo1 and CaseCo2 both favor entrepreneurial subsidiary activities and in their perspective possible upsides outweigh possible downsides. Nevertheless, both companies state that they only favor such a behavior "within strategic guidelines" (CaseCo1) and "in an organized manner" (CaseCo2). Both see the chances of subsidiary entrepreneurship in a vivid stream of new ideas. In addition, CaseCo2 stresses the importance of subsidiary entrepreneurship to react appropriately to local market needs. Whilst CaseCo1 views the loss of strategic direction as the major downside, CaseCo2 focuses its view on possible operational downsides such as duplicates, lack of resource pooling, risk of knowledge loss,

and negligence of potential synergies. Consequently, CaseCo1 values the central management of entrepreneurial initiatives as the right approach to ensure strategic alignment. In addition, CaseCo1 values the subsidiarity principle: subsidiaries are allowed to operate autonomously only within a framework of strategic guidelines set by headquarters to ensure conformity of all subsidiary activities. Here the biggest difference to CaseCo2 becomes apparent: CaseCo2 values the "network of entrepreneurial businesses" without stressing the governmental role of headquarters.

The attitude regarding subsidiary entrepreneurship in both companies has improved over time. The improvement is mainly attributable to experiences in the past and changed market needs.

	CaseCo1	CaseCo2
Headquarters' attitude towards subsidiary entrepreneurship	<p>"favors" entrepreneurial subsidiary behavior as long as it is within strategic guidelines</p> <p>Upside: fluent stream of innovative ideas</p> <p>Downside: loss of strategic direction</p> <p>Central management of entrepreneurial initiatives to maximize value</p> <p>Subsidiarity principle important</p>	<p>"favors" entrepreneurial subsidiary behavior in an organized manner</p> <p>Upsides outweigh downsides</p> <p>Upsides: ability to react appropriately to different local market needs; additional ideas</p> <p>Downsides: risk of too many duplicates, lack of resource pooling, risk of knowledge loss, potential synergies partly not realized</p> <p>"Network of entrepreneurial businesses" feels comfortable</p>
Change in attitude	<p>Positive attitude has intensified over time which is attributable to:</p> <ul style="list-style-type: none"> ○ the new more decentralized operating model ○ positive experiences in the past 	<p>International collaboration has become more important</p> <ul style="list-style-type: none"> ○ change driven by both headquarters and subsidiaries ○ based on experiences in the past

Table 7: CaseCo1/2 comparison: headquarters' attitude

Source: Author

Governance of subsidiary entrepreneurship and innovation activities

For both case study companies, the degree of headquarters support depends on the importance of the entrepreneurial subsidiary initiative. CaseCo2 has even a classification scheme which distinguishes between strategically important project for the global

organization and nationally important projects for the local unit. CaseCo1's as well as CaseCo2's support for local impact initiatives is limited.

The incentive scheme shows similarities and differences between CaseCo1 and CaseCo2. Both companies use variable salary components to stimulate entrepreneurial behavior. At CaseCo1, this is supplemented by awards and contests for prioritized topics. CaseCo2, in contrast, has tried an innovation contest on a global level only once and, based on its outcome, is not convinced of a contest's suitability. Nevertheless, on a regional level, CaseCo2 also uses innovation contests. Although not an incentive scheme, CaseCo2 also conducts focus group interviews. Those groups discuss future trends and possible innovations under the surveillance of headquarters.

Both studied companies have control mechanisms in place which ensure financial moderation as well as strategic fit. CaseCo1 performs financial control via the existing proposal mechanisms while strategic control is done by the respective product divisions. CaseCo2, in contrast, has established a single control instance, the so-called "corporate caretaker." His task is to ensure financial and strategic alignment with corporate policy as well as a constant information flow to headquarters. Overall, CaseCo2 seems to have further developed control mechanisms in comparison to CaseCo1. One explanation might be that this form is needed to manage the network of entrepreneurial businesses at CaseCo2.

	CaseCo1	CaseCo2
Parent support/involvement	Depends on the relevance for the overall organization	Depends on the relevance for the overall organization Differs for "sipros" and "nipros" <ul style="list-style-type: none"> o "sipros:" partly financed by parent o "nipros:" mainly funded by subsidiary
Incentive scheme/idea generation	Financial and material employee incentives Awards and contests for strategically prioritized topics Worldwide suggestion scheme	Performance-based pay which takes innovative projects into account Innovation contest (on regional level only) Focus groups
Control mechanisms	Financial control via proposals Strategic control via respective product divisions	Corporate caretaker appointed for every project (tracks progress and ensures alignment with overall company strategy)

CaseCo1		CaseCo2
Innovation (process) organization		Regular reporting
	Divided into two phases (idea generation and idea realization)	Innovation projects classified as either “sipros” (strategically important projects) or “nipros” (nationally important projects)
	○ idea generation (new formalization under review)	Underlying process for both types similar
	○ idea realization (stage-gate process)	(stage-gate process)
	Subsidiary involvement differs between and within each phase	
	Future trends predicted via horizon model	

Table 8: CaseCo1/2 comparison: entrepreneurship and innovation governance

Source: Author

Knowledge utilization of subsidiary entrepreneurship results

CaseCo1 and CaseCo2 pursue quite different models for knowledge aggregation and transfer. CaseCo1 sees its functional organization as a sufficient tool for knowledge aggregation at the headquarters level. Corporate employees are supported in their knowledge aggregation work through the existing contests. These are conducted by headquarters and most of the existing ideas forming in the subsidiaries are handed in. Therefore, contests help headquarters to collect and review all outstanding ideas and initiatives. However, CaseCo1 does not use a database or software-based system for archiving entrepreneurial activities. CaseCo2, in contrast, has a more initiative focused set-up of its initiative knowledge management. Corporate caretakers are appointed as the corporate counterparts for every ongoing innovative initiative. These counterparts are responsible for collecting all relevant information about the projects which is supported by frequent reports from the projects to the counterpart. Besides that, CaseCo2 uses an initiative knowledge database.

In both companies, knowledge exchange between subsidiaries is organized by headquarters. CaseCo1 regularly organizes meetings for executive subsidiary managers in which ongoing and past initiatives are presented. In addition, the meetings provide a platform for informal exchange between subsidiary managers. Besides that, company magazines which are distributed to all employees enable knowledge exchange across the whole organization. CaseCo2, in contrast, centrally manages knowledge exchange between subsidiaries and uses the concept of corporate caretakers: they facilitate knowledge

exchange between subsidiaries and recommend subsidiary experts to other subsidiaries. Altogether, headquarters and corporate caretakers act as a hub that collects and distributes knowledge. According to headquarters, the knowledge hub approach avoids work duplications and simplifies the transfer and replication of successful innovations to other subsidiaries.

It seems that CaseCo2's perception of a "network of entrepreneurial businesses" leads into a network knowledge management approach. Similar to headquarters view of being the umbrella above all its subsidiary activities' it views itself as central knowledge hub which interlinks all units. CaseCo1, in contrast, seems to approach this topic from the centrally oriented perspective which can be seen in the functional organized knowledge exchange.

	CaseCo1	CaseCo2
Knowledge aggregation on headquarters level	Idea/initiative aggregation via: <ul style="list-style-type: none"> ○ contests ○ functional organization form (meetings between corporate and subsidiaries) No database of software-based system	Knowledge database which allows keyword search Corporate counterparts ensure knowledge aggregation Frequent reports
Knowledge exchange/distribution	Regular meetings for executive managers increases informal exchange between subsidiaries Company magazine (distributed to all employees in several languages)	Knowledge database which allows keyword search Knowledge exchange facilitated through corporate counterparts (headquarters acts as a knowledge hub) Expertise transfer arranged by headquarters
"Learning" tools	n/a	Knowledge hub should avoid duplication and transfer successful innovations to other subsidiaries

Table 9: CaseCo1/2 comparison: utilization of subsidiary entrepreneurship results

Source: Author

5.2 Case study segment: "Transnational environment"

The following case study companies (CaseCo3 and CaseCo4) belong to the category "transnational environment." This categorization was verified via triangulation and discussion with interview partners as well as other sparring partners. Characteristic for those companies is that both differentiating factors "forces for local responsiveness" and

“forces for global integration” tend to be high. However, one or the other criteria behind the overall rating might be closer to another section. Nevertheless, the overall rating for those companies puts them into the “transnational environment.”

Looking at “forces for local responsiveness” as the first factor, the companies tend to face a low degree of product standardization, a relatively high need to adapt to the distinct local market conditions, and different marketing and distribution channels across geographies. The need to adapt the foreign unit to its local country also tends to be relatively high. With respect to the second factor, “forces for global integration,” it can be said that the need to integrate across national boundaries, the possibilities for scale economies, and the level of R&D intensity tend to be high.

In this subchapter, the case of CaseCo3 (5.2.1) as well as the case of CaseCo4 (5.2.2) is described and briefly analyzed. Subsequently a cross-case analysis of these two case studies is performed (5.2.3).

5.2.1 CaseCo3

In the following two subchapters CaseCo3 is sketched. In subchapter 5.2.1.1, a description of the case, based on external data and information gathered in interviews, is given. Afterwards, the within-case analysis in subchapter 5.2.1.2 highlights the relevant insights of this case and sets the foundation for the cross-case and cross-segment analyses.

5.2.1.1 *Case description*

(1) Company description/company environment

CaseCo3 is a multinational corporation within the “transnational environment” which employs ~40,000 people and has local presences in about 50 countries. The corporation’s growth was mainly realized organically, which CaseCo3 recently supplemented with strategic acquisitions. CaseCo3 makes more than half of its revenues in region 1, whereas region 2 accounts for ~30% and region 3 for ~15% of company revenues. The company has a very international footprint and generates more than 50% of sales outside its home market.

Despite ongoing market consolidation, CaseCo3 extended its market leading position. Rivalry in the market is intense and at the top-end duopoly structures can be observed. Furthermore, CaseCo3 faces increasing competition through niche players in its market segments. Therefore, threat of new entrants is classified as high. Buyer power in this market is also classified as high. Supplier power and threat of substitute products, in contrast, are valued as low.

(2) Role of the subsidiary unit and the parent-subsidiary relationship

CaseCo3 is organized as a matrix along geographies and certain product areas. Headquarters' impression is that the majority of innovations happen in subsidiaries. Altogether, subsidiary roles are not exactly defined and there is much more ambiguity and scope for interpretation at CaseCo3 than in other companies/industries. CaseCo3 further states that the company's setting is very entrepreneurial and subsidiaries have the right to do whatever they want.

Here are less precise definitions of roles of subsidiaries versus corporate about who should be doing what. There is much more ambiguity and scope for interpretation then when I compare it with my experience in a bank.

It is a very different and much more entrepreneurial environment, where at the end of the day if subsidiaries do their activities better than the center, they usually get the right to do it.

[I]f you are doing well and you are achieving the results, you get even more independence to do what you want.

The parent-subsidiary relationship is characterized as a "long-leash" relationship: as long as subsidiaries perform, they can do what they want. However, if continual record of non-delivery is recognized, the leash will be shortened. Otherwise, if subsidiaries do well and exceed their targets, they will get even more independence and freedom. For example, subsidiaries are allowed to sign partnerships with local companies who will extend the subsidiary's product portfolio in this geography. Subsidiaries are absolutely free to decide on partnerships and it might occur that regions/countries have different partnerships for different products. Headquarters is aware that this long leash might raise a long-term issue of product viability, but has not interfered in the past. CaseCo3 characterizes the parent-

subsidiary relationship as a relationship between a “retired parent and his self-standing son:”

In the sense that subsidiaries can run their lives by themselves, of course, at some points they need certain things, they need their affection, they need their inheritance but they are all pretty confident and good enough to run on their own.

However, not all subsidiaries have the same voice in the organization. Headquarters raises three reasons for that: the managing director’s reputation, the subsidiary’s entrepreneurial image, and the subsidiary’s size. CaseCo3 describes itself as a highly networked organization: the same people always rotate within the organization and do different challenges, tasks, and leadership roles. Therefore, the importance and voice of a subsidiary stands and falls with its managing director’s standing and reputation within the organization:

For example, in the case of a small geography such as Latin America, we might appoint somebody who is actually very well-considered within the company network, which means that he brings his personal authority to the conversation and has more influence not because it’s Latin America but because of his network and what he has done at the company before.

Besides that, each subsidiary possesses an entrepreneurial image at headquarters. Subsidiaries which are considered more entrepreneurial than others and are more self-starting get a longer leash over time. For example, China was not a large revenue contributor in the past and its managing director was not well-known, but it has established an entrepreneurial image over time through creative sales activities.

[...b]ut the general impression is that they have been very creative and find a lot of local partners, government partnerships through the Chinese government, and they always have been hitting their numbers. They want to do something; of course we should allow them.

However, headquarters admits that the evaluation of subsidiary’s entrepreneurialism is very qualitative and sometimes the result of well-placed story telling.

The size of a subsidiary not only determines its voice in the organization, but also the type of relationship with its parent. Larger subsidiaries feel more comfortable and independent

from headquarters and have no difficulties with new situations and challenges. Headquarters in return lets them act on their own and only raises issues if they think their involvement is needed and adds value.

It's a very mature relationship in the sense that the parent also know what topics to pick and what topics not to pick.

Smaller subsidiaries, in contrast, feel uncomfortable in new situations and need a lot more parental support. Headquarters' role in that case is to give smaller subsidiaries confidence and support where needed.

(3) Degree and type of subsidiary entrepreneurship

The degree of entrepreneurial subsidiary actions tends to be high (4-5). Despite the fact that certain things (especially new product decisions) are centrally decided, units do their best to realize their favored innovations by working around regulations. For example, if a subsidiary innovation proposal is not picked up by headquarters, the subsidiary unit will either strongly lobby for it at headquarters or will even realize it without headquarters consent but with a local partner instead.

It's not that they are not entrepreneurial, but they find ways around it. They say "company, if you don't develop it for me, I might get a local partner" or they will basically say "just to make you understand it's really important, I'm going to invite you for a conversation with my local customer to have you, the big company, talk to them and maybe then you will understand my problem." So, they are very creative and push their agenda.

Headquarters describes the company's innovation approach as a decentralized bottom-up driven trial and error process. Furthermore, headquarters views its role as re-active which has to prove the subsidiary's ideas wrong. Otherwise, the subsidiary's ideas will be realized.

So, it's the exact opposite model of certain other [...] companies where ideas are launched top-down from the center [...] At the end of the day, how the company finds its way is that it goes here and thinks it goes this way, but somebody else in some area, subsidiary or whatever, is doing something which suddenly becomes very interesting and then, "hey, that's interesting let's go this way." So, we kind of find our way which is a very different model and in that model, innovation in subsidiaries, either defined by regions or different business units, is absolutely what's driving fundamental direction.

They are 'in your face' all the time saying what they need. They might be wrong and sometimes they are wrong and part of the challenge in the center is to manage it [...].

[...A]nd often the burden of proof for rejecting ideas comes from large subsidiaries in sight of center is with the center. It is presumed that their idea is good, unless the center can disprove it.

Nevertheless, subsidiaries differ in their entrepreneurial activities. Headquarters explains those differences mainly with the size of the respective unit. Smaller subsidiaries tend to be supervised by the parent and mainly focus on pure execution of existing strategies/products, whereas larger subsidiaries have a relevant share of voice regarding innovations and often pursue their ideas.

[...B]ased on the size of the subsidiary the level of innovation is very different.

Not all initiative types are equally probable at CaseCo3: Product improvement/adaptation innovations as well as new product innovations regularly occur at larger subsidiaries, whereas process improvement/adjustment innovations and resource reallocation initiatives do not really occur. Subsidiaries use different methods to realize their planned initiatives: (1) realize ideas on their own, (2) realize ideas via local partnerships, (3) lobby at headquarters and push realization through headquarters, or (4) actively lobby for relevant acquisitions. With regard to acquisitions, subsidiaries are responsible for the majority of CaseCo3's acquisitions made in the last years.

[S]ubsidiaries are [...] big in defining the acquisitions we make. [...] Except for the largest acquisition which was driven top-down almost everything or 90% of what we made in the last three years was done because one subsidiary was championing it and was really keen on it and convinced the center to do it.

The picture looks a bit different for processes: Subsidiaries are less frequently changing, renewing processes in an active way than they do in the product case. Nevertheless, CaseCo3's corporate culture is characterized by an open feedback culture. Therefore, subsidiaries will complain about not properly working processes and will force headquarters to improve them:

I would say that's less the case. I think the subsidiaries have a lot more influences on product results in general but less on processes.

So, there is less of a focus of subsidiaries to propose and proactively modify broken processes.

[T]he center understands which processes clearly don't work and there is more pressure to change some processes because we know that the subsidiaries are not happy with it, but at the same time, unlike the product case [...], they are not focused on solutions. [I]t's the task of headquarters to solve the problem.

Resource reallocation initiatives, in contrast, do not really occur at CaseCo3. Headquarters explanation is that only few subsidiaries are production units, whereas most of the subsidiaries are sales sites. Budget and production changes are only decided on a yearly basis during the budgeting process. Therefore, subsidiaries do not lobby during the year for reallocation of resources. However, strong negotiations about this topic happen in the yearly budgeting round.

(4) Headquarters' attitude towards subsidiary entrepreneurship

Entrepreneurial subsidiary activities are, in headquarters' perspective, a significant piece of overall company innovation. According to headquarters, innovation at CaseCo3 is managed significantly differently in comparison to other companies:

Innovation at our company is like millions of venture capital subsidiaries. You will find a lot of duplication in activities and you will find a lot of people thinking about similar ideas, spending budgets on the same things in slightly different fashions, and it's a bit like an environment where you let a hundred flowers bloom and you see at the end of the day which is the biggest.

According to headquarters, upsides of entrepreneurial subsidiary behavior outweigh potential downsides by far and it would be more dangerous for CaseCo3 if subsidiaries would not innovate at all. Therefore, headquarters even accepts innovative subsidiary behavior which goes in a wrong direction for a certain span of time:

I think the perceived risks are lower than if they didn't innovate at all. [...] I would be much more worried if the subsidiaries stop innovating at all then if they innovate in the wrong way. Because then it's like a stopped engine and you are going to have a lot of problems.

The subsidiary innovation is the ocean current. Sometimes it's okay that the ocean current flows in the wrong way, but finally it comes back to a regular cycle.

Perceived risks are erosion of corporate product strategy, destabilization of long-term growth, and risky interference with other subsidiary strategies. Subsidiary initiatives might interfere with headquarters product strategy of ensuring long-term growth. Headquarters' impression is that CaseCo3 could be doing more to win customers more permanently. Headquarters' long-term growth strategy might be further undermined when subsidiaries pursue a volume-driven sales strategy. In that case, subsidiaries are selling all existing solutions at once with a huge discount and in the following years do not have any products to further sell to their clients.

Interference problems with other subsidiary strategies might arise; for example, if a subsidiary unit is a competitor to company A while other subsidiary units partner with A. In that case, it must be ensured that the competing subsidiary unit does not harm the relationship between the other partnering units and A (e.g., does not talk badly about A).

Altogether, CaseCo3 is aware of possible issues and tries to manage them. Nevertheless, headquarters impression is that subsidiaries currently tend to be very powerful and management of entrepreneurial subsidiary activities could be improved:

The issue is how to manage innovation in a way which doesn't dampen long-term potential whether it has to do with the kind of products we build, the way we sell to the customer, local partnerships we make which we have to kill afterwards because it doesn't align with the overall flow.

That's the kind of stuff and the reason why there always has to be a balance between center and subsidiary. I would say that at our company, the balance is more towards subsidiary but is not out of control, but at the same time there is much more we can do to secure the long-term future allowing innovation as well.

In order to explain headquarters' attitude, the interview partner refers to CaseCo3's new board. The board has gone through a complete change in the last year and now mainly consists of former subsidiary heads. Therefore, CaseCo3's attitude has become even more subsidiary-oriented than it had already been before. The new board situation has also improved the interaction between the corporate center and subsidiary units.

The organization itself has made a change regarding who are in their genes more sympathetic with the subsidiaries.

[T]he guy who is now head of the subsidiary is used to report to the guy who was former head of the subsidiary and is now in the center. It's a big person network.

However, headquarters' attitude is currently centralizing in parts. This is caused by a new, much more directive CEO as well as by increasing competitive pressure. Nevertheless, the interviewee's impression is that CaseCo3's innovation attitude ("let a hundred flowers bloom and not a single one and we will see at the end which one became the brightest") will continue in the future because it is a crucial part of CaseCo3's vision and self-conception.

I won't say that I would expect fundamental changes, but I would say probably there is a bit more shift towards the center than it has been in the past. Let's say on a scale from 1 to 10, if we were more 7 or 8 in terms of giving freedom, probably we are an 8 at the moment and probably go to a 6. In aiming for 6 we might reach 7.

(5) Governance of subsidiary entrepreneurship and innovation activities

Headquarters involvement tends to be low. In the case of financial support, a set process exists which runs mechanistically once a year and uses tools such as spreadsheets, templates, presentations, and milestones. Besides that, no extra funding for entrepreneurial initiatives is provided. Therefore, subsidiaries have to use part of their budgets for financing their innovative ideas. Furthermore, the current situation is that once a subsidiary was granted a certain funding, headquarters will not get involved in how the money is actually spent. It is up to the subsidiary to optimize its budget and to set some money aside for entrepreneurial initiatives, if needed.

No one is going to get in this organization funding for specifically identified initiatives as entrepreneurial initiatives just to have some extra money. There is no extra money.

The situation is a bit different for product innovations. During the last one and a half years, CaseCo3 centralized all product investment decisions. The reason for the increased centralization is that different subsidiaries/product units performed identical activities, performed things which did not build on each other, or in some cases even headed in fundamentally different directions:

Somebody was, for example, partnering with a specific company for an area and built around it and somebody else was actually developing exactly the area the other one was partnering with. That kind of stuff happens a lot.

Therefore, headquarters decided to commit all decision power to the center and consequently took away the budget for product development from all subsidiaries. Since then, everybody has to apply for financial support at headquarters. Altogether, this centralization decision is modestly successful:

[P]art of that challenge in a very complex entrepreneurial diverse company like ours is you need a very big breadth and depth of knowledge to do something like that at the center. What we are finding out now is that we stopped a lot of bad things from happening but also we are not good enough to figure out which are the real stars. The results are mixed.

Subsidiaries also feel confident to ask for help and certainly will get some support.

But they certainly have the voice to ask for support and there will certainly some response.

The incentive scheme to foster entrepreneurial subsidiary behavior consists of two elements: (1) peoples own individual and personal career development, and (2) a financial incentive scheme. The one thing that is really relevant for career growth is whether the relevant business area has made progress. In headquarters' opinion, this is the best approach for fostering any collaboration or innovation. According to headquarters, the financial incentive scheme is highly tailored to individual performance and motivates employees to be much more entrepreneurial. Besides that, yearly increasing sales targets motivate subsidiaries to find entrepreneurial solutions to meet them. Headquarters explains that at a certain point it is easier for a subsidiary to increase its sales by pushing new products into the market than further selling existing ones. Therefore, subsidiaries are regularly looking for new products which are either self-developed or bought in.

Nevertheless, innovation at CaseCo3 is brink and supported in various ways by headquarters. Product innovation is pursued in three different ways: (1) continuous improvement of mass selling products, (2) incubator innovation of new products, and (3) new product research innovation. In the first case, business units with mass selling

products continuously work on product improvements to satisfy their customer needs. These innovations are driven and financed by the respective subsidiary.

In the second case, fundamentally new product areas are set up in an incubator, because headquarters was convinced and has decided to develop a new product in that area or to go after an opportunity. Headquarters describes this as “the incubator approach,” because the new unit is cut off from the rest of the organization and works separately on product development and launch. CaseCo3 created here an internal venture capital environment: corporate invests in certain ideas and gives people a budget and timeframe (2-3 years) to develop these ideas. These teams consist of internal employees and external experts, but currently internal employees form the majority of these teams. Headquarters’ explanation is that a lot of people are internally volunteering because they are fed up with their job and incubator work is seen as a nice outlet for talented people. Headquarters’ reason for establishing incubators is that certain ideas and innovations could not be pursued hard enough by the organization itself. Headquarters also considers the incubator approach as the best way to give visionary employees the freedom and resources to realize their ideas.

In the last case, dedicated research units pursue fundamental research on topics, ideas which may or may not become relevant in the future. These fundamental research programs are mainly centrally located and funded. However, the fundamental research not only involves internal employees, but also external people through collaborative research programs with partners, customers, and leading universities. Therefore, CaseCo3 already follows in some parts the principle of co-innovation.

The exchange between corporate product development teams and subsidiaries is very limited, which gives product developments a “black box” character. This black box character is often criticized by subsidiary units. However, headquarters opinion is that too strong an involvement of sales subsidiaries in the development process will not tremendously improve developments but will definitively absorb too much sales time from subsidiaries and hinder business.

Corporate decides it and develops a solution and a year later something will come, and then it's a surprise when they open the package.

Now at the end of it, it's good and bad, because these guys are supposed to sell, so you don't want them to spend a lot of time on validating, testing the product.

(6) Knowledge utilization of subsidiary entrepreneurship results

Aggregation of entrepreneurial results tends to be informal, unsystematic, and dependent on individuals who foster the aggregation. Knowledge exchange between subsidiaries occurs either informally in the context of regular meetings or partly through a so-called “wiki”. Headquarters invites managing directors of all countries regularly, and at those meetings topics defined by headquarters are discussed. Headquarters’ opinion is that those meetings enable an informal exchange between their subsidiary managers:

That forum probably gives an informal opportunity to interact and the managing directors may compare notes. It may happen informally in these kinds of settings and there are similar settings on the product side but it's not like there is a structured mechanism to say “tell us about the five entrepreneurial things you did.” It's more like you create the informal environment and then people might sit around at dinner tables or cafes and just compare notes.

Besides that, headquarters sends dedicated employees on information exchange missions to other subsidiaries. This should synchronize all ongoing innovative activities and ensure their alignment with corporate strategy. CaseCo3 also started some wikis on certain topics and communities of interest are forming to some extent: an intranet-based platform for the development of ideas was launched. Employees can independently submit their ideas, create teams, and further develop their ideas in collaboration with colleagues. The platform also allows tagging, blogging, and social bookmarking. However, headquarters opinion is that some interaction is going on via those wikis, but rates this tool as not yet significant:

[W]e created and put some solution proposal on the intranet and the guys from the U.S. commented on it and came up with an idea how to improve it. And someone from Asia continued.

But it is at a very early stage of it and we are now getting used to all of these web 2.0 tools.

The corporation’s attitude is that failure of an entrepreneurial initiative is not a big taboo. Still, no systematic analysis about the reasons for a failure and the key learning’s is conducted. One explanation for headquarters attitude is:

You can say it's either because the organization really wants to innovate or you could say it's because the organization doesn't care. There's a bit of truth in both.

Knowledge management solutions are just a tool. Organizations using them must be willing and philosophically being committed to that purpose.

5.2.1.2 Within-case analysis

CaseCo3's setting is very entrepreneurial and subsidiaries have the right to do whatever they want as long as they perform. Headquarters' impression is that the majority of innovations happens in subsidiaries and that there is much more ambiguity and scope for interpretation at CaseCo3 than in other companies or industries. However, subsidiaries differ in their role and status due to their size, entrepreneurial image, and managing director's reputation. The parent-subsidiary relationship is characterized as a "long-leash" relationship and as the "relationship between retired parents and their grown-up son." Therefore, subsidiary entrepreneurship is expected to be high due to the very entrepreneurial setting of CaseCo3 and the relaxed and remote relationship between headquarters and its subsidiaries.

The degree of entrepreneurship tends to be high, almost expected. Headquarters itself describes CaseCo3's innovation approach as a decentralized and bottom-up driven trial and error process. All subsidiaries tend to do their best to realize their ideas by either lobbying headquarters or just realizing them on their own. Therefore, headquarters' role seems to be reactive: to try to hold everything together and to form some structure or framework around all the different entrepreneurial activities. Despite the high degree of entrepreneurialism, not all initiative types are equally probable: improvement/adjustment innovations of products, as well as new product developments, are highly likely, whereas improvement/adjustment innovations of processes less frequently occur and resource reallocation initiatives do not occur at all. It seems that subsidiaries strongly focus their entrepreneurial efforts on product-related topics which tend to be more directly linked to sales improvements. Therefore, sales improvements and consequently reputational improvements are the main drivers behind entrepreneurial subsidiary activities.

Headquarters absolutely "favors" entrepreneurial subsidiary behavior and rates such activities as "a relevant piece of overall company innovation." CaseCo3's attitude with

regard to innovation is “let a hundred flowers bloom and you see at the end of the day which one became the biggest and brightest.” Consequently, headquarters perception is that the possible upsides of such activities outweigh the possible downsides. It seems that CaseCo3 is more worried about subsidiaries not acting entrepreneurially at all. This is supported by the fact that headquarters does not interfere with subsidiary initiatives if they are not completely aligned with corporate strategy for a certain period of time. Altogether, headquarters resistance against entrepreneurial actions tends to be low. However, headquarters’ attitude is currently changing a bit towards a more centralized approach which is driven by a new, more directive CEO as well as by increasing competitive pressure.

Headquarters’ involvement tends to be low, with no extra financial funding for local initiatives given besides the yearly budgeting. Therefore, subsidiaries have to use part of their existing budgets for funding their entrepreneurial initiatives. However, at the same time, headquarters does not spell out how subsidiaries must spend their budgets. New product decisions were centralized one and a half years ago and subsidiaries now have to apply for their funding. CaseCo3’s incentive scheme is relatively lean, with a few innovation-motivated bonus incentives and people’s individual career growth possibilities. Innovative and entrepreneurial behavior seems to be motivated by the highly entrepreneurial company culture. Besides that, CaseCo3 invests in certain ideas by setting up incubators, which constitute of internal and external employees. Furthermore, headquarters’ pre-existing expectation is that all of their employees are innovative and act entrepreneurially.

Knowledge aggregation and utilization tends to be informal and unsystematic and includes a fluent stream of emerging wikis regarding certain topics and dedicated employees on knowledge exchange missions. It seems that knowledge management at CaseCo3 has a life of its own which makes it difficult to consolidate knowledge and lessons learned.

5.2.2 CaseCo4

In the following two subchapters, CaseCo4 is sketched. In subchapter 5.2.2.1, a description of the case, based on external data and information gathered in interviews, is given.

Afterwards, the within-case analysis in subchapter 5.2.2.2 highlights the relevant insights of this case and sets the foundation for the cross-case and cross-segment analyses.

5.2.2.1 Case description

(1) Company description/company environment

CaseCo4 is a multinational organization within the transnational environment and employs ~30,000 people in about 60 countries. It operates through a network of ~200 companies and is organized along two business units. The larger business unit accounts for ~70% of company sales, the smaller one for the remaining ~30%. CaseCo4's operations are split along four geographic regions, with the largest geography responsible for ~50% of sales, the second largest for ~25%, the third largest for ~15%, and the smallest for ~10%.

CaseCo4's market is on the one hand highly competitive (strong competition between the major players) and on the other hand very consolidated (about five big players). Nevertheless, CaseCo4 is one of the leading companies in its business segment. Supplier power in CaseCo4's market tends to be moderate because most raw materials are sold as bulk commodities and production costs tend to be low. Barriers of entry are very high due to regulatory environment, patents, and technology. Buyer power, in contrast, tends to increase due to regulatory developments.

(2) Role of the subsidiary unit and the parent-subsidiary relationship

CaseCo4's subsidiaries differ with regard to their tasking: most of them are just sales units, with only a few also possessing a production or even research element. Subsidiaries are understood as the realizing units of headquarters targets, but subsidiaries have the freedom to decide on their own about realization.

It still can be centrally organized, because we do not have the size of some of our competitors.

Therefore, we still are of a size with on the one hand allows a central organization and on the other makes it necessary.

The parent-subsidiary relationship is described as "openly steered". Headquarters also states in that context that subsidiaries are like twelve year old children: parents give them the impression that they make some decisions on their own, but the truth is that parents still

limit options and make the difficult decisions. Furthermore, headquarters aims at strongly coordinating its subsidiaries. Nevertheless, some subsidiaries have established themselves as experts in some topics and are able to successfully lobby for further investments in related areas.

For example, a new production site close to site B for product XYZ exists. Thereabouts a complete new plant is currently built to enlarge capacities. The original idea was to build such a plant here, at site A, but the expertise is around site B and therefore the decision was made to change the previous plan and invest instead at site B. It costs anyway everywhere about the same. [...] It is done at site B, because the people there could convince headquarters that they are the right site.

Subsidiaries differ in their standing and reputation. These differences can be explained with the subsidiary's size, historical growth, performance, and geographical distance to headquarters. Subsidiaries that contribute a larger portion to company sales tend to have a better standing and share of voice in the organization than those in smaller countries. The same is true for subsidiaries with good historical growth and performance reputation. Geographical distance between headquarters and subsidiaries influences a subsidiary's prominence in headquarters in a way that more remote subsidiaries are not as closely monitored as nearby subsidiaries.

I believe that foreign sites, especially if they were farther away, had much more autonomy in the past than today.

Altogether, the subsidiary's role and standing have changed over time: according to headquarters, subsidiary units have always possessed direct responsibility and self-initiative, but with more autonomy in the past than today. Recently, things are more centrally managed than before, mainly due to efficiency improvement.

(3) Degree and type of subsidiary entrepreneurship

Headquarters rates subsidiary entrepreneurship activity as moderate to high (4-5 out of 6). Some subsidiaries are extremely good at spotting new ways to fuel sales. Nevertheless, most of the product-related initiatives must be approved centrally before subsidiaries are allowed to realize them.

Mainly, two forms of subsidiary entrepreneurship can be observed at CaseCo4: (1) improvement/adjustment initiatives of existing products and their sales approach and (2) improvement/adjustment initiatives of existing processes (especially sales and distribution processes). Headquarters regularly receives proposals regarding product adaptations and/or adjustments to the underlying sales approach. For example, last year, headquarters launched an internal competition, won by Country A, to gather outstanding process improvements. CaseCo4 is currently underway to roll out Country A's adaptations in other countries.

They had optimized the internal processes in that manner so that everything now runs more efficiently. We analyzed what they have done and we currently try to implement the same in other countries, including Europe, as far as possible.

New product development, in contrast, is incumbent upon one of the central development hubs. Nevertheless, ideas might be delivered from subsidiaries and a frequent exchange between headquarters and subsidiaries regarding new product ideas takes place.

(4) Headquarters' attitude towards subsidiary entrepreneurship

CaseCo4 rates entrepreneurial subsidiary activities as relevant for overall company innovation and thinks that subsidiaries in most cases know the local market needs better than headquarters.

[T]here are always certain technical, market specific or even coincidental reasons why local people observe certain things better than a bureaucrat at headquarters.

In addition to subsidiary entrepreneurship, headquarters rates ideas from outside the organization as crucial for company innovation. Therefore, research is organized in decentralized, distributed centers around the globe:

Our company is highly dependent on the exchange with the outside world. Therefore, we want to screen the academic innovations that exist in a certain radius or culture area. This can be more easily done if we do not have to travel around the world and if similar cultural backgrounds exist.

Therefore, these sites have the clear assignment to screen their surroundings and to sign agreements with universities, research departments, and so on, for bringing in new ideas from the outside into the organization.

Therefore, we cannot do everything on our own and it would be naïve to believe that we could. We have to interact with others.

[T]here are always tendencies of inbred thinking. This can be seen institutionally, geographically, and divisionally.

According to headquarters, the possible upsides of entrepreneurial subsidiary behavior outweigh the possible downsides. A perceived upside is the ability to gather different points of view from subsidiaries, which ultimately helps overall company innovation. However, the perceived risk is that a local idea is not consistent with corporate strategy or might even create a life of its own. It may even lead to subsidiaries building their own empires in an extreme case.

[A subsidiary may] adapt to the local circumstances of how business in certain regions is done. We have to pay attention. Especially with regard to corruption, the company does not want to be associated, although it is normal in other cultural areas.

Overall, entrepreneurial subsidiary behavior is favored by headquarters. This attitude has indeed not changed very much over time, but euphoria always slightly increases and decreases a bit from time to time. Certainly, communication modalities have changed quite a lot over time: improved means of communication (email, intranet, etc.) have definitively changed the interaction culture between headquarters and subsidiaries and consequently decreased barriers of idea realization:

The barrier to propose new ideas has definitively decreased. Meanwhile it is possible to write to somebody, somewhere a not perfect email, whereas in the past you had to find a secretary who typed your idea on special stationery and eventually made mistakes, because she did not understand what she was writing about.

Furthermore, headquarters believes that subsidiary entrepreneurship is crucial for CaseCo4's innovation power as well as its competitiveness and ensures a wide-spread innovation footprint:

Especially in our core product area, we invest in sites around the world, because very good science knowledge exists around the world and we want to benefit from this. This for sure also directly impacts our competitiveness. Furthermore, about every seven to eight years companies in our market have to overturn their product portfolio. Therefore, innovation is absolutely crucial for us.

Entrepreneurial subsidiary ideas/activities might even lead to a re-focus of corporate strategy. For example, CaseCo4 offered solely the plain product in the past. A subsidiary came up with the idea to supplement product sales with complementary services which the respective customer base requested. Idea formulation and piloting was done by a subsidiary. This subsidiary is currently responsible for global distribution of its idea.

(5) Governance of subsidiary entrepreneurship and innovation activities

CaseCo4's headquarters supports entrepreneurial subsidiary initiatives mainly with financial resources. However, in most cases headquarters is involved in larger projects with global impact only. Smaller projects are mainly driven by the subsidiary unit, but headquarters wants to stay informed and involves itself from time to time in discussion about initiative progress. Also, local initiatives are funded by subsidiaries. Only if an initiative becomes global at a later stage might extra financial resources be provided by headquarters.

CaseCo4's incentive scheme for entrepreneurial subsidiary behavior mainly consists of a total of ten different innovation awards and prizes. For example, a tendering for innovative new products/processes was held recently which collected ideas from all over the organization. According to headquarters, contests are a good way to collect outstanding ideas and facilitate idea generation:

We got plenty of different ideas with regard to their nature and quality from all countries around the world. This shows that people all over the world think about new ideas, but due to technical and organizational settings do not have the possibility of raising them. Especially in the research area, it is not easy to find the right contact person and transmit your idea. Our company has to improve the communication across the board. This is one reason why the contests are set up and strongly promoted. People are able to submit their ideas either through an easy internet tool or by email and do not have to find the relevant contact person on their own. This is a very successful story so far.

Rewards for the winners of innovation stretch from a few hundred Euros to much higher amounts for very valuable and special innovations. Some contests offer reputational prizes instead of financial ones. According to headquarters, an innovation contest does not aim at distributing money across employees, but rather tries to foster the entrepreneurial attitude within the organization:

The idea is not to just give the people a few thousand Euros; it is instead to create a mechanism to give them recognition and to demonstrate that the company values such [entrepreneurial] behavior. It is not the size of a prize that is relevant, but rather the linked recognition.

Strategic fit of subsidiary initiatives is verified for larger initiatives only. A corporate committee is responsible for approving ideas after they have passed certain scientific and plausibility tests.

Research and development is organized following a hub concept: All research work is concentrated at three different hubs which are located around the world while each hub focuses on a specific topic; all hubs are equally important. The main reason for research concentration is that a critical mass is needed in order to conduct research efficiently.

[...], because we need a certain critical mass to operate a site efficiently. We have realized that in the past. If a site is too small, too much friction loss occurs due to communication, travel, etc.

The innovation process at CaseCo4 is organized according to the well-known stage-gate process: After an idea has emerged, a coherent concept needs to be developed and presented to the responsible board. Each project has to pass certain milestones where a decision is made about whether the project is approved for the next stage or has to be terminated. If an idea does not have a clear focus, concept groups continue to further develop and substantiate the initial proposal. Those groups are usually staffed on an international basis in order to facilitate exchange and to bring in different groups.

(6) Knowledge utilization of subsidiary entrepreneurship results

CaseCo4's regulatory environment demands a well-organized knowledge aggregation tool at headquarters level. Therefore, all data regarding product or process innovations is stored and managed centrally:

In the case of production sites, it is very crucial that information is centrally coordinated, because we have to notify the regulatory authorities of any changes. If a production process of a product in Mexico, which is also sold in Germany, the USA, or Japan, is changed, the new process eventually also needs to be reported to the respective country authorities. In which time-lag and in which form, this is centrally coordinated.

The regulatory environment also demands a well-established data and knowledge management system. Therefore, CaseCo4 has established a knowledge management tool which allows tracking of changes over a very long time horizon. Besides that, a number of less structured, independent departmental knowledge systems exist. They were developed in the 80s and 90s and CaseCo4 sometimes still faces data incompatibility.

In each division more or less synchronized data bases exist, which are library- and archive- like organized, and in which key information relevant to certain projects can be found. Each division has its own. [...] This has developed historically. Sometimes we have are lucky and the data formats are compatible. In other situations, we have less luck and data formats are not compatible.

Knowledge exchange between subsidiaries as well as with headquarters is enabled via regular personal meetings and a sophisticated, carefully thought-out intranet tool. In each division and product area, meetings are held regularly for both upper management and non-management.

Teams from different sites around the world meet and exchange about ongoing topics.

In addition, each functional area as well as location has its own intranet space which is used regularly for knowledge exchange between subsidiaries as well as to provide headquarters with relevant information. It also facilitates idea generation and transmission from subsidiary employees to headquarters:

On the one hand, headquarters should get all the information it is supposed to get and on the other hand, [all subsidiaries] should have the possibility to communicate their wishes and necessities via email to headquarters.

Furthermore, knowledge exchange among subsidiaries is facilitated by blog-like exchange platforms, regular meetings between certain employees, and central databases. Nevertheless, headquarters' impression is that knowledge exchange between subsidiaries

about ongoing initiatives can still be improved. Subsidiaries seem to keep ongoing initiatives and ideas at a local level and do not pro-actively share them with headquarters or other subsidiaries.

5.2.2.2 Within-case analysis

CaseCo4 is organized along two business units. Subsidiaries differ in their task (sales versus production units) and their standing. A subsidiary's role and status are influenced by its size, historical growth path, past performance, and geographical distance from headquarters. The parent-subsidiary relationship is described as "openly steered" and similar to the relationship between "parents and its twelve year old child." Both descriptions imply that subsidiaries indeed have the autonomy to make a decision of simple things on their own, but that the "parent" decides the more important, long-term, and difficult questions and can overrule a subsidiary's decisions if needed. Importance of central subsidiary management has increased over time due to an increased focus on efficiency improvements and cost reductions. Nevertheless, subsidiaries still possess certain autonomy to pursue their ideas and initiatives themselves.

The degree of subsidiary entrepreneurship seems to be moderate at CaseCo4. However, subsidiaries are regularly improving and adjusting their sales approaches on their own. Besides that, improvement/adjustment innovations of local processes regularly occur. New product developments are solely incumbent upon headquarters because CaseCo4's regulatory environment makes it difficult for subsidiaries to pursue product related innovations on their own. Resource improvement initiatives also do not occur.

Altogether, headquarters "favors" entrepreneurial subsidiary behavior and rates such activities as "relevant for company innovation." Furthermore, headquarters highlights the importance of including outsiders (e.g., universities and external research units) in company innovation. The possible upsides of entrepreneurial subsidiary behavior (increased innovation rate) outweigh the possible downsides (dilution of corporate strategy or risk of subsidiary's empire building). Headquarters' attitude has not changed significantly over the last few years, but CaseCo4 admits that the acceptance of such activities has varied in both directions (increases and decreases). It seems that entrepreneurial activities evolve in waves rather than being constant and stable.

Headquarters only supports certain larger entrepreneurial subsidiary initiatives, whereas smaller initiatives must be funded and realized by the subsidiaries themselves. CaseCo4's incentive scheme for subsidiary entrepreneurship mainly consists of a variety of innovation contests that offer financial and reputational prizes. R&D is organized in hubs and the innovation process follows the stage-gate process. Despite several innovation contests, CaseCo4 does not strongly support entrepreneurial subsidiary activities. The necessity for subsidiaries to get each initiative centrally approved imposes another barrier of action which consequently reduces the probability of subsidiary entrepreneurship.

CaseCo4's knowledge utilization is characterized by a governmental-style demanded knowledge management system which enables the organization to track changes of documents as well as to have an overview about all ongoing initiatives. Nevertheless, knowledge exchange between subsidiaries seems to happen by chance in the context of meetings, through intranet, or through blog-like exchange platforms. However, it seems that the knowledge exchange between subsidiaries could be improved, because subsidiaries still tend to keep initiatives local and do not proactively share them with headquarters or other subsidiaries. It seems that currently no incentive scheme for sharing information exists and subsidiaries have a standalone, silo mentality rather than fully belonging to a larger network.

5.2.3 Within-segment analysis

In the following subchapter, similarities and differences between studied companies in the transnational environment are investigated. This analysis forms the foundation for the cross-segment analysis in chapter (6.1).

Company description/company environment

CaseCo3 and CaseCo4 are of similar size in terms of number of employees, and both possess a market leading position. Minor differences can be observed with regard to their organizational structure: CaseCo3 is organized in a matrix form along geographies and products, whereas CaseCo4 has a divisional organization by business units.

The respective market environment of the two companies shows similarities and differences: the markets of both companies are consolidated or currently consolidating and

both can be characterized as highly competitive. In the case of CaseCo3, even duopoly structures at the top-end of the market exist, whereas CaseCo4 is one of the five biggest players in its market. A further difference between the two markets is that barriers of entry are considered as low in CaseCo3's market and high in CaseCo4's market.

	CaseCo3	CaseCo4
Company description	~40,000 employees Matrix organization (geographies/products) Market leading position	~30,000 employees Organized along its two business units (product areas) Market leading position
Market environment	Ongoing market consolidation Highly competitive market environment: <ul style="list-style-type: none"> ○ Duopoly structures at the top-end ○ Increasing competition from niche players at the down-end Barriers of entry tend to be low Buyer power tends to be high	Consolidated market (five biggest players possess ~80% of market sales) Highly competitive market environment Supplier power tends to be moderate Barriers of entry tend to be very high Buyer power currently increasing

Table 10: CaseCo3/4 comparison: company setting and company environment

Source: Author

Role of the subsidiary unit and the parent-subsidiary relationship

The subsidiary's role and the parent-subsidiary relationship differ quite strongly between the two studies' companies. CaseCo3's subsidiaries are strongly empowered, self-standing units, and most of company's innovation is concentrated in the subsidiaries. CaseCo4's subsidiaries, in contrast, are centrally managed, closely linked to headquarters, and most of them only have a sales function. Nevertheless, subsidiaries at CaseCo4 are also understood as contributing units which are more than just the implementers of corporate commands.

CaseCo3's parent-subsidiary relationship is very different to CaseCo4's. Subsidiaries at CaseCo3 "have the right to do whatever they want, as long as they perform" which is the absolute realization of the proclaimed "long-leash" attitude. Subsidiaries at CaseCo4, in contrast, are strongly coordinated by headquarters. Although some subsidiaries at CaseCo4 have established an expert status for certain topics/products and thus possess certain autonomy, overall parental behavior is more about managing and observing subsidiary's actions. The differences can also be observed by comparing the relationship descriptions:

“relationship between a retired parent and a self-standing son” (CaseCo3) versus “subsidiaries are like twelve year old children” (CaseCo4). At CaseCo3, subsidiaries are very much at equal terms with headquarters, whereas subsidiaries at CaseCo4 are still understood as dependent units which need the care and help of headquarters. This is currently intensified by increasing centralization of innovation activities.

Further differences between CaseCo3 and CaseCo4 can be observed by looking at reasons for role, status, and relationship differences between subsidiaries. According to CaseCo3, the reputation of a subsidiary manager has a significant influence on subsidiary’s role and standing. The subsidiary differences at CaseCo4, in contrast, are mainly explained with the subsidiary’s past performance and geographical distance. Therefore, the subsidiary’s role and standing at CaseCo3 might change from time to time, when the respective managing director changes. The subsidiary’s role and standing at CaseCo4, in contrast, seems to be more lasting.

	CaseCo3	CaseCo4
Subsidiary role	Self-standing units Strongly empowered Most of the innovation takes place at the subsidiary level	Centrally managed Closely linked to headquarters Most subsidiaries are sales units, only a few with production or research task “Contributing units”
Parent-subsidiary relationship	Subsidiaries have a considerable degree of freedom(can even sign local partnerships, etc.), as long as they perform “Long-leash” attitude Like a “relationship between a retired parent and a self-standing son” Highly networked organization	“Openly steered” Headquarters aims at strongly coordinating its subsidiaries; some have established themselves as experts “Subsidiaries are like twelve year old children” Subsidiary units had more autonomy in the past; currently increasing centralization
Reasons for role, relationship differences between subsidiaries	Subsidiary’s size Managing director’s reputation (most important factor) Subsidiary’s entrepreneurial image	Subsidiary’s size Historical growth and performance Geographical distance to headquarters

Table 11: CaseCo3/4 comparison: subsidiary role and parent-subsidiary relationship

Source: Author

Degree and Type of subsidiary entrepreneurship

Surprisingly, both companies estimate the degree of subsidiary entrepreneurship as moderate to high. However, it seems that entrepreneurial activities at CaseCo3 are much more far-reaching than entrepreneurial activities at CaseCo4. CaseCo3's subsidiaries are strongly involved in company innovation and sometimes even pursue their ideas with local partnerships, whereas CaseCo4's subsidiaries are continually improving their sales approaches, but only seldom are involved in innovation activities beyond that.

Differences in the degree of entrepreneurial activity between subsidiaries at CaseCo3 are mainly explained with the different size of subsidiaries, whereas CaseCo4's headquarters refers to the entrepreneurial attitude of the subsidiary's managing director. It seems that larger CaseCo3 subsidiaries are "organizations within the organization" and have a relevant share of voice to push their innovative ideas. Besides that, the reputation of a subsidiary's managing director might be another explaining factor for a higher share of voice: managing directors with a better reputation face fewer barriers.

Differences are also obvious with regard to initiative types: CaseCo3's subsidiaries mainly engage in product adaptation innovations and new product innovations, whereas CaseCo4's subsidiaries do usually not engage in product related initiatives, but only in local process improvements and sales strategy innovations. CaseCo3's subsidiaries, in contrast, might raise process related topics but seldom come up with solutions, as process improvements and innovations are thought to be incumbent upon headquarters.

	CaseCo3	CaseCo4
Degree of subsidiary entrepreneurship	Tends to be moderate to high (4-5) Subsidiaries strongly lobby for their innovations and even try to find local partners if not picked up by headquarters	Tends to be moderate to high (4-5) with subsidiaries regularly improving their sales approach
Reasons for degree differences between subsidiaries	Subsidiary's size <ul style="list-style-type: none"> ○ Smaller subs: parent-restricted, mainly focus on execution of existing products/strategies ○ Larger subs: relevant share of voice regarding innovations, pursue their ideas 	Entrepreneurial attitude of subsidiary's managing director
Types of subsidiary entrepreneurship	Local product adaptations regularly occur New product developments regularly occur	Improvement/adjustment of existing products' sales strategy (no product

CaseCo3	CaseCo4
Local process improvements seldom occur (subsidiaries might raise problem, but seldom come up with solutions)	adaptations)
Resource improvement initiatives do not occur	Improvement/adjustment of other existing local processes
	New product development is incumbent upon headquarters, but subsidiaries might deliver ideas
	Resource usage improvement initiatives occur, but seldom

Table 12: CaseCo3/4 comparison: degree and type of subsidiary entrepreneurship

Source: Author

Headquarters' attitude towards subsidiary entrepreneurship

Both studied companies in the transnational environment show a very positive attitude towards subsidiary entrepreneurship, but with obvious differences in the effective degree of freedom for such activities. CaseCo3's headquarters even accepts entrepreneurial subsidiary activities if they head in a wrong direction for a certain period of time. This is also reflected in CaseCo3's statement "let a hundred flowers bloom and not only a single one and see which one will be the brightest in the end". CaseCo4, in contrast, does not allow such a high level of freedom, because it fears that entrepreneurial activities might create a life of its own; subsidiaries tend to build their own empires and become more and more powerful. CaseCo3 indeed also recognizes possible downsides of such activities, but does not fear too powerful subsidiaries. However, CaseCo3 instead fears that too different subsidiary activities might collide.

CaseCo3's attitude is currently changing a bit towards a more centralized approach due to a new CEO and increasing competitive pressure. CaseCo4, in contrast, has not really changed its attitude. However, headquarters' positive mood about such activities seems to vary a bit from time to time.

	CaseCo3	CaseCo4
Headquarters' attitude towards subsidiary entrepreneurship	Entrepreneurial subsidiary activities are a "significant piece of overall company innovation"	Entrepreneurial subsidiary activity is a "relevant part of overall company innovation"
	Upsides by far outweigh downsides, more	Possible upsides (ability to gather diverse

	CaseCo3	CaseCo4
	<p>risky if subs would not innovate at all</p> <p>Headquarters even accepts if the innovative behavior goes in the wrong direction for a certain period of time</p> <p>Perceived risks: erosion of corporate product strategy, destabilization of long-term growth, risky interference with other subsidiary strategies</p> <p>“Let a hundred flowers bloom and not only a single one and see which one will be the brightest”</p>	<p>ideas) outweigh possible downsides (ideas do not fit corporate strategy, create life of its own, subsidiaries may build their own empires)</p> <p>Subsidiary entrepreneurship crucial for innovativeness, competitiveness and ensures a wide-spread innovation footprint</p> <p>Entrepreneurial ideas on par with influence on corporate strategy</p>
Change in attitude	<p>Attitude becomes a bit more centrally oriented due to a new, more directive CEO and increasing external competitive pressure</p>	<p>Attitude has not changed much over time, but headquarters’ attitude continually increases and decreases a bit</p> <p>Modalities have changed: easier exchange between subsidiaries and headquarters decreases barriers of idea transfer and communication</p>

Table 13: CaseCo3/4 comparison: headquarters’ attitude

Source: Author

Governance of subsidiary entrepreneurship and innovation activities

The degree and type of parent support and involvement differs for CaseCo3 and CaseCo4. While CaseCo3 does not support entrepreneurial subsidiary initiatives with extra financial or personnel resources, CaseCo4 supports selectively some larger projects. However, CaseCo3 has recently centralized product innovation decisions to streamline the existing trial and error innovation process with regard to the product portfolio. CaseCo4, in contrast, operates a research hub concept which strives to balance central and decentralized aspects. The two companies have in common that they also try to involve external people in their innovation activities.

CaseCo4 more strongly tailored its incentive scheme towards fostering entrepreneurial subsidiary activities than did CaseCo3. According to CaseCo3, people’s individual career growth possibilities and the existing financial bonus scheme are sufficient to foster entrepreneurial behavior. Furthermore, intrinsic motivation of people and the existing culture of the organization fuel entrepreneurial behavior. CaseCo4, in contrast, has set up a

corporate suggestion scheme and regularly organizes innovation contests. CaseCo3 indeed does not have a very sophisticated incentive scheme but the overall setting and culture of the organization is very entrepreneurial. For example, initiative owners have the possibility to apply for the incubator approach. This means that an idea will be pursued separately from the organization by internal employees and external experts. However, ideas are financially supported by headquarters. The incubator is a bit like a small start-up, and CaseCo3 is the financing venture capital fund.

	CaseCo3	CaseCo4
Parent support/involvement	No extra funding of entrepreneurial initiatives. Subsidiaries have to fund their initiatives out of their existing budgets Centralization of product innovation decisions due to duplication and efficiency problems	Headquarters mainly supports larger projects and not small and local ones Supports with financial and personnel resources
Incentive scheme/idea generation	People's individual career growth Financial incentive scheme	About ten different innovation awards (financial and leisure rewards) Corporate suggestion scheme
Control mechanisms	No control in terms of partnerships etc., but through centralization of product decisions, avoidance of duplications, etc.	Strategic fit in most cases only monitored for larger initiatives by a corporate committee
Innovation (process) organization	Not centrally driven and directed trial and error process Product innovation in 3 different ways: <ul style="list-style-type: none"> ○ Mass selling product improvements ○ Incubator innovation ○ Research innovation 	Research hub concept Organized according to the stage-gate process Concept groups work on idea concretion

Table 14: CaseCo3/4 comparison: entrepreneurship and innovation governance

Source: Author

Knowledge utilization of subsidiary entrepreneurship results

Knowledge utilization is also organized very differently between the two studied companies. Knowledge aggregation and exchange at CaseCo3 is very people-centric and strongly depends on the interaction among employees. Tools like “wikis” or “communities of interests” are also installed to ease communication between employees and subsidiaries. CaseCo4's regulatory environment, in contrast, demands a well-organized and documented

knowledge management database. Therefore, knowledge aggregation and exchange tend to be much more formalized at CaseCo4.

Both companies also differ in their learning attitude. While at CaseCo3, failure is no taboo and part of the trial and error innovation culture, CaseCo4 continuously monitors ongoing initiatives and also documents lessons learned. Therefore, learning at CaseCo4 is formalized, whereas appears to be unstructured at CaseCo3.

	CaseCo3	CaseCo4
Knowledge aggregation on headquarters level	Very people-oriented and people-centric No real mechanism currently exists	Regulatory environment demands well-organized knowledge management system
Knowledge exchange/distribution	Informally in the context of regular meetings Via wikis and communities of interest, which are currently formed to some extent	Blog-like exchange platforms Regular meetings between subsidiaries Intranet and central databases Internationally staffed initiative teams
Learning	Failure is not taboo, but no systematic analysis why the initiative failed and what relevant key learnings are	Continuous monitoring of ongoing initiatives, lessons learned, etc.

Table 15: CaseCo3/4 comparison: utilization of subsidiary entrepreneurship results

Source: Author

5.3 Case study segment: “International environment”

The following case study companies (CaseCo5 and CaseCo6) belong to the segment “international environment.” This categorization was verified via triangulation and discussion with interview partners as well as other sparing partners. Characteristic for those companies is that both differentiating factors “forces for local responsiveness” and “forces for global integration” are relatively weak. However, one or the other criteria behind the overall rating might be closer to another section. Nevertheless, the overall rating for those companies puts them into the “international environment.”

Looking at “forces for local responsiveness” as the first factor, the companies tend to face a high degree of product standardization, a relatively low need to adapt to the distinct local market conditions, and similar marketing and distribution channels across geographies.

The need to adapt the foreign unit to its local country also tends to be relatively weak. With respect to the second category, “forces for global integration”, it can be said that the need to integrate across national boundaries, the possibilities for scale economies, and the level of R&D intensity tends to be low.

In this subchapter, the case of CaseCo5 (5.3.1) as well as the case of CaseCo6 (5.3.2) is described and briefly analyzed. Subsequently, a cross-case analysis of these two case studies is performed (5.3.3).

5.3.1 CaseCo5

The following two subchapters describe CaseCo5. In subchapter 5.3.1.1, a description of the case, based on external data and information gathered in interviews, is given. The internal case analysis in subchapter 5.3.1.2 will then highlight the relevant insights of this case and will set the foundation for the cross-case and cross-segment analyses.

5.3.1.1 *Case description*

(1) Company description/company environment

CaseCo5 is a multinational organization within the “international environment” and employs ~50,000 people in about one hundred countries. The company is set up as a matrix organization which is organized along business units and geographies. CaseCo5 consists of three divisions, with the largest one accounting for 75% of company sales. The second largest division is responsible for ~24%, whereas the smallest one only accounts for ~1% of company sales. CaseCo5’s sales are generated in four geographic regions: region 1 accounts for ~45% of sales, regions 2 and 3 account for ~20% each, and region 4 accounts for ~15%. Therefore, region 1 accounts for nearly half of company sales, whereas the other three are of similar size. CaseCo5 has a market leading position (number one or number two) in most of its key markets, from which 70% of its sales originate.

CaseCo5’s market is highly consolidated. The four major players in the market are responsible for roughly 80% of market supply and all of them pursue an integrated business model. Market demand, in contrast, is very fragmented because the products are used in a large variety of end markets. The market situation is also characterized by long-term contracts between companies and their customers. CaseCo5’s market is mainly a

business-to-business and only partly a business-to-customers market. Barriers of entry are very high as the industry is capital intensive and requires significant experience. The regional density of players tends to be high, because this allows companies to leverage scale effects. Altogether, the market environment can be characterized as very stable.

(2) Role of the subsidiary unit and the parent-subsidiary relationship

CaseCo5's major division is structured as a matrix organization along geographies, (regional business units - RBU), and business areas (BAs)/global business units (GBUs). The regional business units bear full profit and loss responsibility and are strongly empowered. GBUs and BAs, in contrast, are central units which support the regional units. A GBU's major task is to work on business developments, whereas a BA's focus is on business improvements through benchmarking and best practice sharing.

Regional business units differ tremendously by size and comprise between one and ten plus countries. Besides that, RBUs also differ in their complexity: some consist of very homogeneous countries, whereas others consist of very heterogeneous ones. Altogether, CaseCo5's RBUs strongly differ and a common approach does not exist: IT-processes differ, region or country organization charts differ, and sales methods (customer-oriented versus product-oriented) differ. Headquarters explains these differences with CaseCo5's non-organic growth strategy and the existing market differences. CaseCo5 has strongly grown by acquisitions recently and integration of the acquired firms into the organization is not yet fully completed. This also explains the existing process diversity. According to headquarters, the decentralized organization is necessary for an efficient business approach in such an environment. In addition, the business only works efficiently within a certain radius around a production facility. Therefore, regions and countries in the past possessed a high degree of power and autonomy. CaseCo5 is currently underway to increase centralization of its organization.

Therefore, we mainly have a local business which means, what we also experienced in the past, that the regions possess a high level of power and autonomy. We are currently underway to increase standardization.

The role of the parent, from headquarters' perspective, can be described as something between a "strategic architect" and a "conductor." This means that headquarters sets the

strategic direction and gives guidance where needed, but subsidiaries still possess the freedom and autonomy to determine the realization approach. The degree of autonomy is the same for all subsidiaries and no differences between subsidiaries are made by headquarters. Consequently, CaseCo5 is a decentralized organization with a high degree of subsidiary autonomy:

We have a relatively decentrally organized corporation with a high level of subsidiary autonomy and consequently, subsidiaries have the freedom to design and initiate things on their own.

CaseCo5 describes the parent-subsidiary relationship as a “long-leash” relationship between a grown-up child and its parents: the child (subsidiary) only seeks contact to the parent if he needs advice or knowhow from the parent. The parent, in return, allows the subsidiary enough autonomy to come up with and realize ideas on its own.

I would say we are speaking about adult daughters who do not always seek contact with headquarters.

However, the leash tends to be longer and regions can decide autonomously what they want to do.

(3) Degree and type of subsidiary entrepreneurship

According to headquarters, the degree of entrepreneurial subsidiary behavior tends to be low (1-2). Nevertheless, a few subsidiaries are very active and can be rated as moderate to high (4-5). Two clusters of subsidiaries can therefore be identified. From headquarters' point of view, one explanation for the different levels of entrepreneurship is the different cultural background of subsidiaries:

[E]specially, the cultural background of a country plays a significant role. Some countries are highly innovative, whereas others seldom raise innovative ideas. I would assume a high correlation between the general innovative background of a certain country and the innovative success of the respective unit in that country.

Despite a few very entrepreneurial and innovative subsidiaries, innovative subsidiary activities are rather scarce. This can be explained by the commodity character of the product: roughly 80% of customers are just interested in a low price and are not willing to pay extra for innovations or special features.

Different types of entrepreneurial subsidiary activities occur at CaseCo5: (1) new product innovations, (2) product adjustments, and (3) local process improvements. Improvements in the resource usage (e.g., production units competing against each other) cannot be observed at CaseCo5. (1) New product innovations by subsidiaries only occur from time to time, whereas (2) product adjustments are done regularly. Nevertheless, subsidiaries, in most cases, only deliver ideas and do not actively realize them. Headquarters explains this with a lack of relevant capabilities at subsidiary level:

It is very likely that the region itself will not start and say “we will develop something.” If they are very desperate, they eventually would, but overall, they are missing the relevant competencies, the knowhow, and the resources to realize it on their own.

Therefore, innovations center on how to use a product at a specific client site. It is seldom the case that a complete new product was developed by a subsidiary. However, it could occur.

(3) Local process adjustments, in contrast, occur frequently. Country A, for example, developed a new sales system (franchise-system) which is currently implemented across the organization. In addition, central units (BAs) actively facilitate knowledge exchange as well as best practice sharing and continuously improve company processes.

(4) Headquarters’ attitude towards subsidiary entrepreneurship

Headquarters “favors” entrepreneurial subsidiary behavior as entrepreneurial input, but wants to be involved from the beginning of the process.

[I]nitiation of certain ideas and approaches by subsidiaries is something which is favored and desired. This is very often crucial, because raised ideas are often market-driven ideas and the market is represented by the subsidiaries.

Headquarters also thinks that most subsidiaries have a “passive” or receiving mentality with regard to their innovation attitude. Although subsidiaries might approach headquarters with an innovative idea, they almost always would leave development and realization upon headquarters. The matrix organization is understood as a tool to ensure subsidiary involvement, because all central units have subsidiary counterparts.

[I]t is more a receiving mentality. They will more likely approach the corporate innovation management team and say that there is something which should be solved. However, we are speaking about very specific solutions and it probably does not make sense to reserve relevant competencies in each region.

However, headquarters' perspective differs for process and product innovations: process innovations are currently more strongly controlled and unfavored in comparison to product adaptation innovations, because CaseCo5 tries to standardize its processes. Headquarters' opinion is that the risks (maceration of standards, divergence of processes, and sub-optimality for the group) of entrepreneurial subsidiary behavior currently outweigh the chances (cost reduction potential). For product adaptation innovations, in contrast, no central rules apply.

With regard to product innovation it, can be said that from headquarters point of view we currently do not care. We give plenty of rope to the subsidiaries, if they would like to involve in such topics or not. A certain recommendation to do such things exists, but at the end of the day it is incumbent upon each region's autonomy.

With regard to process innovation we are currently more sceptical. This does not mean that we do not value innovation with regard to processes, but it must be aligned with the overall goal of standardization.

Nevertheless, headquarters in general "favors" and "supports" entrepreneurship in their subsidiaries. Headquarters perception is that the managing directors of their subsidiaries are strong entrepreneurs with regard to local processes, sales approaches, and methods. Headquarters even demands from their subsidiary managing directors to behave entrepreneurially in managing and improving their local operation, but not with regard to new product developments.

We want our employees to be innovative, especially with regard to local [sales] processes and somewhat less with regard to product development.

However, headquarters' innovation approach has changed over time: while historically, innovations in the subsidiaries happened by chance, headquarters now coordinates them centrally. Headquarters' new approach aims at first reducing performance differences between subsidiaries and second, realizing cost synergies.

This has changed a bit over time. [Subsidiaries] were much more independent in the past: the parent company was rather a holding and did not care so much about the content. Therefore, headquarters' content leadership was not so intensely performed and things were often developed and piloted without further soliciting headquarters' permission. However, headquarters' content leadership was strongly empowered over the last few years.

The central management of innovations also gathered momentum over the last few years: while in the past, regional expansion had been the key strategic priority, it has now become increasingly important for CaseCo5 to differentiate itself from its competitors via innovations. Besides that, globalization and the increasing similarity of markets makes it necessary for CaseCo5 to differentiate itself via innovations in order to defend its market position.

The commodity trap particularly exists currently for our products due to the strong trend of assimilating markets. Therefore, we are forced to create an appropriate differentiation which preserves our current price premium.

We recognize that competitors do the same. We also believe that this can secure us the right to stay in the market in the long run and might work against a commoditization of our products. Therefore, innovations were always important for us.

Altogether, headquarters experiences in the past with entrepreneurial subsidiary activities are mainly positive. However, CaseCo5 shows some skepticism with regard to process innovations. Parent's opinion is that a creeping divergence of processes continually occurs and needs to be corrected from time to time. Headquarters states that subsidiary entrepreneurship is seen as a valuable input with regard to corporation's innovativeness, but that realization is understood as a combined effort. Subsidiary entrepreneurship also has only a minor impact on corporate strategy.

(5) Governance of subsidiary entrepreneurship and innovation activities

CaseCo5 has an increased interest in gathering innovative ideas throughout the corporation. Therefore, headquarters has established an "Inventors Club" whose members are recruited/appointed with the help of a contest. CaseCo5 annually organizes an innovation contest which covers two areas of interest: technical and business improvements. Every employee is allowed to hand in his/her ideas. The best two to three ideas are then presented to and rewarded by headquarters. One "prize" is the admission

into the Inventors Club. Besides that, the selected innovation will be published throughout the organization via the company's newsletter and magazine. Furthermore, the winner gets a nice weekend with board members.

The inventors club is well-established and works well. It is a good reward system for people who achieve. It also has a high recognition and standing in the organization. Additionally, one of our board members will be involved in the distinction ceremony.

Headquarters supports innovative projects mainly with experienced parent employees, because subsidiaries often do not have the necessary knowledge. Allocation of parent experts and prioritization of projects is done by headquarters. Financial support for smaller innovation projects is not granted by headquarters, thus subsidiaries have to finance them from their existing budgets. In the case of larger investment needs, subsidiaries can apply for financial support.

If the regions do something on their own, they have to finance it themselves.

Furthermore, the content lead for the realization of initiatives stays with headquarters. However, subsidiaries are actively involved through their representatives in the global expert teams and discuss and decide about innovative initiatives. The teams consist of both parent and subsidiary employees. The majority of the members are subsidiary employees to ensure market relevance of initiatives. Team members are chosen based on experience and achievement in the past.

[Regarding global expert teams:] These teams consist of regional experts and application engineers who jointly think about which topics should be further pursued and where future innovation potentials are. Ideally, these teams have a meeting in a bigger forum and one person might note that in his region, a certain request for a certain solution or product has emerged. Eventually, somebody else also raises the same issue or supports the proposal, which then might result in a new innovation project.

The process for product innovations is organized according to the stage-gate process, but is unstructured for process innovations. According to the stage-gate process, idea generation is followed by idea selection, development, and realization. During the development phase, milestones secure a continuous control of the initiative progress. Furthermore, from the beginning of an initiative, an RBU sponsor is selected; it commits itself to the introduction

of the innovation in its marketplace. This should ensure the marketability of an innovation. The involvement of global expert groups in the phase of idea generation and selection also ensures that innovations are driven by both parent and subsidiary employees.

(6) Knowledge utilization of subsidiary entrepreneurship results

Knowledge aggregation and exchange is mainly done via the global expert teams. They meet quarterly and discuss current and future innovation projects. Headquarters' impression is that most of the ongoing innovations are identified and transmitted to headquarters. Corporate employees also visit their subsidiaries regularly to stay informed. Besides that, past projects, patents, experts, etc., are stored in an intranet-based database.

My feeling tells me, that with the current structure and how innovations happen in the regions, very little stays undiscovered.

I believe that a well-working community is a much more efficient process.

Knowledge exchange about current, historic, and future initiatives occurs in the context of those global expert teams.

Furthermore, the matrix organization is understood as a valuable tool to aggregate relevant knowledge and to facilitate its exchange. Knowledge exchange between subsidiaries is conducted via communities as well as informally.

Furthermore, subsidiary units directly speak with each other if someone notices that somebody else is doing something new which he also wants to get to know. This works bilaterally.

Nevertheless, headquarters admits that CaseCo5's mentality is more about sharing success stories than actively sharing problems and key learning's.

5.3.1.2 Within-case analysis

CaseCo5 is organized as a matrix, in which regions are one dimension and bear full profit and loss responsibility. Regions and subsidiaries are strongly empowered and differ tremendously by size and complexity. This might be attributable to the fact that CaseCo5 has grown mainly by acquisitions and that the integration of the acquired units is not yet

fully completed. However, headquarters currently seeks to increase centralization of its operations. Parent's role is considered to be between "the strategic architect" and "the conductor:" headquarters sets the strategic direction, whereas subsidiaries can decide about the realization path and method. Degree and type of autonomy is the same for all subsidiaries. The parent-subsidiary relationship is described as a "long-leash" relationship between a grown-up child and its parents. Therefore, subsidiaries at CaseCo5 tend to be very self-contained and self-confident.

Entrepreneurial subsidiary activities at CaseCo5, in general, tend to be low and scarce, with the exception of a few subsidiaries being highly active. These few subsidiaries tend to be entrepreneurially active due to their country's innovation culture background. Not all types of entrepreneurial initiatives are equally likely at CaseCo5: local process improvement innovations and local product adjustments occur regularly, new product innovations rarely, and resource usage initiatives not at all. The overall low level of subsidiary entrepreneurship might be explained with the commodity good character of the product.

Headquarters indeed "favors" entrepreneurial subsidiary behavior, but with the limitation that it wants to be involved from the beginning of the process. Headquarters also allows entrepreneurial activities to have only a minor impact on corporate strategy. Furthermore, headquarters perception differs for process and product related initiatives: product related initiatives are currently not subject to any special conditions, whereas process related initiatives are currently more centrally managed and supervised. Central management of innovations also gained momentum due to increasing competition, globalization, and similarity of markets. The centralization of process innovations came in focus due to the creeping divergence of processes at CaseCo5. It seems that headquarters thwarts its "favor" attitude with its centralization actions and consequently decreases possibilities for subsidiary entrepreneurship.

For motivating entrepreneurial subsidiary behavior, headquarters has established an "Inventors Club" whose members are appointed by an innovation contest which takes place annually. Besides the reputational reward of being accepted into the club, winners are also recognized throughout the organization and get recreational rewards. Entrepreneurial initiatives are mainly supported by experienced parent employees and

rather than by financial contributions. However, the content lead in an initiative remains at headquarters. Global expert teams and subsidiary sponsors, in contrast, ensure adequate subsidiary involvement in innovation projects as well as facilitate knowledge aggregation and exchange. Furthermore, the matrix organization and regular meetings enable knowledge exchange. It seems that headquarters holds the reins of innovation activities and tries to involve subsidiaries where needed, but seldom gives them the freedom to pursue innovative projects on their own. Knowledge aggregation is also driven by headquarters and CaseCo5's mentality is more about sharing success stories than problems. Therefore, subsidiaries might face direct and indirect barriers and resistance for their entrepreneurial activities.

5.3.2 CaseCo6

In the following two subchapters CaseCo6 is detailed. In subchapter 5.3.2.1 a description of the case, based on external data and information gathered in interviews, is given. Afterwards, the within-case analysis in subchapter 5.3.2.2 highlights the relevant insights of this case and sets the foundation for the cross-case and cross-segment analyses.

5.3.2.1 *Case description*

(1) Company description/company environment

CaseCo6 is a multinational corporation within the international environment and employs about 60,000 people at 2,600 sites in ~50 countries. The company is organized geographically and along its three product divisions. The largest region accounts for ~50% of sales, whereas the smaller two regions are responsible for ~30% and ~20%, respectively. Two out of the three product divisions are of the same size and together account for ~90% of company sales, whereas the smallest division generates the remaining 10%. The company has grown over the last years by entering new markets and becoming an integrated player in its existing ones.

CaseCo6's main market has consolidated over the last years, but is still relatively fragmented, with the four biggest players responsible for less than 20% of overall sales. This fragmentation can be explained by the high locality of business due to a relatively low weight-value ratio. This means that delivery beyond a certain radius (~250km) tends to be

inefficient for the company. CaseCo6 is one of the four biggest players and has a market leading position in most of its markets. Energy costs are the primary cost block and account for ~10% of sales.

(2) Role of the subsidiary unit and the parent-subsidiary relationship

CaseCo6 is set up as a matrix organization. Subsidiaries are independent units and have full operational and financial accountability. One exception is R&D for fundamental innovations, which is exclusively located at headquarters.

The parent-subsidiary relationship, from headquarters' perspective, is characterized as "cooperative:" subsidiary units get business targets from the parent company, but can decide on their own about how to realize them. Nevertheless, a continuous discourse about possible solutions between the parent company and its subsidiaries takes place. Allocation of resources and market strategy, in contrast, are managed centrally. As a result, subsidiaries possess a high degree of freedom with some limitations.

CaseCo6 has grown organically and non-organically: it consists of the original unit and three larger units which were acquired and then integrated into CaseCo6. Each of these acquired companies had its own market and product development activities, and in parts still has.

The acquired companies of course had [...] their own market activities and product development and still have in parts.

Subsidiary units differ in their role and their relationship with headquarters. Explaining factors, from headquarters' perspective, are the subsidiary's size, the geographical distance between parent and subsidiary, unit's history, subsidiary's maturity, and the development stage of subsidiary's market. Subsidiaries with several production sites and a high share of sales tend to have a higher standing in the organization than smaller ones. Furthermore, the history of a subsidiary is important for the self-conception of a unit and directly impacts its role and standing:

The previous lead companies of the acquired corporations especially have a very different self-conception and struggle with their new role as a subsidiary unit than acquired units that have been subsidiary units before.

(3) Degree and type of subsidiary entrepreneurship

According to headquarters, the overall degree of entrepreneurial activity tends to be high at CaseCo6, but the radical nature of entrepreneurial activities differs from subsidiary to subsidiary:

[They are] all rather strong, but the occurrence varies with respect to the local circumstances. Things which are innovative in one country are already known and obsolete in another country.

The subsidiary's involvement in company innovation also differs for fundamental and adaptive innovations. Fundamental innovations, in that context, are understood as true innovations for the overall organization, whereas adaptive innovations are defined as local market product/process adjustments. Fundamental innovations are mainly driven by headquarters. The idea, however, can be initiated by a subsidiary unit. Adaptive innovations are usually led and actively pushed forward subsidiary units. These innovations are mostly realized by knowledge transfer from one market to the other. However, differences between subsidiaries can be observed: some subsidiaries are only innovation implementers, while others are innovation leaders who actively drive company innovation. The role mainly depends on the development stage and relevance of the respective subsidiary market. Nevertheless, all essential subsidiaries have a share in company innovation.

In some countries we only speak about knowhow transfer, while in the innovative markets, there is a yearly meeting about subsidiary's expectations with regard to their market and possible innovations in that market.

The majority of entrepreneurial subsidiary initiatives are production process improvements or adaptations of local processes. Initiatives are either triggered by the parent or the subsidiary. One example for a subsidiary-driven initiative is the ongoing change of the production process in country A: the whole production strategy in that country was built upon a specific input factor that became scarce and extremely expensive over the last year. Therefore, country A now tries to transform its production process and wants to use another input factor in the future. The relevant knowledge exists at headquarters and country A is supported in that matter by the parent. Nevertheless, adaption of the knowledge to the subsidiary's local situation must be made by the subsidiary itself.

The technology itself was developed at headquarters and can be considered as the fundamental technology. In contrast to that, subsidiaries have to do the local adaptation to their local resource setting, existing production process, and market situation.

Fundamental product and process innovations, in contrast, are developed centrally and afterwards transferred to the subsidiaries. The parent views itself in that matter as a knowledge exchange facilitator.

In the case of fundamental technology, it is more about developing the core competencies at headquarters level and dissemination of knowledge via knowhow transfer to the subsidiaries.

(4) Headquarters' attitude towards subsidiary entrepreneurship

According to headquarters, possible upsides of entrepreneurial behavior outweigh possible downsides. A perceived upside is the ability to gather creative and innovative ideas from subsidiaries and exploit them for the whole corporation. A named downside is that innovative ideas collide with overall company strategy. For example, due to a better resource setting, subsidiary A might be able to produce within a lower limit of exhaustion than subsidiary B. If A agrees with the government on a too low exhaustion level, B might get into governmental problems. Therefore, headquarters has to ensure that the innovativeness of one subsidiary does not lead to a disadvantage for others.

Risks might occur, if subsidiaries pursue ideas which are not aligned with company's overall strategy. [...] We have to ensure that a subsidiary's unbounded innovation does not result in egotisms which eventually might harm other subsidiaries.

Headquarters' attitude towards subsidiary entrepreneurship is described as between "favors" and "accepts." CaseCo6 does not incentivize entrepreneurial behavior financially. Nevertheless, it desires that subsidiary units establish themselves as well as possible in their marketplace, where entrepreneurial subsidiary activities might be necessary. However, serious innovations are centrally located and subsidiary units are not supposed to position themselves as innovators.

Subsidiaries should not present themselves as the big inventor in the organization because innovation is supposed to be centrally located.

Altogether, headquarters' experiences with entrepreneurial subsidiary behavior are positive. However, headquarters makes its decision about an idea based on a cost-benefit analysis, because it made the experience that some units always tend to favor new technologies over old ones and want to have state-of-the-art facilities, which are sometimes of little use for the overall corporation.

In order to reduce redundancies and to optimize resource usage, centralization of innovation has increased over the last years. The future scenario is that headquarters acts as a knowledge hub which collects ideas throughout the organization and distributes to all business units for exploitation.

[W]e must be able to collect the outstanding creativity and diversity. Then we have to verify which ideas might be transferred and which we can further develop and globally leverage.

(5) Governance of subsidiary entrepreneurship and innovation activities

Relevant parent and subsidiary employees meet once a year to decide about upcoming innovation projects and headquarters involvement in these initiatives. The degree of headquarters involvement differs in four ways. (1) For a local initiative which the subsidiary is able to do it on its own, the parent company stays out of the initiative. (2) If the parent company has experiences in the initiative matter; headquarters will support the subsidiary with its knowledge. (3) If the relevant experiences were already made by another subsidiary, the parent will facilitate the knowledge exchange between the units. (4) If the initiative is completely new for the organization and has a global impact, the project is either transferred to the parent or realized together with the subsidiary. Besides this yearly meeting, subsidiary's representatives can always approach key people in the parent company with their ideas.

CaseCo6 does not use financial incentives to generate innovative ideas but rather uses the existing knowledge management system for this purpose. Expert groups were set up for various topics with the task to collect best practices for a certain topic throughout the organization and to further define them. Results are either distributed via Intranet or CaseCo6's so-called "yellow pages."

We strongly try to manage the innovation activities with the help of our knowledge management system. We have established for several topics so-called “expert groups” which should collect and define best practices throughout the organization..

Furthermore, a meeting of all operationally responsible subsidiary employees takes place twice a year, at which future scenarios and possible innovative ideas are discussed. In addition, a committee prioritizes ideas and commits funding.

Besides that, contests on process and product topics are organized on a non-regular basis. The contest is set up as a multi-stage process. First, ideas are collected and evaluated by a central committee. Second, the top eight to twelve ideas are further detailed by their initiative owners. If different people raised the same idea, small initiative teams for further detailing are set up by headquarters. Headquarters will try to connect the relevant people with each other. Third, a small business plan for the idea is developed and works as the basis for the final evaluation. Until today, winners only got reputational prizes and no financial ones. For example, the three to four winners were always eligible to present their ideas in front of the board.

Until now no financial incentives were given to the winners because it rather is a reputational reward. The best three or four ideas are presented to the executive board that stages the contest. Symbolic prizes are indeed given, but thousands of Euros are not involved.

Headquarters also stays informed about all ongoing projects and innovative ideas through its personal network:

[G]enerally speaking it works. However, we have regular discussion forums with many relevant people with whom headquarters keeps a close contact. Therefore, it is especially a question of the personal network.

Funding of entrepreneurial initiatives is done by either the subsidiary or the parent. Smaller projects are funded directly out of the subsidiary's budget, whereas bigger projects have to apply at headquarters for funding. The application process is competitive and the same as for any other capex project. Besides financial contributions, support with personnel resources might be provided. For example, if a new process is established at a subsidiary site or a new production facility is set up, corporate engineers and experts will offer

support locally. In some cases, a startup team consisting of subsidiary people and corporate engineers is set up for a certain period of time. Alignment with corporate strategy is, in headquarters' perspective, ensured by investment and operational planning.

The innovation process is organized according to the stage-gate process: the idea enters the development phase after successfully passing the pilot study phase and afterwards ends in the final realization phase. The idea has to pass certain milestones ("gates") throughout its realization process. At each milestone, gatekeepers have to release the innovation into the next phase. The innovation might be re-transferred to the subsidiary after completion, which is then responsible for its realization. An exchange between the central innovation process and subsidiary activities takes place via yearly meetings between headquarters and relevant subsidiary employees.

(6) Knowledge utilization of subsidiary entrepreneurship results

Knowledge aggregation and exchange is done via three ways: (1) a knowledge management system, (2) regular meetings, and (3) expert groups. CaseCo6 tries to document both success and failure stories, in its knowledge management system by summarizing best practices and lessons learned for every initiative. Most of the data can be accessed by all employees. The database makes it easy for employees to find relevant background information or contact persons with relevant experiences. However, some critical data (e.g., competitor's data) is only accessible to authorized people.

The second way of knowledge exchange is via regular meetings between subsidiary and parent managers. Knowledge exchange about completed and ongoing innovative projects is one of the meeting topics. These meetings also help to establish a close network between relevant employees and reduce barriers of communication. Altogether, headquarters aims to enable and increase horizontal exchange between subsidiaries via these meetings.

The plant manager meetings are held once a year. The meetings with technical executives occur every three months. Besides that, regular meetings are held within each country unit. In the context of these meetings, ongoing and planned initiatives are discussed.

Knowledge aggregation is mainly done with the help of the aforementioned expert groups (communities of practice). In the literature, these communities are defined as a voluntary

association of people with a common interest. CaseCo6 has defined them a bit differently, because it actively launched groups for specific topics. Therefore, headquarters not only provides the platform for such a development, but also picks experts for these groups and connects them systematically. Headquarters also defines a minimum number of users for each group. Beyond that, employees can join any group they are interested in. Roughly 25 to 30 communities of practice exist at the moment. Each community relates to one of the four main topic areas: (1) management of production facility, (2) products, (3) market, and (4) environment and sustainability. For each of the four, a committee exists to define relevant topics and decide about creating new communities and closing redundant ones. Overall, the knowledge management system and the communities of interest are well accepted and used throughout the organization. Nevertheless, the whole system is under continual change.

The knowledge management is like a living organism. We are currently in the third reorganization phase. We started the knowledge management system in 2000 and since then have regularly adjusted the model to adapt to changed corporate structures, etc. The system is well accepted and used. For example, the intranet platform has between 1,500 and 2,000 different users each month.

Knowledge distribution is done with the help of the so-called “yellow pages.” Each community receives its customized yellow pages which contain relevant initiative reports or problems. Therefore, all relevant persons can be reached at once via this tool. CaseCo6 has tried a chat forum for each community in the past, but it was not well accepted. One explanation is that it did not fit with company’s culture. Altogether, headquarters’ impression is that the current system is sufficient for knowledge aggregation and distribution.

5.3.2.2 *Within-case analysis*

CaseCo6 is a matrix organization in which subsidiaries have full operational and financial accountability. However, some limitations with regard to R&D, resource allocation, and market strategy exist. The parent-subsidiary relationship is described as “cooperative:” the parent company sets the targets, but subsidiaries are obliged to draft a realization path which is then discussed with headquarters; there seems to be a multi-stage feedback process. CaseCo6 has grown organically and non-organically. Some acquired subsidiaries tend to have a special standing that is driven by their different self-conception. Further factors for differences between subsidiaries tend to be their size, their geographical

distance from headquarters, their maturity, and the development stage of their market. Especially due to the way of their establishment (organic versus non-organically), different involvements in subsidiary entrepreneurship can be expected.

The degree of subsidiary entrepreneurship tends to be high for certain initiative types. However, the radical nature of initiatives differs: some innovations will only affect the local unit, not the overall organization. Subsidiary-driven innovations tend to be high for local product and process adjustments to local circumstances, whereas tend to be low for the creation of fundamentally new products and processes. Resource improvement innovations do not occur due to the local nature of the business. Subsidiaries differ in their entrepreneurial activity: while a few are innovation leaders, most subsidiaries are innovation followers. One possible explanation, besides the development stage of the respective country, might be the historical establishment of a subsidiary: units which were previously self-standing companies tend to act more autonomously and entrepreneurially than organically developed ones.

Headquarters attitude is described as between “favors” and “accepts,” but seems to be closer to “accepts” for the following reasons: CaseCo6 does not incentivize entrepreneurial behavior financially, innovation management is currently further centralized, headquarters is established as a knowledge hub, and headquarters ensures that single subsidiary activities do not collide with overall strategy. Nevertheless, according to headquarters, the possible upsides of entrepreneurial subsidiary behavior outweigh the possible downsides. It seems that headquarters does not feel very comfortable with subsidiaries that behave too entrepreneurially and tries to organize and manage the ongoing subsidiary entrepreneurship accordingly.

Headquarters’ involvement in entrepreneurial subsidiary activities ranges from no involvement at all, supporting knowledge and facilitating knowledge transfer, up to taking over an initiative. Initiatives are funded by either subsidiaries (smaller projects) or by the parent (larger projects). CaseCo6 does not use any form of financial incentives for fostering entrepreneurial subsidiary behavior. Expert groups and innovation contests (only reputational prizes) on a non-regular basis are considered as sufficient ways to generate and collect innovative ideas. Knowledge is aggregated and exchanged via the knowledge management system, regular meetings, and expert groups. Expert groups are set up to

aggregate all relevant knowledge to a certain topic in one place and ease knowledge distribution. Each community regularly receives “yellow pages” which inform about ongoing initiatives and problems. It seems that CaseCo6 has established a well-working knowledge and learning system which helps to facilitate knowledge exchange across subsidiaries and can be used to integrate entrepreneurial initiatives into the corporation.

5.3.3 Within-segment analysis

In the following subchapter, similarities and differences between studied companies in the “international environment” are investigated.

Company description/company environment

The companies studied within the “international environment” have many similarities: both are about the same size in terms of employees, both have set up their organization in a matrix form along regions and business/product divisions, and both possess a market leading position in most of their markets. The main difference between the two is their growth strategy: while CaseCo5 has mainly grown by acquisitions, CaseCo6 has mainly grown organically, supplemented by three or four strategic acquisitions.

The market environments of the two case studies show similarities and differences. Both markets are in most parts business to business markets and characterized as highly local with a low weight-value ratio. Differences are that CaseCo5’s market is highly consolidated, whereas CaseCo6’s market, despite ongoing consolidation, is highly fragmented. Furthermore, CaseCo5 faces a constant market demand which is characterized by long-term contracts, whereas CaseCo6 faces a more volatile demand.

	CaseCo5	CaseCo6
Company description	~50,000 employees	~ 60,000 employees
	Matrix (regions/business units)	Matrix (regions/product divisions)
	Mainly grown by acquisitions	Grown organically complemented by a few strategic acquisitions
	Market leading position in most of its markets	Market leading position in most of its markets

	CaseCo5	CaseCo6
Market environment	<p>Highly consolidated market (four biggest player account for 80% of market sales)</p> <p>Fragmented market demand characterized by long-term contracts</p> <p>Continuous market demand with long-term contracts</p> <p>In most parts: business-to-business market</p> <p>High barriers of entry</p> <p>Local business</p>	<p>Consolidation started, but still fragmented (four biggest players account for ~20% of market sales)</p> <p>Volatile market demand</p> <p>In most parts: business-to-business market</p> <p>Local business</p>

Table 16: CaseCo5/6 comparison: company setting and company environment

Source: Author

Role of the subsidiary unit and the parent-subsidiary relationship

Subsidiaries in both companies are highly empowered and bear full profit and loss responsibility. Nevertheless, both companies state directly or indirectly that the parent is the “strategic architect” who forms and shapes the future of the organization. CaseCo6 is even a bit stricter: R&D for fundamental innovations at CaseCo6 is exclusively located at headquarters, whereas exceptions exist for CaseCo5. While all subsidiaries at CaseCo5 have the same role and no strong differences can be observed, CaseCo6’s subsidiaries differ in their role. CaseCo6 has grown organically, complemented by a few acquisitions, where some units still have a different self-conception and role in the organization than others. Especially former headquarters units have problems finding their new role as a subsidiary.

Also, similarities and differences in respect to the parent-subsidiary relationship can be observed. CaseCo5 describes it as a “long-leash” relationship as well as “a relationship between a grown-up child and its parents,” whereas CaseCo6 uses the term “cooperative relationship.” Both companies indeed describe the relationships as informal with a vivid exchange between parent and subsidiary units, but it seems that CaseCo6’s parent-subsidiary relationship is a bit more controlled and parent-driven than CaseCo5’s one. CaseCo5 gives their subsidiaries a longer leash to realize their own ideas, whereas CaseCo6’s subs are only eligible to develop ideas via a cooperative discourse with headquarters. Therefore, the parent unit at CaseCo6 seems to be more strongly involved in subsidiary activities than CaseCo5’s headquarters.

	CaseCo5	CaseCo6
Subsidiary role	Full profit and loss responsibility High degree of autonomy and empowerment Role of the parent between “strategic architect” and “conductor”	Full operational and financial accountability Most R&D for fundamental innovations exclusively located at headquarters Organically grown versus acquired subsidiaries: acquired ones still have own market and product development activities
Parent-subsidiary relationship	“Long-leash” relationship Like the relationship between “a grown-up child and its parents” Headquarters sets business targets; subsidiaries can nearly decide on their own about their realization	“cooperative” relationship Headquarters sets business targets; subsidiaries can draft their realization path, but have to discuss possible solutions with headquarters
Reasons for role, relationship differences between subsidiaries	No significant role differences between subsidiaries	Subsidiary’s size Geographical distance Unit’s way of establishment (organic vs. acquisition) Subsidiary’s date of establishment Development stage of subsidiary market

Table 17: CaseCo5/6 comparison: subsidiary role and parent-subsidiary relationship

Source: Author

Degree and Type of subsidiary entrepreneurship

The degree of subsidiary entrepreneurship tends to be similar for the two studied companies, although it is differently rated. Subsidiary entrepreneurship at CaseCo5 tends to be low with only a few subsidiaries being very active entrepreneurially. The degree at CaseCo6 is rated as moderate, but also with only a few subsidiaries being the innovation leaders, while most subsidiaries are only innovation followers. Therefore, in both companies, only a few subsidiaries seem to drive entrepreneurial activities, while most of the subsidiaries are rather inactive followers. The reasons behind that differ for the two companies. For CaseCo5, the innovation culture of the country in which the subsidiary operates is crucial for the degree of subsidiary entrepreneurship, whereas for CaseCo6, the development stage and future relevance of the subsidiary’s market are main factors for explaining the differences in subsidiary entrepreneurship. It seems that for CaseCo5 extrinsic and soft factors such as a country’s innovation culture motivate subsidiaries to be entrepreneurially active, whereas for CaseCo6, the factors are reputational ones which are therefore more intrinsic. It also seems that CaseCo6’s headquarters demands

entrepreneurial behavior from these few subsidiaries, whereas the specific subsidiaries at CaseCo5 demand to be allowed to behave entrepreneurially. Therefore, subsidiary entrepreneurship tends to be subsidiary-driven for CaseCo5 and headquarters-driven for CaseCo6.

The existing types of subsidiary entrepreneurship are the same for CaseCo5 and CaseCo6: new product developments occur mainly at headquarters, local product and process improvement and adjustment innovations, in contrast, occur regularly, whereas resource usage improvement initiatives do not occur at all.

	CaseCo5	CaseCo6
Degree of subsidiary entrepreneurship	Tends to be low (1-2), but a few subsidiaries tend to be very active (4-5) Low level due to commodity character of product	Tends to be moderate (2-3), but radical nature of entrepreneurial activities differs Only a few subsidiaries are innovation leaders, while most are innovation followers
Reasons for degree differences between subsidiaries	Different innovation culture in country where subsidiary is operating	Development stage and future relevance of the underlying subsidiary market
Types of subsidiary entrepreneurship	Rare new product innovations Regular product adjustment innovations Regular local process improvements No resource usage improvements	New product innovations are mainly centrally developed, but ideas might be risen by subsidiary Regular local product adjustment innovations Regular local process improvements (majority: production process improvements) No resource usage improvements

Table 18: CaseCo5/6 comparison: degree and type of subsidiary entrepreneurship

Source: Author

Headquarters' attitude towards subsidiary entrepreneurship

Headquarters' attitude tends to be similar for CaseCo5 and CaseCo6. CaseCo5 "favors" entrepreneurial input from subsidiaries, but wants to be involved from the beginning of an initiative. Therefore, headquarters does not feel very comfortable if subsidiaries work on their own on entrepreneurial ideas and initiatives. CaseCo6 behaves similarly: headquarters has indeed realized that subsidiary entrepreneurship bears some potential for the overall

organization, but its opinion is still that innovation is supposed to be centrally located and subsidiaries are not allowed to act as innovators. CaseCo5 also currently tries to reduce entrepreneurial actions that focus on process improvements and therefore further reduces entrepreneurial subsidiary activities.

Both companies are currently underway to centralize innovation management. While CaseCo5's motivation is to reduce process divergence, CaseCo6's main motivation is the establishment of a knowledge organization at which headquarters acts as the knowledge hub.

	CaseCo5	CaseCo6
Headquarters' attitude towards subsidiary entrepreneurship	<p>"Favors" entrepreneurial input, but headquarters seeks to be involved from the beginning on</p> <p>Attitude differs for product versus process innovations:</p> <ul style="list-style-type: none"> Process innovations: "unfavored," more controlled due to ongoing centralization Product innovations: no rules apply <p>Experiences in the past mainly positive</p>	<p>Attitude is between "accepts" and "favors"</p> <p>Possible upsides outweigh downsides</p> <ul style="list-style-type: none"> Upsides: ability to gather creative and innovative ideas from subsidiaries and leverage them for the organization Downsides: ideas might collide with overall company strategy <p>Serious innovations should remain centrally located and subsidiary units are not supposed to act as innovators</p>
Change in attitude	<p>Central management of innovations gained momentum over recent years due to increased market competition (defend price premium via innovations)</p>	<p>Centralization of innovation has increased over the last years</p> <p>Future scenario: headquarters agitates as a knowledge hub that collects ideas throughout the organization and exploits them for all units</p>

Table 19: CaseCo5/6 comparison: headquarters' attitude

Source: Author

Governance of subsidiary entrepreneurship and innovation activities

Both studied case companies only support larger projects financially, whereas subsidiaries have to finance and realize smaller local projects on their own. The form of knowledge and expert support slightly differs between CaseCo5 and CaseCo6: CaseCo5 only supports with parent experts. Experts are allocated and assignments are prioritized by headquarters. CaseCo6's involvement is more differentiated. It ranges from being uninvolved for those local initiatives that can be done by the subsidiary itself, helping with experts and

facilitating knowledge exchange between subsidiaries, to transferring an initiative to headquarters. It seems that CaseCo6's headquarters more strongly serves as a knowledge hub to connect knowledge-seeking to knowledge-possessing units and therefore optimizes the organization's knowledge management.

For idea generation and aggregation, both companies use innovation contests that mainly offer reputational prizes. CaseCo5's contest winners are additionally admitted into the company's "Inventors Club," which is a worldwide platform of employees striving for innovation. Neither company uses financial incentives to foster entrepreneurial behavior.

The innovations at CaseCo5 are reviewed by a global expert team consisting of parent and subsidiary employees. The involvement of both sides should ensure strategic fit with the overall company strategy (parent employees) and marketability of the initiative (subsidiary employee). CaseCo6, in contrast, concentrates all governance activities at headquarters level.

	CaseCo5	CaseCo6
Parent support/involvement	<p>Headquarters mainly supports with experienced parent employees (expert allocation and prioritization done by HQ)</p> <p>Application for financial support only for larger projects possible, smaller projects must be financed by the subsidiary itself</p>	<p>Headquarters involvement differs:</p> <ul style="list-style-type: none"> Local initiative, subsidiary can do it alone: no headquarters support Local initiative, headquarters with relevant experiences: headquarters supports with knowledge, experts Local initiative, same done by another subsidiary: headquarters facilitates knowledge exchange between subsidiaries Global initiative: either transferred to parent or realized in collaboration between headquarters and subsidiary <p>Smaller projects are directly funded by subsidiary, whereas larger projects have to apply for funding like any other project</p>
Incentive scheme/idea generation	<p>Yearly innovation contest and admittance of winners to the "Inventors Club," publicity throughout the organization, and further rewards (dinner, etc.)</p>	<p>No financial incentive scheme, but rather use of the existing knowledge management</p> <p>Contests (only reputational prizes) on process and product topics are organized on a non-regular basis</p>

	CaseCo5	CaseCo6
Control mechanisms	Global expert teams consisting of subsidiary and parent employees decide about innovative initiatives and should ensure: <ul style="list-style-type: none"> ○ Strategic fit of an initiative ○ Equal participation of headquarters and subsidiary units ○ Marketability (RBU sponsor) 	Investment and operational planning
Innovation (process) organization	Product innovations organized according to the stage-gate process Unstructured for process innovations	Product innovations organized according to the stage-gate process Exchange between central innovation and innovative subsidiary activities is realized via yearly meetings between headquarters and subsidiaries

Table 20: CaseCo5/6 comparison: entrepreneurship and innovation governance

Source: Author

Knowledge utilization of subsidiary entrepreneurship results

Knowledge is aggregated in both companies via a knowledge database, regular meetings between parent and subsidiary employees, and special expert teams. It seems that CaseCo6's database and communities of practice are slightly more sophisticated as they not only store information, but also extract lessons learned and facilitate companywide knowledge exchange via the so-called yellow pages. This difference can also be seen in the underlying attitude: CaseCo5's mentality is more about sharing success stories, whereas CaseCo6 focuses on lessons learned.

	CaseCo5	CaseCo6
Knowledge aggregation on headquarters level	In four ways: <ul style="list-style-type: none"> ○ Intranet-based database stores past projects, patents, experts, etc. ○ Corporate employees regularly visit subsidiaries to stay informed ○ Global expert teams aggregate all relevant knowledge to certain topics ○ Matrix organization supports knowledge aggregation 	In three ways: <ul style="list-style-type: none"> ○ Knowledge management system which stores success and failure stories, lessons learned, best practices ○ Regular meetings of subsidiary and headquarters managers ○ Expert groups (communities of practice): headquarters launched certain groups

	CaseCo5	CaseCo6
Knowledge exchange/distribution	Global expert teams facilitate knowledge exchange to certain topics Informal contacts between employees Matrix organization ensures knowledge exchange	“Yellow-pages” of communities of practice Chat forum for communities was not well accepted
“learning”	Corporation’s mentality is more about sharing success stories than problems	Lessons-learned of each project stored in knowledge database

Table 21: CaseCo5/6 comparison: utilization of subsidiary entrepreneurship results

Source: Author

5.4 Case study segment: “Global environment”

The following case study companies (CaseCo7 and CaseCo8) belong to the category “global environment.” This categorization was verified via triangulation and discussion with interview partners as well as other sparing partners. Characteristic for those companies is that the factor “forces for local responsiveness” tends to be low, whereas the factor “forces for global integration” tends to be high. However, one or the other criteria behind the overall rating might be closer to another section. Nevertheless, the overall rating for those companies puts them into the “global environment.”

Looking at “forces for local responsiveness as the first factor, the companies tend to face a high degree of product standardization, a relatively low need to adapt to the distinct local market conditions, and similar marketing and distribution channels across geographies. The need to adapt the foreign unit to its local country tends to be low. With respect to the second category, “forces for global integration”, it can be said that the need to integrate across national boundaries, possibilities for scale economies, and the level of R&D intensity are relatively high.

In this subchapter, the case of CaseCo7 (5.4.1) and case of CaseCo8 (5.4.2) are described and briefly analyzed. Subsequently, a cross-case analysis of these two case studies is performed (5.4.3).

5.4.1 CaseCo7

In the following two subchapters, CaseCo7 is sketched. In subchapter 5.4.1.1, a description of the case, based on external data and data gathered in interviews, is given. Afterwards, the within-case analysis in subchapter 5.4.1.2 highlights the relevant insights of this case and sets the foundation for the cross-case and cross-segment analysis.

5.4.1.1 Case description

(1) Company description/company environment

CaseCo7 is part of a big conglomerate and evolved out of numerous small companies via acquisitions³⁷. In the meantime, about two hundred former standalone companies were integrated into CaseCo7. CaseCo7 employs about 6,000 employees, whereas the conglomerate employs in total ~400,000 people. The company has major production sites in six countries and is active (including sales sites/offices) in ~170 locations worldwide. It is organized along four divisions which are responsible for ~200,000 installations in total on several continents and offer a product portfolio of about 900 products.

The market is a business-to-business as well as a business-to-customer market in which CaseCo7 possesses a market-leading position. Specific for the market is the very fragmented customer base of which CaseCo7 serves about 90% of the Fortune 500 companies as well as various governmental agencies. Over the years, CaseCo7 has strongly improved its market presence across different geographies and industry sectors and enhanced its market position. Furthermore, CaseCo7's market has high barriers of entry due to its very capital-intensive character.

(2) Role of the subsidiary unit and the parent-subsidiary relationship

All four divisions at CaseCo7 bear full profit and loss responsibility. Therefore, headquarters sets business targets and master conditions, whereas subsidiaries decide on their own about realization.

Subsidiary units need a certain degree of autonomy to decide things on their own because subsidiaries have the duty to independently realize headquarters' input. Furthermore, in a good instructional relationship, rights and responsibilities are well balanced. Corporate might say, "We do not build turnkey facilities, but rather sell products and systems. We are not a full-line provider." This cannot be changed, but if it is sold in country A, B, or C as well as if a sales initiative is started in country Z, that is up to the subsidiary unit.

The relationship between headquarters and subsidiary units is valued as co-operative but with the restriction that headquarters is authorized to issue directives. One interview

³⁷ The case study will focus solely on part (CaseCo7) of the conglomerate which is a multinational company with headquarters and subsidiaries itself.

partner described the parent-subsidary relationship at CaseCo7 according to the relationship between parents and their maturing daughter. This implies that subsidiaries sometimes realize local interests that might not help the organization overall, but are necessary for subsidiary's local development:

Therefore, subsidiaries might pursue ideas that are on the one hand interesting from the local perspective but on the other hand will not necessarily advance the overall organization. This is tolerated in the end, because it helps local business and makes sense from the local point of view.

Role and status differences between subsidiaries are explained by their different sizes, historically developed footprints (single- versus multi-country operator), and their innovation cultures.

It just depends on subsidiary's size and business volume. If you look at the regional unit in Singapore, [...] this allows certain structures, a certain level of autonomy, and a certain amount of self-confidence, while other countries. Such as Vietnam, are much smaller, have a different position, and therefore have a different voice in the organization.

Subsidiaries differ in their innovation culture: some subsidiaries continually strive to improve their existing business situation, while others feel comfortable with their status quo. Headquarters explains differences with a subsidiary's (1) repose or attitude on a former unique selling proposition, (2) competitive environment, and (3) entrepreneurial culture (autonomy and enthusiasm). The first two reasons are intertwined: a highly competitive environment demands a continuous quest after new innovations and subsidiaries cannot rest on former innovations. Subsidiaries in low competition environments, in contrast, tend to settle in on their former unique selling propositions.

It might happen that a unique selling proposition changes into a boomerang: a subsidiary which was a bit or even a length in front and rested for too long on its laurels all of a sudden might find itself stagnant after years of innovation and at the bottom of all subsidiaries and realizes that it possesses aged products and risks driving its product portfolio into the sunset. Other units that always faced an intense competition were the whole time forced to continuously innovate.

(3) Degree and type of subsidiary entrepreneurship

Both interview partners rate the degree of subsidiary entrepreneurship as relatively high with a "5" out of "6." Headquarters explains this high level of subsidiary entrepreneurship

with the situation that nearly all subsidiaries have to adjust their existing product portfolio to its local market needs in order to successfully compete. Therefore, local market needs demand entrepreneurial, self-driven subsidiary behavior:

It is the case that headquarters possesses a bundle of products and systems which subsidiaries might use like a construction set. However, that local conditions demand a strong adaptation of those sets and in many cases the technologies and systems headquarters supplied are not directly accepted in the local market, because different principles exist. Therefore, the local adaptation is directly made in the region.

Furthermore, one interview partner stated that nearly all innovation is driven only by subsidiaries and in the past, subsidiaries were the only place of innovation:

In the end, the subsidiary is the engine, the driving unit. Actually, all innovations originate in subsidiaries; because these units are close to the client, have an ear on the ground. They collect the ideas, recognize the signs of the times, and push ideas forward. They have the background to develop products for the next generation. Anyway, it actually happens in the subsidiaries.

[S]ubsidiaries are the company's innovation. In the past, innovation only happened in subsidiary units and was limited.

However, fundamental entrepreneurial behavior differences can be observed between subsidiaries. Some regions just focus on selling their basic product portfolio, whereas some other regions are involved in innovation development and aim to sell new ideas. In particular, pure sales units seldom come up with ideas and if they do, they normally do not proactively raise them. However, if asked in the course of sales meetings, they will share those ideas.

Two forms of subsidiary entrepreneurship can be observed at CaseCo7: adjustment/improvement innovations of existing products and adjustment/improvement innovations of existing processes. From time to time, resource improvement initiatives occur, whereas development of new products is mainly done in one of the corporate research centers.

Regularly occurring product adjustment innovations are often transformations of existing high technology standard products into locally accepted “good-enough” products. The

Asian markets in particular do not value new product features or technologies as European or North American markets do. Therefore, product features and other innovations will be reduced in the Asian market version to cope with cost pressure issues in these markets.

Finally, it is caused by the different price structure in some regions in comparison to the ones in high technology markets. While Europe and the US are technology loving, upscale markets, Asia-Pacific values technology, but more important in those countries is a low price level. Therefore, the existing base technology must be adapted to be able to compete with the existing cost pressure.

Besides that, subsidiaries regularly and proactively improve local business processes like sales, engineering, or global interaction processes. Sometimes, subsidiaries even transform their way of doing business. Some exceptional cases exist in which entrepreneurial subsidiary activities even influenced or changed corporate strategy. For example, one subsidiary came up with the idea not to sell a technical product to the customer, but instead to sell the operation or data of the product. Therefore, subsidiary actions opened up a completely new perspective on how business can be done.

We cannot really become active beyond our product portfolio. We are tied to company's mission and vision. However, if we have the chance to rent or lease a product to a client instead of selling it (for example, we sell the data in a certain timeframe instead of the analytical apparatus), then we can do it as long as it is consistent with the super ordinate mission.

(4) Headquarters' attitude towards subsidiary entrepreneurship

According to headquarters, a relatively high cost structure makes it necessary for CaseCo7 to continuously generate innovations and defend its price premium. Therefore, entrepreneurial subsidiary actions are crucial for company performance. Nevertheless, perceived risk of unmanaged/uncontrolled entrepreneurial subsidiary actions is that subsidiaries overlook the right timing or the bigger picture of an innovation. Therefore, a successful subsidiary innovation demands support from corporate experts:

We have the technology in the background to develop the solution to this problem in one and a half years. However, if we are done too early, we will deal with rotten eggs and if we are done too late, we also deal with rotten eggs. Therefore, we have portfolio managers and strategic marketing experts who possess product segment responsibility and are located at headquarters. They have to agree with the local managers on the timing and the initiatives.

Both interview partners state that entrepreneurial subsidiary behavior is absolutely favored and subsidiary empowerment is supported. The main reason is that business is done locally and therefore strong subsidiaries are needed.

It is absolutely favored. Subsidiaries are actually the driving force in the local market and in the end business can only be made locally. Headquarters also highly supports localization of business because business cannot be made meaningful from headquarters. We have certain global technologies, but the development of local technologies can only be made locally. Therefore, entrepreneurial subsidiary behavior is favored.

Headquarters' attitude has changed in two ways over time. First, CaseCo7 previously realized innovations mainly via acquisitions of innovative companies. But, for about five years, CaseCo7 has tried to establish its own innovation culture and now mainly drives innovations organically. Second, CaseCo7 was previously very centrally organized and managed. But, over the company's course of globalization, this attitude has changed and headquarters understands that their "one corporate strategy shoe" did not fit all different regional needs:

I think, if we look ten years backwards, everything was much more centrally organized. Headquarters decided what had to be done, which technologies had a stake in the future, and how the future products had to look. I think this has significantly changed over the last ten years in the course of globalization. Today, headquarters has a better feeling what customers in each region demand and know where the shoe pinches. Therefore, headquarters now knows that customer needs on one side of the world will differ from customer needs on the other side of the world. Consequently, the "one shoe fits all attitude" cannot be really found in the organization any more.

Altogether, entrepreneurial subsidiary activities are highly valued for CaseCo7's innovativeness. Finally, nearly all innovations are started in one of the subsidiaries and subsidiaries are measured by their innovativeness. Also, headquarters continuously monitors the success of its subsidiaries with regard to their innovative activities.

(5) Governance of subsidiary entrepreneurship and innovation activities

CaseCo7 supports entrepreneurial subsidiary activities with both financial and personnel resources. All research work in each of the seven research hubs is completely financed by headquarters. In addition, headquarters shows strong commitment to further support globalization of research and innovation work. Therefore, headquarters supports

innovation hubs for a certain period of time, with personnel resources like corporate experts. Furthermore, all subsidiaries can fall back on corporate experts such as patent lawyers.

Therefore it is obvious in which form (100 %) and to what extent (to a high degree) headquarters supports us. Actually, with the decision to open up this R&D center in country A, headquarters stepped up to take responsibility for the expansion of its global business. It is a very new initiative

The incentive scheme to foster entrepreneurial activities consists of different elements: (1) a subsidiary's profit and loss responsibility, (2) variable salary components for entrepreneurial behavior, (3) reward premiums for innovative ideas, (4) competitions and awards, and (5) a corporate suggestion scheme. Both interview partners state that a subsidiary's profit and loss responsibility stimulates entrepreneurial subsidiary behavior and that subsidiaries intrinsically aim to increase their autonomy and want to be the owners of their business.

The final incentive for a subsidiary unit is to be its own master and to have autonomy and headquarters' confidence that it is doing the right things to generate business. This is an incentive system itself. Apart from that, the incentive is to generate more business in the next year than in the current one. I think it is not necessary that headquarters create a certain incentive scheme but rather allow subsidiaries a longer leash if subsidiaries behave correctly, which benefits both headquarters and subsidiaries.

Each employee is incentivized to behave entrepreneurially via variable salary components. For example, each employee in a research hub has a target agreement with CaseCo7 about a certain number of patents or invention disclosures he has to deliver. The degree of achievement is then tied back to the annual bonus payments and also plays back in his career development options.

Besides that, each innovation, patent, or invention disclosure is evaluated based on a criteria catalogue consisting of differentiating measures, degree of idea newness, market attractiveness, radical nature, and other elements. Each criterion is linked to a certain amount of points. Every idea and initiative is evaluated based on this catalogue and a certain point balance is derived. At the end of the year, employees get their earned points disbursed in cash, ten U.S. dollars for each point.

Each point equals at the end of the year 10 USD. Consequently, if somebody has 40 invention disclosures and each one is ranked relatively high, it will significantly pay off.

Moreover, based on this point system, a competition is held. In fact, the top five idea submitters are rewarded as “Inventors of the Year” and are presented to headquarters. The five awarded nominees get both financial and reputational rewards like a dinner with the executive board. Furthermore, the winners’ names are published throughout the organization. Each year the “invention of the year” is awarded which is, in contrast, a qualitative assessment. In that competition, the three innovations with the biggest impact and highest level of radical nature are compared to each other. Finally, one innovation is elected as the invention of the year and its submitters are financially and reputational rewarded. Besides that, the corporate suggestion scheme continuously supports generation and collection of innovative ideas.

Budgeting of innovative projects is either done by official project budgets or by bootlegged ones. Each research hub has a budget which consists of single project budgets and a percentage supplement of ten to fifteen percent which can be used for idea concept developments. This is like an open budget for innovation out of which visibility studies and proof of principle studies are paid. Up to a certain amount, employees are eligible to decide on their own about resource usage. Besides that, other subsidiaries like sales and production units are allowed to use some of their budgets for innovative activities.

The majority of my budget is allocated to certain discrete projects, but I have a small open budget. This “open” money is meant to further develop ideas which are too callow and early in the process that it is not possible to have them in the concept phase or to sketch them in an evaluation project.

Strategic fit control is realized via regular meetings between headquarters and relevant subsidiary employees. In the course of those meetings, all upcoming innovation projects/initiatives are discussed and adapted if necessary.

Recently, CaseCo7 has functionalized its entrepreneurial, innovative development work. Now, all developing employees in all subsidiaries report to the head of development. This should help to realize synergy effects and reduce work duplications. In the context of innovation work re-organization, seven globally distributed research hubs were formed.

Each is a special unit for a certain topic and works as a service center for all other units. One interview partner even calls them “an organization within the organization.” Altogether, this new approach helps to streamline research work, include various market aspects, and realize synergies.

The innovation process at CaseCo7 is part of its product lifecycle management tool. It is a well structured process which starts with idea generation and ends with product's phase out. In between, the whole value chain of a product lifecycle can be found. Crucial for CaseCo7 is that ideas might result spontaneously, from a specific idea generation workshop or even from an open innovation initiative. CaseCo7 tries to strongly encourage everybody to come up with new ideas. Subsequently, proposed ideas are validated in the “concept phase.” At this point, CaseCo7 tries to find “deal breakers” showing why an idea might not work or might not make sense for the organization. If no deal breakers are found, the idea is evaluated and the necessary development budget is estimated. After approval from corporate, the official development phase kicks off. Progress of development is regularly monitored and leads in the production phase.

That is the so-called product life cycle management process. It is actually used to evaluate ideas coming from subsidiaries, headquarters, or external parties based on its market potential, technology differentiation, and intellectual property. After successful completion, the idea is pushed through the innovation channel. It does not matter if the idea is raised by a subsidiary unit or by headquarters.

Open innovation is relatively new at CaseCo7 and corporate is currently underway to define a pilot. CaseCo7 wants to use this tool to find solutions for existing problems and to generate specific ideas. However, according to headquarters, specific answers can only be found if the open innovation problems are well defined:

Open innovation makes sense if the question is not too generic but rather precise and specific.

(6) Knowledge utilization of subsidiary entrepreneurship results

Knowledge aggregation and management is mainly done by technology intelligence as well as by its organizational hub form. Technology intelligence collects both internal and external data regarding certain technologies and problems. Its further task is to provide people with all relevant information regarding certain problems. For example, if a new idea

faces certain problems, technology intelligence can provide certain information and background knowledge so that research teams can easier solve this problem. Besides that, technology intelligence gathers new trends and extracts ideas for future innovation projects.

Besides that, the organizational setup of research hubs and the direct reporting line of all hubs to the lead R&D hub further ensures knowledge aggregation. Each hub is only responsible for a certain technology area and all work touching such an area sooner or later ends up with it. Therefore, each hub is the aggregator of all relevant information regarding their certain technology area. Furthermore, head of development then aggregates all technology areas.

The danger of duplicational entrepreneurial work is partly averted by the system of technology affiliation groups. For example, we have a new idea concerning topic B. Nobody at site C should work on this topic, because we (site B) are the only ones allowed to work on “B” topics. This is an effective tool against duplication of work.

Knowledge exchange between subsidiaries is a bit more difficult. The topic of establishing a knowledge platform is regularly discussed but so far no real solution exists. Currently, the directors of research hubs communicate via SharePoint, but research employees do not have access to this database and all data queries need to be made through their managing directors. Therefore, knowledge exchange is currently mainly done through the personal networks of employees. These are fostered by regularly occurring in-person meetings and supplemented by net-meetings, telephone conferences, etc.

We discuss about it, we talk about it, but we have not found the ideal solution yet.

Furthermore, CaseCo7 does not really believe in expert systems which are fostered through knowledge exchange groups. Nevertheless, CaseCo7 has installed systems (technology intelligence) for technology screening and idea generation to stay informed about recent trends and technology changes.

Yes, but we do not believe in expert systems. It is an oft-mentioned standard, but technologists and business managers almost agree that expert systems don't work. Certainly, we have tools, and these are adequate for technology screening. They give a good and global overview on emerging trends and technologies from all over the world.

Knowledge exchange about entrepreneurial ideas or initiatives is, as mentioned before, mainly done in the context of regular global meetings. Two to three times a year, global research meetings are held where all research directors and relevant corporate employees attend. One part of those meetings is to present ongoing and planned innovation projects as well as to discuss existing process improvements and facilitate knowledge exchange.

On one day, we discuss process issues and speak about improvements. So, in the context of this meeting, we facilitate internal improvements, work more efficiently together, start new initiatives, and discuss content-oriented. A distinct process therefore exists (how such things have to be done) as well as adequate follow-ups supported by a package of measures. It is then processed.

Subsidiaries indeed interact continuously with each other but most of the time each unit is strongly tied up in daily work and time for knowledge exchange about new initiatives is missing. Therefore, these global meetings set the context for an efficient knowledge exchange both between subsidiaries and headquarters and between subsidiaries.

Learning is facilitated by storage of successful and unsuccessful ideas in the database which all research directors can access, by technology intelligence, and through the hub concept.

5.4.1.2 Within-case analysis

CaseCo7, as a multinational organization within a multinational conglomerate, developed out of various acquisitions. Therefore, CaseCo7 could also be described as a bundle of erstwhile self-standing businesses. This might imply highly entrepreneurially active subsidiaries. Indeed, subsidiaries possess full profit and loss responsibility and have the autonomy to pursue local solutions which might thwart corporate objectives. Role and status differences between subsidiaries are obvious as well as differences in their innovative activities: some continuously strive to improve their existing business situations

by being entrepreneurially active while others remain inactive and non-innovative in their status quo.

The degree of subsidiary entrepreneurship at CaseCo7 tends to be high. Headquarters mainly explains this with a market that strongly demands local adaptations. Besides that, CaseCo7's growth path (acquisition of former standalone companies) might be a good explanation for such a high level of entrepreneurial behavior: the acquired companies are accustomed to actively managing and innovating their business. It seems that they will keep up this spirit to some degree after being integrated in the new organization. Furthermore, subsidiaries tended to be the only place of innovation in the past and nearly all innovation happened in the subsidiaries. Today, the most frequent entrepreneurial initiatives are adjustment/improvement innovations of existing products or processes. From time to time, fundamental business changing initiatives might also occur. However, new product developments as well as resource improvements rarely occur.

Headquarters absolutely "favors" entrepreneurial subsidiary activities and supports subsidiary empowerment. The reason for this attitude can be seen in CaseCo7's high cost structure and its market situation. Both demand a high innovativeness to defend the company's price premium and to successfully compete in such a market. However, CaseCo7's attitude in the past was very centrally oriented and its approach was mainly about imposing existing solutions on their subsidiaries. CaseCo7 did realize that their "one corporate shoe" strategy did not fit the different regional needs. Therefore, subsidiary entrepreneurship is understood as a solution for its globalized situation demanding different local approaches.

CaseCo7 supports entrepreneurial subsidiary initiatives with financial and personnel resources. Besides that, CaseCo7 has quite a wide spectrum of mechanisms which foster entrepreneurial behavior and innovative idea suggestions. Subsidiary's profit and loss responsibility is the only element which generally aims to increase a subsidiary unit's behavior, whereas all other elements such variable salary components, innovation contests, and etc. aim to change the individual employee's behavior. These elements are supplemented by a corporate suggestion scheme which should alleviate idea collection. Furthermore, CaseCo7 supports entrepreneurial activities by its partly open budget for idea testing and idea pursuance. CaseCo7 is also underway to start the open innovation method

to find solutions for existing problems and to gather further innovative ideas. Altogether, it seems that CaseCo7 is absolutely aware of the subsidiary entrepreneurship potential and has consequently established a wide spectrum of mechanisms to foster and coordinate such activities. However, it seems that the alignment of all ongoing initiatives could be further streamlined.

Knowledge aggregation is realized via the special group “technology intelligence,” the organizational form of research hubs, and through the direct reporting line to head of development. Knowledge exchange between subsidiaries, in contrast, is a lot less formalized and mainly occurs through the personal networks of people involved. Therefore, it seems that knowledge exchange, and consequently, learning, occurs a bit by chance and could be improved by a more formalized knowledge exchange system.

5.4.2 CaseCo8

In the following two subchapters CaseCo8 is sketched. In subchapter 5.4.2.1, a description of the case, based on external data and information gathered in interviews, is given. Afterwards, the within-case analysis in subchapter 5.4.2.2 highlights the relevant insights of this case and sets the foundation for the cross-case and cross-segment analyses.

5.4.2.1 Case description

(1) Company description/company environment

CaseCo8 is a multinational organization in the “global environment” which employs ~16,000 people and sells ~ 3,500 products in more than a hundred countries. The corporation is organized in a matrix form and consists of five operational divisions. The two largest divisions are the same size and each one accounts for ~33% of company sales. The third largest division is responsible for ~21%, the fourth largest division for ~12%, and the smallest division for about 1% of sales. Each division bears full results responsibility for their products, markets, and customers, and each regional organization is accountable for the business in its geography. Central teams also support divisions and organizations with service and product related functions. CaseCo8’s global footprint consists of ~100 sales units, ~20 technical competence centers, and ~30 production sites

which are all located worldwide. Altogether, CaseCo8 possesses a very international footprint and generates 80% of its sales outside of its home market.

CaseCo8's market is a B-to-B market with a very diverse customer base. In most of its markets, CaseCo8 faces high consolidation. For example, in one market segment, the five largest players are responsible for ~90% of market sales. Nevertheless, CaseCo8 has a leading market position, ranking within the top three for more than 90% of its business. Barriers of entry are high in this market due to its capital and technological intensity.

(2) Role of the subsidiary unit and the parent-subsidiary relationship

CaseCo8 is organized by divisions which are set up globally and nearly all of them bear full profit and loss responsibility. Nevertheless, guidance and management of divisions is almost always controlled by headquarters. The degree of each unit's profit and loss responsibility varies for each different division. This might be explained by their different globalization approaches/strategies and their different development stages in the globalization process. One division, for example, is already "headquartered" outside of CaseCo8's home country with even the division manager sitting in that country. Other divisions are still strongly tied to headquarters and are mainly driven and managed by headquarters.

Subsidiary units differ in their role and standing. Units in CaseCo8's focus regions and production sites are of higher relevance, in headquarters perspective, than pure sales units. As a result, size and width of activities are relevant drivers of subsidiary importance. Units in developing regions are more closely observed by headquarters due to the high investments made for increasing business in those regions.

Sites including production are certainly more important to the organization than pure sales sites. This is especially true for integrated sites.

Size and width of activities along the value chain are relevant factors for different subsidiary roles.

The subsidiary's role and standing in the corporation has changed over time: They have developed from very centrally managed units into more self-sufficient ones which now

even possess the autonomy to shape their own future, causing them to become much more self-initiated innovatively.

[W]e have gone the classical route like most of the industrial enterprises do. They start their foreign operations at the beginning by sending corporate people in those countries, classical expats. The bigger the foreign organization gets and the more they realize that the market differs from the home market, the more they will build up a local organization, focus on local resources, strengthen the regional responsibility, and transfer functions. If we take the example of innovations, this is one of the last things which is given to the regions. This is mainly done centrally. Recently, we started to think about establishing local product development departments to meet local demands. This is definitely changing.

The parent-subsidiary-relationship is described by headquarters as a partly “long-leash” relationship. Headquarters also characterized subsidiary development status as well as the parent-subsidiary relationship as a “teenage time”. This means that the subsidiaries are underway to emancipate themselves with the help of the parent company and within company guidelines.

(3) Degree and type of subsidiary entrepreneurship

Headquarters rates the degree of entrepreneurial subsidiary behavior as low to medium with a “2-3.” Entrepreneurial subsidiary initiatives are, in most cases, only product improvement/adaptation innovations and very seldom new product development or process improvement/adjustment innovations.

[...S]uch an entrepreneurial attitude exists most likely for product adaptations, not new product developments. [...] We are mainly talking about adjusting existing products to regional client needs, quality expectations and industry norms. The complete new development of a product is very rare and I can remember only one example. At the end, it is really more about developing a product further.

Product improvement initiatives happen quite regularly and often aim to adapt existing products to local market needs. Asia, in particular, reduces a local unit’s product offerings and changes them into “good-enough” products. Such downgrading needs are mainly spotted and driven by the respective local units. These initiatives are, in most cases, supervised by one of the Technical Centers whose function is to globally coordinate these adaptation innovations. Technical Centers mainly consist of application engineers who are responsible for customer service and adapt existing products to local customer needs. The fundamental research, in contrast, is centrally located and driven. Divisional research

teams, who focus on divisional research topics, are partly decentralized. New product developments are almost exclusively done by either fundamental research teams or divisional research teams.

Improvement or adjustment initiatives regarding production processes only occur occasionally. CaseCo8 has established a group-operating-system (GOS) which continuously tracks process improvements and facilitates knowledge transfer and exchange between units. GOS is a productivity management tool which is based on the Six Sigma approach. CaseCo8 continuously challenges its business models in each region and adapts them as necessary. As a result, most of the process initiatives are initiated and driven by headquarters rather than the subsidiary.

As mentioned before, subsidiaries become involved in company innovation through their local product adjustment innovations. Nevertheless, subsidiaries differ in their entrepreneurial activities. One possible explanation is that entrepreneurial behavior is strongly personality-dependent and driven. Degree of entrepreneurialism will therefore vary according to the people in charge and their personalities. According to CaseCo8, it is less about the role of the region; when there is somebody in the region who comes up with a lot of ideas and who is bringing these ideas forward, then usually the region performs. At the same time, when you replace this person, then suddenly this [over performance] ends. Consequently, I would link performance to the [regional] management rather than to the specific business unit or region.

(4) Headquarters' attitude towards subsidiary entrepreneurship

Entrepreneurial subsidiary activities are, according to headquarters, relevant for CaseCo8's global footprint. Local markets regularly demand certain product adjustments which can only be recognized and realized by the subsidiaries themselves.

In our global organization these activities play an important role for adjusting our product portfolio to regional needs. Besides global [standardized] products we also offer products which are adapted to the regional market.

Headquarters' attitude has changed over time, and meanwhile, entrepreneurial subsidiary behavior is valued as positive. The perceived chance of complying with local market needs

via entrepreneurial subsidiary initiatives outweighs the perceived risk of possibly diluting CaseCo8's regional strategy and product portfolio.

Headquarters' attitude change can mainly be attributed to the increasing importance of subsidiary markets for ensuring future company sales. In some cases, however, it is even more helpful if the subsidiaries work on the innovations themselves to ensure that the idea completely meets subsidiary needs. Altogether, entrepreneurial subsidiary behavior is favored and accepted by headquarters, but only if it happens within existing corporate guidelines.

The importance of the regions for the company's revenues and growth opportunities is constantly increasing. Therefore, we increasingly invest in the regions and shift our focus to a greater extent to them.

Entrepreneurial subsidiary activities are, with regard to CaseCo8's overall innovativeness, of minor relevance because research is still centrally managed and organized. Subsidiaries are nevertheless valued as idea generators:

In Research & Development, we are still organized very centrally. Certainly, the regions are seen as a source for ideas, but that doesn't mean our Research & Development is decentralized.

Entrepreneurial subsidiary activities are, however, valued as crucial for local competitiveness:

[...T]he adjustment of our [product] portfolio to the regional environment ensures our competitiveness in the regions. But as I said, now we are talking again about product modification rather than Research & Development.

Headquarters states, with regard to corporate strategy, that regional activities might influence CaseCo8's globalization strategy.

(5) Governance of subsidiary entrepreneurship and innovation activities

Headquarters involves itself in entrepreneurial subsidiary initiatives in two ways, with personnel and financial resources. Corporate personnel resources mainly support Technical Centers in their product adjustment work. Financial resources are granted in the context of the annual budgeting round.

At CaseCo8, different forms of innovative idea generation exist: (1) a corporate suggestion scheme, (2) an innovation prize, and (3) a financial incentive scheme. The suggestion scheme is well established and continuously generates ideas (~5,000 per year). One successful idea, for example, was the improvement of an existing production process by one country and is currently being introduced in other countries. A yearly innovation contest is also held. The focus of the contest varies between product and process oriented ideas and is open to all employees. Both the suggestion schemes and innovation prizes are financially incentivized and help to collect outstanding ideas from subsidiary as well as corporate employees:

We receive proposals not only from our home country but also from abroad. Therefore, we notice what is going on everywhere.

Funding of entrepreneurial initiatives is mainly covered by existing subsidiary budgets and only in the case of very large innovation projects an additional project budget is granted. Central fundamental research units as well as business division research groups possess a so-called “free budget” that can be used to pre-test ideas and work on independent project ideas.

Company innovation splits into two different fields: (1) fundamental research and business division research, and (2) adjustment innovations performed by Technical Centers. Both fundamental research and business division research are mainly concentrated at locations close to headquarters, whereas Technical Centers are located worldwide in order to be closer to the consumer. The innovation process of the first category is organized according to the stage-gate process approach. Appointed innovation managers at the center and in the business units track the progress of an initiative and stay informed about ongoing and planned initiatives. Personal counterparts at headquarters for Technical Center employees were also established. These counterparts are the first contact at headquarters for subsidiary ideas or proposals. Headquarters tries to reduce barriers of communication and alleviate proposals from subsidiaries with the establishment of this counterpart system.

(6) Knowledge utilization of subsidiary entrepreneurship results

Results and experiences of entrepreneurial subsidiary activities are stored in a central project documentation database. Both successful and unsuccessful projects are

documented. Process topics are covered by CaseCo8's operating system (GOS) which helps to continuously improve existing processes.

GOS is a comprehensive package for productivity management – structured improvement of processes in the production and service units. By now, there are trained Six Sigma contact persons and productivity managers in literally every part of the organization. [...] The system was implemented in 2004 and already has gained high acceptance in the units and works quite well.

Knowledge exchange between subsidiaries and headquarters as well as between subsidiaries is facilitated through innovation managers, the counterpart system, and both formally and informally in the form of meetings. In each division, the “innovation manager” is responsible for the innovation topic and knowledge exchange with headquarters and other subsidiaries. He is also responsible for ensuring the strategic fit of an idea with corporate strategy.

In our business units, we employ people responsible for innovation, our so-called Innovation Managers. Of course, they are also informed about activities in the respective subsidiaries abroad.

We have one Innovation Manager per business unit. In addition, we employ a Director responsible for overall corporate R&D. There, everything converges.

While innovation managers focus on knowledge exchange regarding fundamental research questions, they also have to ensure that central counterparts have a vivid knowledge exchange with regard to product adjustment innovations. Knowledge exchange occurs in the context of global meetings. Headquarters is currently attempting to establish relevant online tools to improve knowledge exchange.

Certainly [we use] formal and informal [processes], usually via meetings and committees. Also, we increasingly seek to use new tools like online based procedures.

5.4.2.2 Within-case analysis

CaseCo8 is organized in a matrix form along divisions and supporting central units. All divisions bear full profit and loss responsibility but their connection to headquarters differs quite strongly. Whereas most of the divisions are still closely linked to headquarters, one division has a higher degree of autonomy and is even “headquartered” outside of

CaseCo8's home country. Such differences are mainly caused by different globalization strategies. Subsidiary units also differ in their role and status due to their size and width of activities as well as their developmental stage. CaseCo8's way of dealing with its subsidiaries has changed over time: whereas in the past, subsidiaries were tightly managed from headquarters, they recently gained more and more autonomy. The parent-subsidiary relationship is characterized by an ongoing emancipation of subsidiaries but with the help of its parents and only within parental guidelines. It could therefore be assumed that entrepreneurial subsidiary activities are still at the infant stage and will gain momentum over time.

The aforementioned assumption is supported by looking at the degree and type of subsidiary entrepreneurship at CaseCo8. Subsidiary entrepreneurship tends to be low and only product improvement/adaptation innovations occur on a regular basis. Both new product developments and process improvement initiatives are mainly initiated and driven centrally. It tends to be the case that entrepreneurial subsidiary activities mainly start as local product adaptations because those needs can only be spotted locally. New product developments, in contrast, are centrally driven by corporate research departments. CaseCo8 also has centralized process improvements by establishing a group-wide operating system which helps to coordinate process improvement. As a result, subsidiary entrepreneurship is still at its infant stage but it can be assumed that it will further develop in the next years. For example, decentralization of research is assumed to take place.

Headquarters' attitude has changed over time and in the meantime, entrepreneurial subsidiary behavior is valued as positive. CaseCo8 has realized that entrepreneurial subsidiary initiatives are crucial for the company's global footprint and that product adjustments can only be realized by the subsidiaries themselves. This change is driven by the increasing importance of subsidiary markets for CaseCo8's future sales growth. CaseCo8 now accepts and tends to favor entrepreneurial subsidiary behavior but only within existing corporate guidelines. Subsidiary entrepreneurship at CaseCo8 is therefore still quite regulated and has not yet reached its full potential.

Headquarters is involved in entrepreneurial subsidiary activities by supplying financial as well as personnel resources and support. Subsidiaries do, however, have to fund small initiatives out of their existing budget. In the case of large projects, headquarters will grant

further financial support. CaseCo8 uses the corporate suggestion scheme in addition to the annual innovation contest to incentivize entrepreneurial behavior and aggregate ideas at headquarters. These tools are supplemented by a financial incentive scheme which tries to further stimulate entrepreneurial behavior via bonus payments. CaseCo8 further aims to reduce barriers of communication with the help of the corporate counterpart system. These counterparts also facilitate knowledge aggregation and exchange for product adaptation innovations. Any other innovative knowledge is mainly managed by the corporate innovation managers. CaseCo8 has established a set of guidelines and support systems to foster and manage entrepreneurial activities. It is obvious that knowledge exchange between subsidiaries mainly occurs via headquarters and that subsidiaries are currently missing tools to directly interact with each other, causing subsidiary entrepreneurship at CaseCo8 to still be in its infant stage: strongly controlled and managed by headquarters, and not completely leveraged.

5.4.3 Within-segment analysis

In the following subchapter, similarities and differences between studied companies in the “global environment” are investigated. This analysis forms the foundation for the cross-segment analysis in the following chapter (6.1).

Company description/company environment

The biggest difference between CaseCo7 and CaseCo8 is each company’s growth strategy: CaseCo7 has mainly grown by acquisitions and consists of a conglomerate of acquired companies, whereas CaseCo8 has mainly grown organically. Besides that, the two CaseCos differ in size and organization form. CaseCo7 has about half the number of employees than CaseCo8. CaseCo7 is organized by product divisions, whereas CaseCo8 is a matrix.

Similarities between the two are that both companies possess a market leading position in their markets and face a similar market environment: both markets are mainly business-to-business and the companies' customer base can be considered as fragmented. Furthermore, both industries are consolidated or currently further consolidating. Barriers of entry are high due to the market’s capital intensity.

	CaseCo7	CaseCo8
Company description	~6,000 employees Organized by product divisions Four product divisions Mainly grown by acquisitions Market leading position	~16,000 employees Organized in a matrix form Five product divisions Mainly grown organically Ranking in top 3 for 90% of its business
Market environment	Business-to-business market/business-to-customer market Fragmented customer base Industry under consolidation High barriers of entry	Business-to-business market Fragmented customer base In some parts, very consolidated industry High barriers of entry

Table 22: CaseCo7/8 comparison: company setting and company environment

Source: Author

Role of the subsidiary unit and the parent-subsidiary relationship

All subsidiaries of CaseCo7 bear full profit and loss responsibility and no per se differences are set by headquarters. Nevertheless, most of the subsidiaries are former standalone companies with different capabilities and backgrounds. Therefore, some subsidiaries are more innovative than others and developed into innovation drivers while the rest can be considered as innovation followers. All subsidiaries at CaseCo8 bear similarly to the situation at CaseCo7 regarding full profit and loss responsibility, but obvious differences between divisions can be observed. While most of the divisions are strongly tied to headquarters and completely managed out of headquarters, one division headquarters has established itself outside of CaseCo8's home country. This special situation is driven by a large investment made for this division. Therefore, historical development (acquisition or organically grown) of a unit tends to influence its standing. However, most subsidiaries at CaseCo8 are organically grown and therefore are previously centrally managed units which now get more and more autonomy. Nevertheless, innovation is still done at headquarters and all subsidiaries at CaseCo8, in contrast to CaseCo7, tend to be innovation followers.

The parent-subsidiary relationship tends to be similar for CaseCo7 and CaseCo8 but with certain differences. Both headquarters define the relationship according to "the relationship between a parent and its maturing daughter" (CaseCo7) which is also meant with the term "teenage time" used by CaseCo8. Both descriptions mean that subsidiaries (children) are

currently underway to emancipate themselves from the parents but with parental guidance and within certain guidelines. Nevertheless, it seems that CaseCo7 is already a bit further in the emancipation process than CaseCo8: CaseCo7 speaks of the relationship as “co-operative” and it might occur that subsidiaries pursue in parts local interests which might not align with the overall strategy. Therefore, it seems that the parent-subsidiary relationship at CaseCo7 is a bit more like a relationship between equally weighted partners than at CaseCo8. Despite the fact that CaseCo8 speaks of a “long-leash” relationship for some subsidiaries, it seems that most of the subsidiaries are still under close headquarters monitoring. Therefore, CaseCo8 seems to have a tighter parent-subsidiary relationship than CaseCo7.

Role and status differences between subsidiaries are explained with similar reasons: both CaseCos state that subsidiaries differ in their status and role in headquarters’ perspective due to their size and their breadth of activities. Differences in explanation are that CaseCo7’s headquarters perceives that subsidiaries have different innovation cultures and consequently values subsidiaries differently for company innovation. CaseCo8 further states that a subsidiary’s regional status as well as its stage in the globalization process determines its standing at headquarters. The reason of subsidiary’s regional status is particularly linked to the amount of investments needed from headquarters. If high headquarters’ investments are needed, headquarters will more closely monitor business progress and involve itself in the local business than in the opposite case.

	CaseCo7	CaseCo8
Subsidiary role	<p>All subsidiaries bear full profit/loss responsibility</p> <p>Many subsidiaries are former standalone companies</p> <p>Subsidiaries are either innovation drivers or innovation followers</p>	<p>Degree of profit/loss responsibility varies</p> <p>One division “headquartered” outside of CaseCo8’s home country</p> <p>Other divisions strongly tied to headquarters</p> <p>Previously centrally managed units became more self-standing, autonomous ones</p> <p>All subsidiaries corporate innovation followers</p>

	CaseCo7	CaseCo8
Parent-subsidiary relationship	<p>“co-operative,” but headquarters issues the directives</p> <p>Parent-subsidiary relationship: “parent and their maturing daughter”</p> <p>Might pursue colliding local interests</p>	<p>Some divisions with “long-leash,” others closely monitored</p> <p>Parent-subsidiary relationship: “teenage time” (subsidiaries emancipate themselves with parental guidance)</p>
Reasons for role, relationship differences between subsidiaries	<p>Subsidiary’s size</p> <p>Historically developed footprint (single- versus multi-country operator)</p> <p>Different innovation culture</p>	<p>Size and width of activities (production sites versus pure sales sites)</p> <p>Different globalization approach/strategy</p> <p>Different development stage in globalization process</p> <p>Subsidiary’s regional status (developing region vs. developed region)</p>

Table 23: CaseCo7/8 comparison: subsidiary role and parent-subsidiary relationship

Source: Author

Degree and type of subsidiary entrepreneurship

The degree of subsidiary entrepreneurship differs quite strongly for CaseCo7 and CaseCo8. While subsidiary entrepreneurship tends to be low at CaseCo8, it is high at CaseCo7 and most of the innovation at CaseCo7 is initiated or driven by subsidiaries. This strong difference might be explained by the different growth paths and the different self-conceptions: CaseCo7 understands itself as a conglomerate within an even bigger conglomerate and therefore as a kind of a network, whereas CaseCo8 views itself as a centrally managed organization in which headquarters has the lead and solely gives the directions.

Despite the high degree of subsidiary entrepreneurship at CaseCo7, only two of four subsidiary entrepreneurship forms can be regularly observed. However, at CaseCo8, in contrast, only one form (local product adjustment innovations) regularly occurs. New product developments are in both companies mainly done in central research units. Both companies report that subsidiaries are different in their entrepreneurial behavior. While CaseCo8 only highlights people’s entrepreneurial attitude as an explanation for differences between subsidiaries, CaseCo7 also considers external factors like the competitive environment as relevant for explaining differences.

	CaseCo7	CaseCo8
Degree of subsidiary entrepreneurship	Tends to be high (5) “Nearly all innovation is only driven by subsidiaries” “In the past, subs only place of innovation”	Tends to be low to medium (2-3)
Reasons for degree differences between subsidiaries	Entrepreneurial culture (autonomy and enthusiasm) Remains on former unique selling proposition Competitive environment	Entrepreneurial attitude of people involved
Types of subsidiary entrepreneurship	Adjustment/improvement innovations of existing products regularly occur Adjustment/improvement innovations of existing local processes regularly occur New product development innovations are mainly done in one of the research hubs Resource improvement initiatives rarely occur	Adjustment/improvement innovations of existing products happen quite regularly Adjustment/improvement innovations of local processes occur from time to time New product development innovations are almost exclusively done centrally Resource improvement initiatives rarely occur

Table 24: CaseCo7/8 comparison: degree and type of subsidiary entrepreneurship

Source: Author

Headquarters’ attitude towards subsidiary entrepreneurship

CaseCo7 seems to be more sympathetic about entrepreneurial subsidiary activities than CaseCo8. While CaseCo7 perceives such activities as “crucial for company performance and innovation” and absolutely “favors” them, CaseCo8 does indeed rate them as “relevant for company’s global footprint” but is in-between “favors” and “accepts.” Therefore, CaseCo7 tends to more strongly support entrepreneurial subsidiary behavior than CaseCo8. But one constraint raised by CaseCo7 is that subsidiary entrepreneurship needs to be centrally managed to reduce possible risks from such activities. This tends to be aligned with CaseCo8’s statement that subsidiary entrepreneurship is only favored or accepted “within corporate guidelines.” However, it seems that CaseCo8 sets the guidelines for subsidiaries up front, whereas CaseCo7 headquarters actively involves itself in entrepreneurial activities and guidelines may be adjusted if needed.

Different attitudes can also be observed with regard to the importance of entrepreneurial subsidiary activities for the companies’ innovativeness. While CaseCo7 values such activities as “important” for its overall innovativeness, CaseCo8 admits that such activities

only have “minor influence” on the company’s innovativeness. Differences in the reputation of entrepreneurial subsidiary activities can also be observed by looking at corporate strategy: While CaseCo7 states that “entrepreneurial subsidiary ideas might even change corporate strategy,” CaseCo8 views subsidiary entrepreneurship only as an “influence on corporate strategy” which is supported by the perceived risk that subsidiary entrepreneurship might dilute corporate strategy.

Both CaseCos have changed their attitude over time. Both are coming from a centrally organized innovation approach which CaseCo7 realized with acquisitions and CaseCo8, in contrast, organically. However, both companies realized that this approach needs to be changed into a more decentralized form. It also seems that CaseCo7 is already further in the decentralization process than CaseCo8, which might be explained by its underlying growth strategy. It might be easier to let previously self-standing companies initiate entrepreneurship themselves again rather than motivate more recent subsidiaries to become more self-active.

	CaseCo7	CaseCo8
Headquarters’ attitude towards subsidiary entrepreneurship	<p>“Entrepreneurial subsidiary activities are crucial for company performance and innovation”</p> <p>Entrepreneurial subsidiary behavior is “favored” by headquarters, but subsidiary entrepreneurship needs to be managed to reduce risks (e.g., timing problems)</p> <p>Important for company’s innovativeness</p> <p>Entrepreneurial subsidiary ideas might even change corporate strategy</p>	<p>“Entrepreneurial subsidiary activities relevant for global footprint”</p> <p>Perceived upsides: adaptation to local market needs</p> <p>Perceived risks: possible dilution of corporate strategy and product portfolio</p> <p>“Favored” and “accepted” but only within corporate guidelines</p> <p>“Of minor relevance for company’s innovativeness”</p> <p>“Might influence corporate strategy”</p> <p>“Crucial for local competitiveness”</p>
Change in attitude	<p>In the past: innovation by acquisitions and centrally organized and managed</p> <p>Today: more organically driven innovation and decentralized, “one shoe does not fit all”</p>	<p>Changed over time</p> <p>Meanwhile valued as positive</p> <p>Change due to increasing importance of subsidiary’s market for future sales</p>

Table 25: CaseCo7/8 comparison: headquarters’ attitude

Source: Author

Governance of subsidiary entrepreneurship and innovation activities

Both companies studied in this segment only partly support entrepreneurial subsidiary activities. Extra financial support tends to be limited and subsidiaries have to fund smaller projects out of their own budgets. Only larger projects may apply for corporate support. Parental support with personnel resources seems to be a bit broader at CaseCo7 than at CaseCo8. While CaseCo7 supports subsidiaries with corporate experts and expats for certain projects and problems, CaseCo8 only supports product adjustment work and seldom more. The same can be observed with regard to each company's incentive scheme for fostering subsidiary entrepreneurship. Both companies use salary components, innovation contests, and the corporate suggestion scheme as incentives. The only difference seems to be that CaseCo7 more frequently uses awards, prizes and competitions than CaseCo8.

Differences between the two CaseCos can also be observed with regard to the control mechanisms in use. While CaseCo7 solely ensures alignment via regular meetings between headquarters and subsidiary units CaseCo8 has established a kind of mentoring model with innovation managers and corporate counterparts taking care of initiative alignment and knowledge exchange. Further differences can only be observed with regard to each company's organization of innovation. While CaseCo7 pursues a decentralized research hub organization, most of CaseCo8's innovation is centrally located.

	CaseCo7	CaseCo8
Parent support/involvement	Headquarters supports partly with financial and personnel resources: <ul style="list-style-type: none"> ○ Extra financial support limited ○ Personnel support with corporate experts or corporate expats at subsidiary site 	Headquarters supports partly with financial and personnel resources: <ul style="list-style-type: none"> ○ Parental financial support only for large projects ○ Personnel support only for product adjustment work of Technical Centers
Incentive scheme/idea	Profit and loss responsibility Variable salary components	Financial incentive scheme Yearly innovation contest
generation tools	Reward premiums for innovative ideas Competitions and awards Corporate suggestion scheme	Corporate suggestion scheme

	CaseCo7	CaseCo8
Control mechanisms	Strategic fit control via regular meetings between headquarters and relevant subsidiary employees. At these meetings all initiatives are discussed and evaluated.	Innovation managers responsible for ensuring strategic fit Corporate counterparts should reduce barriers of communication and facilitate knowledge exchange
Innovation (process) organization	Research is globally distributed in seven research hubs All hubs report to head of development Innovation process is organized according to the stage-gate approach and is part of the product lifecycle management tool Underway to establish the open innovation approach	Innovation realized in two ways: <ul style="list-style-type: none"> ○ (1) Fundamental/business division research (mostly centrally located) ○ (2) Adjustment innovation by Technical Centers (decentralized) Innovation process organized according to the stage-gate approach

Table 26: CaseCo7/8 comparison: entrepreneurship and innovation governance

Source: Author

Knowledge utilization of subsidiary entrepreneurship results

Knowledge aggregation methods differ between the two studied companies. CaseCo7 states that the organization of innovation in hubs facilitates knowledge aggregation which is supported by regular global meetings of all hub managers and a knowledge database. Besides that, technology intelligence helps to aggregate all relevant knowledge about certain topics. CaseCo8, in contrast, has a more stringent centrally managed approach. Besides a central project documentation database, corporate innovation managers and corporate counterparts ensure that headquarters always stays informed about all ongoing initiatives. In particular, the innovation managers and corporate counterparts facilitate knowledge exchange between subsidiaries. CaseCo7 and CaseCo8 are similar in that their subsidiaries in most cases do not act directly with each other, but are connected instead by either hubs (CaseCo7) or innovation managers, etc. (CaseCo8). Besides that, both companies state that knowledge exchange also happens by chance in the context of global meetings.

Both companies store data about successful and unsuccessful initiatives and projects to enable learning. CaseCo7 views the hub organization as a vivid tool for the improvement of corporation's learning. CaseCo8, in contrast, has established a group-wide system which continuously monitors processes and suggests improvement possibilities. Therefore,

learning at CaseCo8 tends to be already much more formalized and active than at CaseCo7.

	CaseCo7	CaseCo8
Knowledge aggregation on headquarters level	Knowledge database (only accessible by research directors) Regular global meetings Special group: technology intelligence Hubs work as aggregators	Central project documentation By corporate innovation managers By corporate counterparts
Knowledge exchange between subsidiaries	Same tools than for knowledge aggregation	By innovation managers (focus on fundamental research) By counterpart system (focus on adjustment innovations) Formally and informally in the context of meetings
“learning”	Successful/unsuccessful ideas stored in database Organization of research by hubs	Successful and stopped projects are documented Group operating system (GOS) facilitates continuous process improvements/benchmarking

Table 27: CaseCo7/8 comparison: utilization of subsidiary entrepreneurship results

Source: Author

6 Integrative analysis and discussion of case findings

After having analyzed each case and segment on its own by using case descriptions, within-case analyses, and within-segment analyses in the previous chapter, the following chapter focuses on the comparative analysis of the eight case studies, respectively the four segments, and delineates an integrated analysis with regard to the leading research questions. First, based on a comparative cross-segment analysis, a set of tentative propositions is developed (6.1). Subsequently, results are confronted with existing literature and propositions are revisited (6.2).

6.1 Cross-segment analysis and building a set of tentative propositions

The analytical focus of this analysis will be on the detection of commonalities and differences between segments with respect to headquarters' strategy towards subsidiary entrepreneurship with the ultimate aim to shape a set of propositions.

Role of the subsidiary unit and the parent-subsidiary relationship

The companies in each segment differ a bit with regard to the subsidiary's innovation role and the parent-subsidiary relationship, but not to an extreme extent. Exceptions are CaseCo3 and CaseCo4, which are both categorized to the same segment, transnational environment, but still differ significantly. This might be explained with the different degree of regulations the two companies are facing: CaseCo4 operates in a highly regulated environment, whereas CaseCo3 does not face any specific governmental regulations at all. Therefore, CaseCo3's subsidiaries have other prospects to behave entrepreneurially and autonomously; CaseCo4's subsidiaries do not. Consequently, evaluation and analysis of the transnational environment will mainly focus on CaseCo3, but CaseCo4 results will be used for relativising CaseCo3 ones.

According to Figure 18 and Figure 19, subsidiaries in the transnational and multinational environments tend to fulfill different roles with regard to company innovation; a few subsidiaries have established themselves as innovation leaders and the innovation powerhouses of the corporation, whereas most of the other subsidiaries are mainly innovation followers/implementers. Subsidiaries in the international and global environment, in contrast, tend to be more similar with regard to innovation and only a few

have differentiated a bit from the others. Therefore, it seems that the environment influences the subsidiary's innovation role, which leads to the following two propositions:

P1a: Companies in the transnational as well as in the multinational environment seem to have subsidiaries that differ in their role with respect to their innovation role. Companies in the international as well as in the global environment seem to have no subsidiaries with differentiating roles.

P1b: Subsidiaries of companies in the transnational as well as the multinational environment seem to be either innovation leaders or followers, whereas nearly all subsidiaries of companies in the international and global environment seem to be innovation followers.

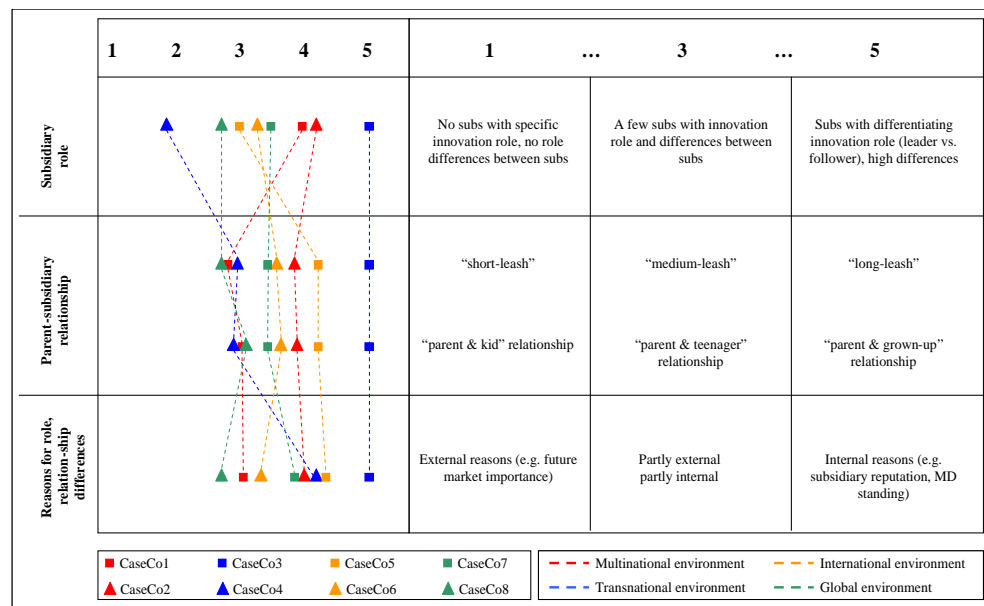


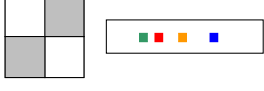


Figure 18: Cross-segment analysis: role/parent-subsidiary relationship (1/2)

Source: Author

	Similarities, differences between segments	Tentative propositions
Subsidiary role		<p>P1a: Companies in the transnational as well as in the multinational environment seem to have subsidiaries that differ in their role with respect to their innovation role. Companies in the international as well as in the global environment seem to have no subsidiaries with differentiating roles.</p> <p>P1b: Subsidiaries of companies in the transnational as well as the multinational environment seem to be either innovation leaders or followers, whereas nearly all subsidiaries of companies in the international and global environment seem to be innovation followers.</p>
Parent-subsidiary relationship		<p>P2: Companies in the global environment seem to have a “short-leash”, companies in the multinational environment seem to have a “medium-leash, and companies in the transnational as well as in the international environment seem to have a loose and “long-leash” parent-subsidiary relationship.</p>
Reasons for role, relationship differences		<p>P3: Subsidiaries in the transnational and international environment tend to pro-actively differentiate themselves, whereas subsidiaries in the multinational and global environment tend to be differentiated by headquarters assignment.</p>

Multinational environment
 International environment
 Transnational environment
 Global environment
 similarities between segments

Figure 19: Cross-segment analysis: role/parent-subsidiary relationship (2/2)

Source: Author

Surprisingly, the situation with regard to the parent-subsidiary relationship is different (Figure 18 and Figure 19): companies in the transnational and international environment tend to pursue a “long-leash” relationship, companies in the multinational environment tend to pursue a “medium-leash” relationship, and companies in the global environment pursue a rather controlled and “short-leash” approach. For companies in the international environment, the high locality of business due to a low weight-to-value-ratio might be the reason for the observation above. Each local market demands a “customized” solution from the respective local subsidiary despite the existence of a common product for all markets. As an MNC, the easiest way to achieve this is to empower its subsidiaries to a certain degree and operate a “long-leash” relationship. For companies in the transnational environment, the long-leash relationship might be explained with differences in market demands the company is facing. To serve these different demands, empowered subsidiaries are needed and companies seem to operate a “long-leash” relationship. Altogether, the following proposition with regard to the parent-subsidiary relationship can be made:

P2: Companies in the global environment seem to have a “short-leash,” companies in the multinational environment seem to have a “medium-leash,” and companies in the transnational as well as in the international environment seem to have a loose and “long-leash” parent-subsidiary relationship.

The explaining factors for role and relationship differences between subsidiaries in a company seem to be linked to the respective parent-subsidiary relationship (Figure 18 and Figure 19). Therefore, companies in the transnational and international environment tend to raise similar explaining factors, while companies in the multinational and global environment raise others. Subsidiaries in the transnational and international environment tend to pro-actively differentiate themselves in the organization, whereas subsidiaries in multinational and global environment tend to be differentiated by headquarters decision. This directly leads to the following proposition:

P3: Subsidiaries in the transnational and international environment seem to pro-actively differentiate themselves, whereas subsidiaries in the multinational and global environment seem to be differentiated by headquarters assignment.

It seems that predominantly subsidiaries with a “long-leash” parent-subsidiary relationship tend to seek differentiation from other subsidiaries, mainly by building upon their skill set and enlarging their reputation.

Degree and type of subsidiary entrepreneurship

According to Figure 20 and Figure 21, the degree³⁸ of subsidiary entrepreneurship differs for the various segments which leads to the following propositions:

P4a: Companies in the transnational as well as in the multinational environment seem to encounter a higher degree of subsidiary entrepreneurship than companies in the international as well as in the global environment.

P4b: Companies in the transnational environment show the highest, companies in the multinational environment the second highest, companies in global environment the third highest, and companies in the international environment the lowest degree of subsidiary entrepreneurship.

It seems that a high degree of entrepreneurial subsidiary activity is linked to those companies that pursue different subsidiary innovation roles. One explanation might be that in particular the innovation leading subsidiaries tend to be very entrepreneurial and

³⁸ Explanations for the different subsidiary entrepreneurship degrees between the different environments will be given on the following pages.

continuously strive to generate new ideas and innovations. This increases the overall subsidiary entrepreneurship level at the respective companies:

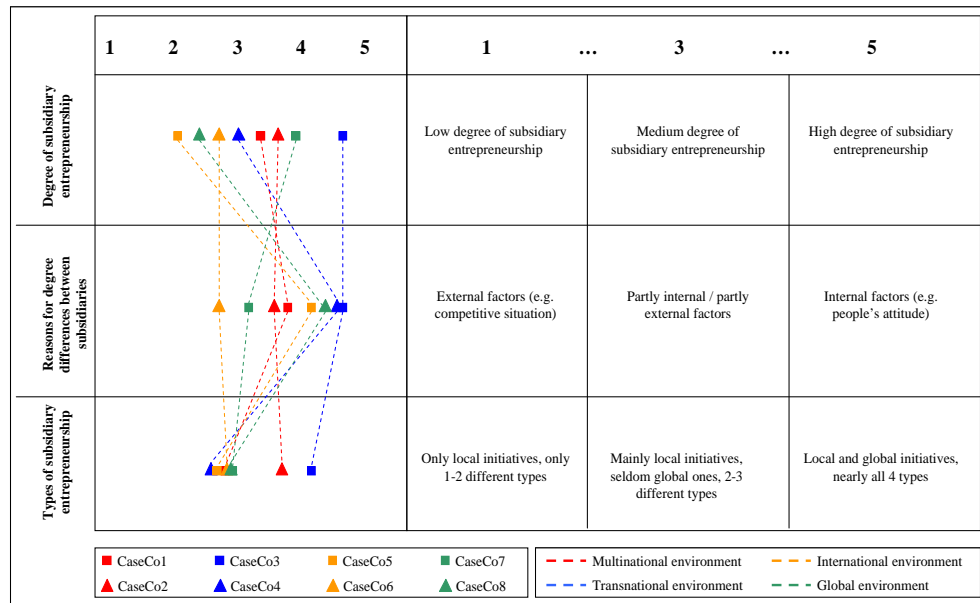


Figure 20: Cross-segment analysis: degree/type of subsidiary entrepreneurship (1/2)

Source: Author

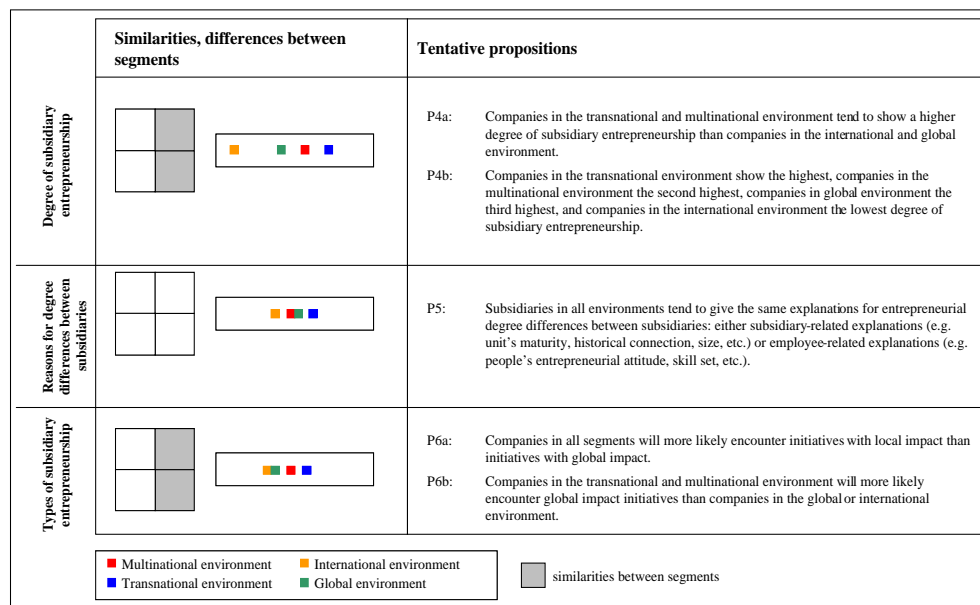


Figure 21: Cross-segment analysis: degree/type of subsidiary entrepreneurship (2/2)

Source: Author

All companies stated that their subsidiaries show different degrees of entrepreneurial behavior, with some being very active versus others being relatively passive³⁹. For nearly all companies, internal factors are the most relevant ones for explaining those differences. Most of the companies explain these differences with both subsidiary-related and employee-related internal factors:

P5: Subsidiaries in all environments tend to give the same explanations for entrepreneurial degree differences between subsidiaries: either subsidiary-related explanations (e.g., unit's maturity, historical connection, size, etc.) or employee-related explanations (e.g., people's entrepreneurial attitude, skill set, etc.).

Across all segments, subsidiary units mainly pursued local initiatives and only seldom global ones. Companies in the transnational and multinational environment, in contrast, are more likely to encounter global initiatives as well, but still to a lower extent than local ones:

P6a: Companies in all segments will more likely encounter initiatives with local impact than initiatives with global impact.

P6b: Companies in the transnational and multinational environment will more likely encounter global impact initiatives than companies in the global or international environment.

Headquarters' attitude towards subsidiary entrepreneurship

According to Figure 22 and Figure 23, all companies state that they “accept” or even “favor” subsidiary entrepreneurship. Nevertheless, few companies fully “favor” such a behavior without any constraints, whereas most of the others tend to set some, such as headquarters involvement from the beginning. Especially, companies in the transnational environment tend to highly favor subsidiary entrepreneurship and even allow entrepreneurial initiatives to impact the company's global strategy:

³⁹ P5 is different to P1a and P1b because it aims to explain the differences between subsidiaries in their initiative-taking behavior, whereas P1a and P1b focus on explaining innovation role differences between subsidiaries.

P7a: Companies in the transnational environment tend to fully favor entrepreneurial subsidiary behavior, whereas companies in the global, international, and multinational environment favor such a behavior only partly.

*P7b: Companies in the transnational environment tend to allow subsidiary entrepreneurship initiatives to impact company's global strategy, whereas companies in the multinational and global environment only selectively allow and companies in the international environment tend to not allow such initiatives.*⁴⁰

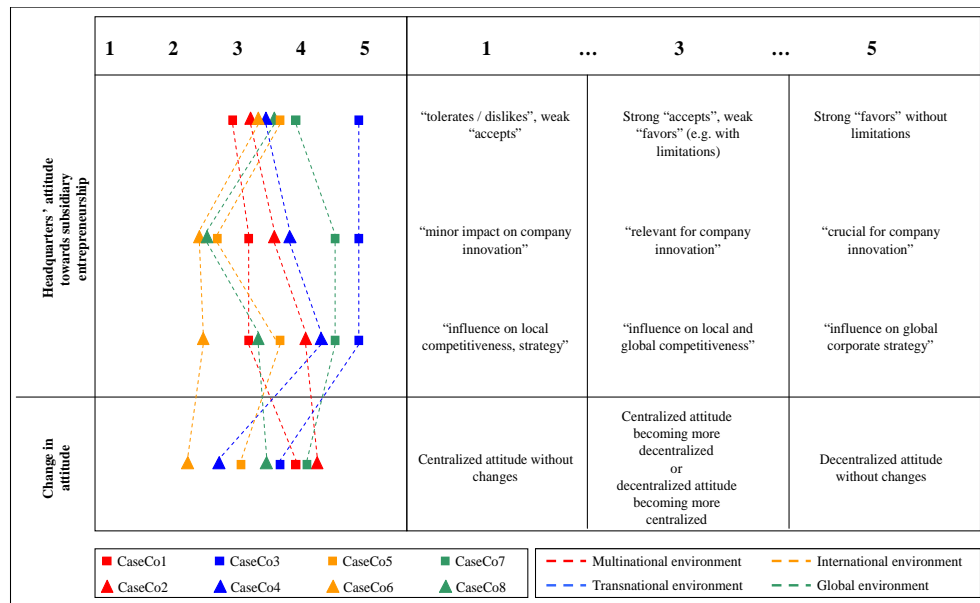
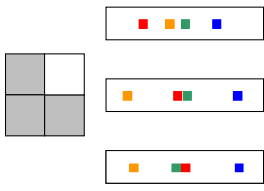



Figure 22: Cross-segment analysis: headquarters' attitude (1/2)

Source: Author

⁴⁰ P7b focuses on headquarters perception towards global initiatives, whereas P6b analysis the actual situation of those initiatives.

	Similarities, differences between segments	Tentative propositions
Headquarters' attitude towards subsidiary entrepreneurship		<p>P7a: Companies in the transnational environment tend to fully favor entrepreneurial subsidiary behavior, whereas companies in the global, international, and multinational environment favor such a behavior only partly.</p> <p>P7b: Companies in the transnational environment tend to allow subsidiary entrepreneurship initiatives to impact company's global strategy, whereas companies in the multinational and global environment only selectively allow and companies in the international environment tend to not allow such initiatives</p>
Change in attitude		<p>P8: It seems that headquarters' attitude converges to a middle position: companies with a previously decentralized understanding (transnational and international environment) are currently increasing centralization, whereas companies with a previously centralized understanding (global and multinational environment) are currently increasing decentralization</p>

■ Multinational environment

■ Transnational environment

■ International environment

■ Global environment

similarities between segments

Figure 23: Cross-segment analysis: headquarters' attitude (2/2)

Source: Author

The different headquarters attitudes can be classified as either centrally oriented (headquarters launches innovations and views itself as the source of innovation) or decentrally located (subsidiaries may launch innovations and headquarters accepts subsidiaries as innovation generators). It is noticeable that companies with a centrally oriented approach (global and multinational environment) are currently decentralizing, whereas companies with a decentrally oriented approach (transnational and international environment) are currently centralizing their operations. It seems that all companies are striving towards a middle position with a certain degree of centralism and decentralism:

P8: It seems that headquarters' attitude converges to a middle position: companies with a previously decentralized understanding (transnational and international environment) are currently increasing centralization, whereas companies with a previously centralized understanding (global and multinational environment) are currently increasing decentralization.

By comparing the results of “headquarters’ attitude” with the results of “degree/type of subsidiary entrepreneurship,” it can be said that most companies with a positive headquarters’ attitude towards subsidiary entrepreneurship tend to encounter a higher degree of subsidiary entrepreneurship than companies with a stricter attitude. However, a positive attitude does not directly lead to a higher degree of subsidiary entrepreneurship: some companies with a very positive headquarters’ attitude towards subsidiary

entrepreneurship encounter a relatively low level of subsidiary entrepreneurship which might be explained with a market environment that does not really strive for innovations.

Governance of subsidiary entrepreneurship and innovation activities

According to Figure 24 and Figure 25, headquarters involvement and support of entrepreneurial subsidiary activities tends to slightly differ for organizations in the transnational versus those in other environments. Subsidiaries in the transnational environment tend to have a high degree of freedom to pursue their ideas but at the same time have the burden and the challenge to realize the innovative initiatives mainly on their own. Parent companies in the international, global, and multinational environments tend to be more involved in and provide more support for entrepreneurial subsidiary initiatives. This might be explained by looking at propositions P7a and P7b: companies in the three previously mentioned environments do not completely “favor” entrepreneurial subsidiary activities and also do not allow initiatives to impact global strategy without headquarters’ involvement. Therefore, a higher involvement via financial and personnel resources helps headquarters to stay informed and while at the same time helping to manage the direction of an initiative. As a result, this leads to the following propositions:

P9a: Companies in the transnational environment tend to be involved in subsidiary entrepreneurship activities to a lower extent than companies in any of the other environments.

Furthermore, it can be observed that companies in the international and global environment tend to more strongly support their subsidiaries with personnel resources and knowledge than with financial resources. One explanation might be that with regard to proposition P7b, these companies do not want to allow entrepreneurial subsidiary initiatives to directly influence corporate strategy. Therefore, headquarters involvement with personnel and knowledge from the beginning of an initiative helps to ensure alignment with corporate strategy. Consequently the following proposition can be made:

P9b: Companies in the international and global environment tend to more strongly support with personnel resources and knowledge than with financial resources. Companies in the multinational and transnational environment tend to support equally with personnel and financial resources.

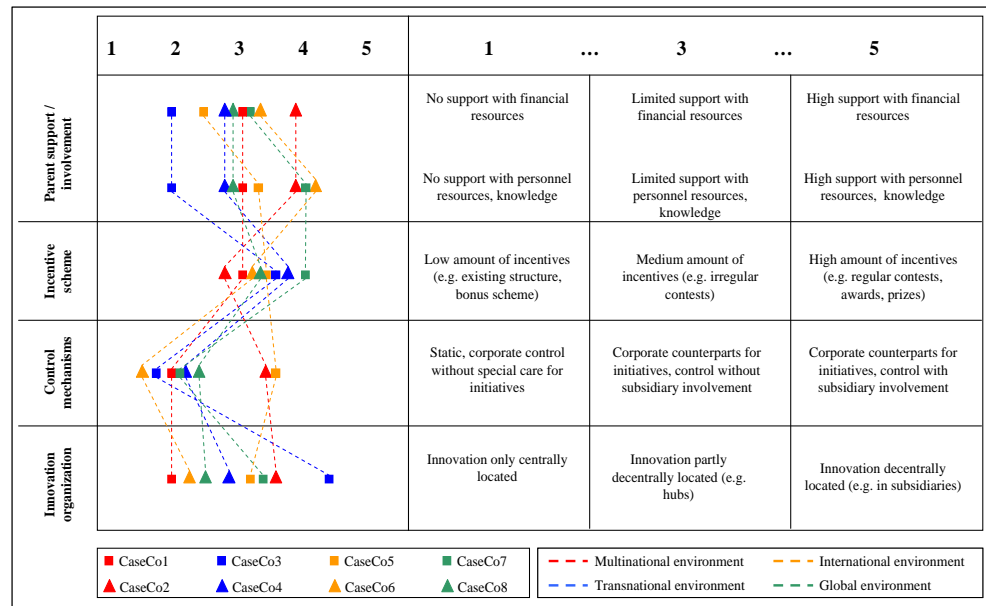


Figure 24: Cross-segment analysis: governance (1/2)

Source: Author

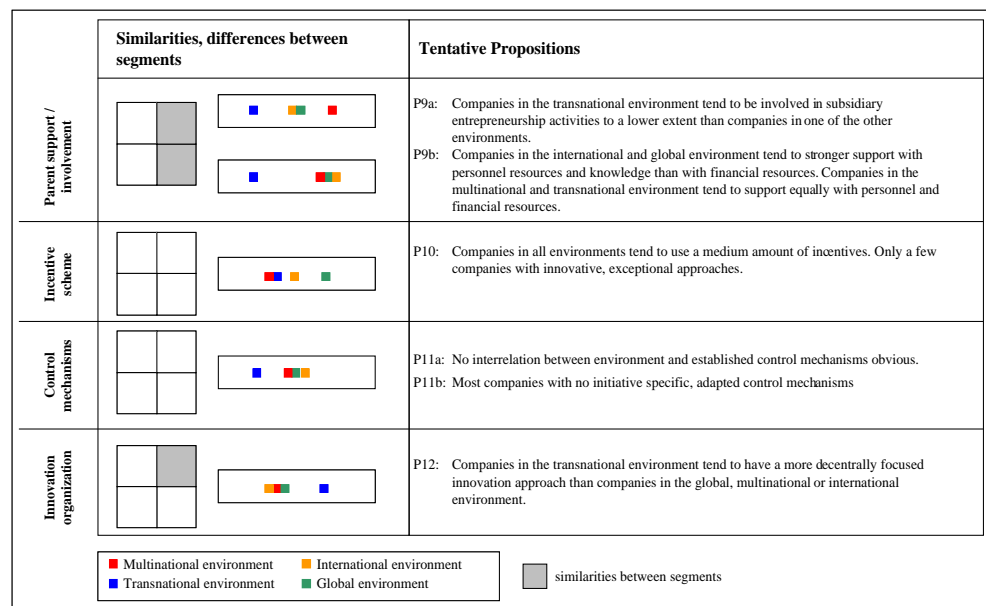


Figure 25: Cross-segment analysis: governance (2/2)

Source: Author

Most of the studied companies have incentive structures in place which should foster entrepreneurial employee and subsidiary behavior. Differences among the four environments are not obvious, and just a few companies stand out with very innovative incentives: CaseCo3, for example, incentivizes entrepreneurial behavior via its “incubator approach,” CaseCo7 has implemented a multi-level competition and award tool, and

CaseCo5 has established a rewarding innovation community (“Inventors Club”). Altogether, this leads to the following proposition:

P10: Companies in all environments tend to use a medium amount of incentives. Only a few companies use exceptional approaches.

Most of the companies studied have not yet established specific control mechanisms for entrepreneurial subsidiary initiatives. The only exceptions are CaseCo5 and CaseCo2. CaseCo5 uses global expert teams which consist of both parent and subsidiary employees. This is supported to ensure first, strategic alignment and second, marketability. Corporate initiative counterparts at CaseCo2 ensure that headquarters always stays informed about ongoing initiatives and initiatives are aligned with company’s strategy. This leads to the following propositions:

P11a: No interrelation between segments and established control degree is obvious.

P11b: Most companies have no initiative specific or adapted control mechanisms regarding subsidiary entrepreneurship.

The overall organization of innovation in the respective companies tends to be different for companies in the transnational versus other environments:

P12: Companies in the transnational environment tend to have a more decentrally organized innovation approach than companies in the global, multinational, or international environment.

Knowledge utilization of subsidiary entrepreneurship results

According to Figure 26 and Figure 27, knowledge utilization in the studied companies tends to differ among the four environments: companies in the global and international environment tend to have a structured knowledge aggregation approach for entrepreneurial subsidiary initiatives, whereas knowledge aggregation at companies in the transnational and multinational environment is done in a more unstructured way. This insight is a bit surprising as, according to propositions P4a and P6b, companies in the transnational and multinational will face a higher degree of subsidiary entrepreneurship and initiatives with global impact than companies in the global and international environment. One might expect companies in the transnational and multinational environment to be more used to

dealing with entrepreneurial initiatives and to have established a relevant knowledge system for such initiatives. However, the contrary is true: this might be explained with looking at P9b: companies in the global and international environment tend to more strongly address entrepreneurial initiatives with personnel and knowledge resources and therefore will have a more initiatives-adapted knowledge aggregation method than companies in the multinational and transnational environment. As a result this leads to the following proposition:

P13: Companies in the global and international environment tend to have a more structured knowledge aggregation process with regard to subsidiary entrepreneurship initiatives than companies in the transnational and multinational environment.

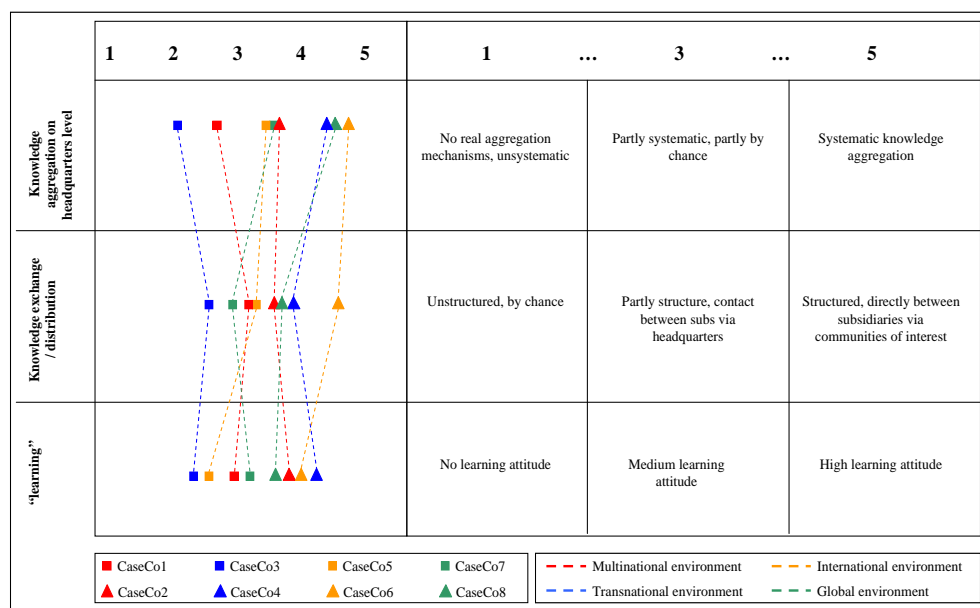


Figure 26: Cross-segment analysis: knowledge utilization (1/2)

Source: Author

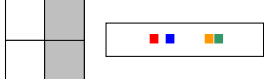


	Similarities, differences between segments	Tentative Propositions
Knowledge aggregation on headquarters level		P13: Companies in the global and international environment tend to have a more structured knowledge aggregation process with regard to subsidiary entrepreneurship initiatives than companies in the transnational and multinational environment.
Knowledge exchange / distribution		P14: No relationship between environment and knowledge exchange facilitation about entrepreneurial initiatives can be observed.
"learning"		P15: No relationship between "learning" attitude and environment can be observed.
<div> <div> ■ Multinational environment ■ Transnational environment </div> <div> ■ International environment ■ Global environment </div> <div> similarities between segments </div> </div>		

Figure 27: Cross-segment analysis: knowledge utilization (2/2)

Source: Author

Knowledge exchange between subsidiaries tends to be rather inchoate in most of the studied companies. One exception is CaseCo6, which has set up different communities of interest constituting various subsidiary employees. These communities enable direct communication between subsidiaries:

P14: No relationship between segments and knowledge exchange facilitation seems to exist. Most of the companies have inchoate direct knowledge exchange facilities for subsidiaries.

The same holds for a company's learning attitude. Most of the companies, independent of their environment, have not set up learning structures to leverage insights gathered through entrepreneurial subsidiary behavior:

P15: No relationship between "learning" attitude and environment seems to exist.

Supplementary analysis with regard to company's growth path

According to Figure 28 and Figure 29, another explanation for different company behavior towards subsidiary entrepreneurship seems to be the company's growth path. Companies that have mainly grown organically tend to behave differently than companies that have strongly relied on non-organic growth. These differences are obvious with regard to

subsidiary role and the parent-subsidiary relationship. Companies with a non-organic growth path tend to manage their subsidiaries less strictly than companies that have mainly grown organically. These tend to control more and their subsidiaries in most cases do not have different innovation roles. One explanation might be that acquired subsidiaries which are previously stand-alone companies possess the skills and abilities to pursue entrepreneurial, innovative activities on their own. Furthermore, the acquired units strive to keep some degree of freedom. Therefore, the parent-subsidiary relationship in the case of acquisitional growth is often described as the relationship between an adult child and its parents, whereas organically grown companies tend to classify their parent-subsidiary relationship as the relationship between the parent and its infant children. Altogether, this leads to the following propositions:

P16: Companies with a non-organic growth path tend to have subsidiaries with different innovation roles, whereas organically grown companies tend to have uniform subsidiaries with no role differences.

P17a: Companies with a non-organic growth path tend to give their subsidiaries more freedom, whereas organically grown companies tend to manage their subsidiaries more tightly.

P17b: Companies with a non-organic growth path tend to define the parent-subsidiary relationship as the relationship between a parent and its adult child, whereas organically grown companies tend to define it according to the one between parents and their children.




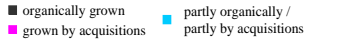
	Similarities, differences between segments	Tentative propositions
Subsidiary role	 <p>No subs with specific innovation role, no role differences between subs</p> <p>Subs with differentiating innovation role (leader vs. follower), high differences</p>	P16: Companies with an acquisitional growth path tend to have subsidiaries with differentiating innovation roles, whereas organically grown companies tend to have uniform subsidiaries with no role differences.
Parent-subsidiary relationship	 <p>Tightly controlled</p> <p>"long-leash"</p>  <p>"parent & kid" relationship</p> <p>"parent & grown-up" relationship</p>	<p>P17a: Companies with an acquisitional growth path tend to manage its subsidiaries by long-leash, whereas organically grown companies tend to manage its subsidiaries more tightly.</p> <p>P17b: Companies with an acquisitional growth path tend to define the parent-subsidiary relationship as the relationship between a parent and its grown-up kid, whereas organically grown companies tend to define the relationship according to the one between parents and their kids.</p>
	 <p>■ organically grown ■ partly organically / grown by acquisitions ■ partly by acquisitions</p>	

Figure 28: Cross-segment analysis with growth path perspective (1/2)

Source: Author





	Similarities, differences between segments	Tentative propositions
Degree of subsidiary entrepreneurship	 <p>Low degree of subsidiary entrepreneurship High degree of subsidiary entrepreneurship</p>	P18: Companies with an acquisitional growth path tend to encounter a higher degree of subsidiary entrepreneurship than organically grown companies.
Types of subsidiary entrepreneurship	 <p>Only local initiatives, only 1-2 different types Local and global initiatives, nearly all 4 types</p>	P19: Companies with an acquisitional growth path tend to more likely encounter initiatives with a global impact, whereas organically grown companies mainly encounter only initiatives with a local impact.
Headquarters' attitude towards subsidiary entrepreneurship	 <p>"tolerates / dislikes", weak "accepts" Strong "favors" without limitations</p>	P20: Companies with an acquisitional growth path tend to more strongly favor entrepreneurial subsidiary behavior than organically grown subsidiaries.
	 <p>■ organically grown ■ partly organically / partly by acquisitions ■ grown by acquisitions</p>	

Figure 29: Cross-segment analysis with growth path perspective (2/2)

Source: Author

Consequently, the degrees of subsidiary entrepreneurship as well as the encountered initiative types differ for the two growth paths. Companies with an acquisitional growth path tend to encounter a higher degree of subsidiary entrepreneurship than organically grown companies. Acquired subsidiaries tend to be more self-confident, proactive units which possess the relevant entrepreneurial skills from their previously independent operations than the more dependent, reactive organically grown subsidiaries which historically have strong ties to the parent unit. This leads to the following proposition:

P18: Companies with a non-organic growth path tend to encounter a higher degree of subsidiary entrepreneurship than organically grown companies.

However, companies with a non-organic growth path not only encounter a higher degree of subsidiary entrepreneurship, but also subsidiaries are more often involved in initiatives with a global impact than subsidiaries of organically grown companies. One explanation can be seen in headquarters positive attitude towards subsidiary entrepreneurship (P20): companies with a non-organic background tend to favor entrepreneurial subsidiary behavior more and therefore will more likely allow subsidiary initiatives to have an impact on global strategy. This leads to the following two propositions:

P19: Companies with a non-organic growth path are more likely to encounter subsidiary initiatives with a global impact, whereas organically grown companies mainly encounter only subsidiary initiatives with a local impact.

P20: Companies with a non-organic growth path tend to more strongly favor entrepreneurial subsidiary behavior than organically grown subsidiaries.

6.2 Discussion of findings based on the literature

The results from the previous case study supports the leading research questions from chapter 3: an interrelation between subsidiary entrepreneurship and the I/R-framework exists. All four environmental settings show a characteristic picture with regard to a company's subsidiary entrepreneurship strategy. For explaining the different patterns of headquarters subsidiary entrepreneurship strategy, three sources of literature will be used: research studying the resulting MNC's strategies (level 2 of the I/R-framework), the subsidiary's strategies (level 3 of the I/R-framework)⁴¹, and the subsidiary entrepreneurship phenomenon.

The following chapter revisits the developed propositions from the previous subchapter, links them with the literature, and integrates them in the proposed model of chapter 3. First, the propositions are examined and validated (6.2.1). Subsequently, an integrated validation of the framework and a summary is given (6.2.2).

6.2.1 Confronting propositions with existing literature

Each of the four environmental settings (multinational, transnational, international, and global) can be characterized by its specific subsidiary entrepreneurship strategy, which is described in the following subchapter. First, each segment is characterized and discussed. Afterwards, the similar characteristics are discussed and a further differentiated where possible.

⁴¹ Although the present analysis focuses on the level 2 of the I/R-framework, it is helpful to review the level 3 research insights because subsidiary entrepreneurship and the subsidiary's strategy are still linked to a certain extent.

Multinational environment

Companies in the multinational environment show a high degree of subsidiary entrepreneurship (P4a) and encounter the second highest level of subsidiary entrepreneurship across all environments (P4b). This is in line with Westney and Zaheer (2009: 252) who state that companies in the multinational environment tend to have a “*portfolio of relatively independent national companies containing entire value chain.*” Therefore, it can be expected that these relatively stand-alone subsidiaries will be more entrepreneurially active than very closely-linked subsidiaries: “[...] *the company allows each subsidiary to operate relatively independently, each being free to customize most aspects of its operations to meet the specific needs of its local customers.*” (Fan et al., 2009: 7). Westney’s insights also suggest that the parent-subsidiary relationship tends to be “long-leash,” which can only be partly observed with a “medium-leash” parent-subsidiary relationship (P2). While it is much longer for CaseCo2, it tends to be relatively short for CaseCo1. One explanation might be that CaseCo1’s environment demands a certain amount of integration and customer needs are challenging, such that headquarters wants to ensure proper customer satisfaction by its stronger involvement (Bartlett and Ghoshal, 1992). Furthermore, companies seem to have subsidiaries that differ in their innovation role (P1a), with a few being innovation leaders and the others being innovation followers (P1b). The reason might be that subsidiaries are relatively independent and have the possibility to establish themselves as centers of excellence (Bartlett and Ghoshal, 1989; Meier, 1997). Surprisingly, a subsidiary’s status and role differences are headquarters-assigned and not subsidiary-driven (P3a). This observation is partly counterintuitive to most of the existing literature. In addition, companies tend to encounter more local than global initiatives, but still have a significant share of global initiatives (P6a, P6b). Subsidiaries in the multinational environment are understood as independent businesses that might deliver ideas for the overall organization (Bartlett and Ghoshal, 1992). However, headquarters does not favor entrepreneurial subsidiary behavior without constraints (P7a) and only selectively allows initiatives an impact on the company’s global strategy (P7b). These observations are partly counterintuitive to the literature which defines the multinational strategy as decentrally with autonomous subsidiary activities. This means that headquarters actively seeks to empower its subsidiaries respectively (Bartlett and Ghoshal, 1989; Roth et al., 1991). Also, the results for headquarters involvement in entrepreneurial subsidiary initiatives are mixed: the proposed decentrally character of the parent-subsidiary relationship (Bartlett and Ghoshal, 1992; Westney and

Zaheer, 2009) suggests that headquarters does not involve at all in entrepreneurial subsidiary initiatives. However, this is not the case in the present study, because headquarters involves itself a medium amount in the ongoing entrepreneurial subsidiary initiatives (P9a). The fact that headquarters supports equally with personnel and financial resources (P9c), in contrast, is more aligned with the existing literature, because it implies that headquarters does not want to influence initiatives too strongly. The next counterintuitive observation can be made by looking at the organization's innovation approach: the literature implies that innovation tends to be decentrally organized, which is only partly true for the studied companies (P12). It seems that the ongoing globalization demands a stronger coordination of activities, including innovation activities (Bartlett et al., 2008). Therefore, it can be assumed that companies in the multinational environment have to use a certain degree of central coordination. However, the present observation is that companies tend to have an unstructured knowledge aggregation process, is supported by the statement from Westney and Zaheer (2009: 252): "*knowledge developed stays at subsidiaries.*" Altogether, the level of subsidiary entrepreneurship seems to be high and it is well accepted by headquarters. However, a certain momentum of coordination can be observed and therefore headquarters' strategy can be characterized as ***coordinated subsidiary entrepreneurship strategy***.

Transnational environment

Companies in the transnational environment tend to have subsidiaries which differ in their innovative role (P1a), with a few being innovation leaders while the rest being follow (P1b). The parent-subsidiary relationship can be described as "long-leash" (P2) and status differences between subsidiaries are mainly subsidiary initiated (P3a). This is supported by "*interdependent subsidiaries differentiated by role and capabilities.*" (Westney and Zaheer, 2009: 252). MNCs tend to face the highest level of subsidiary entrepreneurship relative to companies in other environmental settings (P4a, P4b). One explanation might be that innovation in the transnational environment is mostly decentrally organized (Westney and Zaheer, 2009: 252), which makes it easier for subsidiaries to act entrepreneurially. Another reason might be that "*the primary role of overseas units is to find and take advantage of opportunities within the countries in which they operate.*" (Leong and Tan, 1993: 456) This consequently means that subsidiaries will pursue most of all arising possibilities, ideas that result in a higher degree of subsidiary entrepreneurship. Companies in the transnational environment indeed encounter more local than global initiatives (P6a),

but global initiatives are still frequent and a substantial part of a subsidiary's entrepreneurial activities (P6b). The statement from Leong also supports the observation that companies in the transnational environment tend to fully support entrepreneurial activities (P7a) and allow initiatives an impact on a company's global strategy (P7b). Surprisingly, headquarters tends to be involved to a lower extent in entrepreneurial initiatives than headquarters in other environmental segments (P9a). Due to the fact that subsidiaries in such an environment are often highly empowered and possess the relevant autonomy and knowledge (Bartlett and Ghoshal, 1992), it can be assumed that headquarters support is not needed to such an extent in the multinational, international, or global environment. Consequently, headquarters tends to equally support the activities with financial and personnel resources (P9c). It can also be observed (P12) that companies in the transnational environment have a decentrally organized innovation approach (Bartlett and Ghoshal, 1992). The present analysis also suggests that knowledge aggregation tends to be unstructured (P13). However, this is only true for CaseCo3 and not for CaseCo4. Bartlett and Ghoshal (1989) and Meier (1997) state with respect to knowledge aggregation and sharing that companies in the transnational environment tend to operate as a knowledge network that continuously shares all existing knowledge. Altogether, subsidiary entrepreneurship seems to play an important role for a company's innovation and therefore is highly favored by headquarters. Headquarters strategy towards subsidiary entrepreneurship can be summarized as *requested subsidiary entrepreneurship strategy*.

International environment

According to Bartlett and Ghoshal (1989) and Morschett (2007: 58–59), headquarters in international environments views its subsidiaries as a source of short-term profits. Also, subsidiary units do not adapt extensively to local conditions. In addition, headquarters does not systematically integrate foreign subsidiaries in the organization. The previous characterization might explain the observed “long-leash” parent-subsidiary relationship (P2) and that status differences between subsidiaries are mainly initiated by subsidiary units (P3a). Headquarters focuses on its central operations and therefore does not have the motivation to confer upon certain subsidiaries special roles or a different status. Innovation also tends to be centrally organized (P12) which is supported by “*most technology development is carried out centrally.*” (Taggart, 1997b) Companies in the international environment tend to encounter the lowest degree of entrepreneurial initiative taking by subsidiaries (P4b). This low to medium level of subsidiary entrepreneurship (P4a) might be

explained by headquarters' strict procedure to keep technology and management systems centrally: "*central control of technology and mgmt [sic] systems; knowledge flows from the centre.*" (Westney and Zaheer, 2009: 352) The previous statement might also explain how subsidiaries in the international environment tend to be uniform in their innovation role and are respectively only innovation followers (P1a, P1b). It can be assumed that subsidiaries do not possess the necessary autonomy and support to pursue entrepreneurial activities often. Headquarters' strict centralized focus also explains that it tends to not allow subsidiary entrepreneurship an impact on company's strategy (P7b) as well as only "favors" subsidiary entrepreneurship if it occurs within headquarters guidelines (P7a): "*strategy based on home country leadership.*" (Westney and Zaheer, 2009: 352) This might also explain why headquarters supports entrepreneurial initiatives more strongly with personnel than with financial resources (P9c): the higher personnel support gives headquarters a greater control over entrepreneurial initiatives and secures their consistency with corporate strategy. The observed characteristic of a relatively structured knowledge aggregation (P13), but relatively unstructured knowledge exchange process is not supported by the literature: "*knowledge developed stays at subsidiaries.*" (Westney and Zaheer, 2009: 352) However, it might be explained with the centrally-focused organization approach. Therefore, headquarters will strive to operate as the central knowledge node of the network. Taggart (1997b) states more explicitly that "*the small local effort, where it exists at all, is not shared with sister subsidiaries.*" Consequently, entrepreneurial results will not be shared between subsidiaries without headquarters intervention. However, nothing is said about the existing aggregation mechanisms. Companies in the international environment are more likely to encounter local initiatives and only seldom global initiatives (P6a, P6b). Taggart (1997b) states that a subsidiary in the international environment is more likely to adopt an existing solution rather than pursuing an idea on its own. This explains on the one hand the low degree of subsidiary entrepreneurship in this segment and on the other hand explains why global initiatives seldom occur. Furthermore, the centrally oriented innovation approach might also explain the overall low level of global initiatives. Altogether, subsidiary entrepreneurship tends to be relatively low and headquarters actively controls and involves in such subsidiary activities. Therefore, headquarters approach towards subsidiary entrepreneurship can be summarized as ***restrictive subsidiary entrepreneurship strategy.***

Global environment

MNCs in the global environment tend to have a “short-leash” parent-subsidary relationship (P2) and their subsidiaries seem to have uniform innovation roles (P1a), with most subsidiaries being innovation followers (P1b). Furthermore, status differences between subsidiaries are mainly headquarters-driven (P3a). This is supported by “*weak subsidiaries tightly coupled to home country organization*” (Westney and Zaheer, 2009: 352). However, one interviewee from CaseCo7 reports a relatively “long-leash” for subsidiaries and that they are one source for company innovation. This can be explained by looking at CaseCo7’s innovation approach: CaseCo7 has recently organized its innovation in globally distributed hubs. Those hubs are subsidiaries as well and therefore the statement of a long-leash relationship and subsidiaries being the innovation drivers holds true. However, it still means that innovation is centrally managed (P12) and supervised the way it is also described by Westney and Zaheer (2009: 352): “*innovation pattern: central for global markets.*” Companies seem to encounter a low to medium level of subsidiary entrepreneurship, facing the second lowest level of subsidiary entrepreneurship of all segments (P4a, P4b). This is in line with the following statement: “*The key strategic requirement for Global companies is to manufacture standardized products in a cost-efficient way; therefore we do not expect their subsidiaries to sell a high proportion of products modified for the local market.*” (Harzing, 2000: 108) Therefore, if subsidiaries are only selling a low proportion of locally adapted products, no local initiatives are needed to adapt products locally. Consequently, this reduces the probability of subsidiary entrepreneurship. In addition, companies in the global environment will more likely face local initiatives than global ones, which occur very seldom (P6a, P6b). According to the international environment, it can be explained by headquarters’ centralized approach and attitude (Leong and Tan, 1993), which does not allow enough space for global initiatives. The same explanation is valuable for explaining a company’s tendency to only “favor” subsidiary entrepreneurship performed within certain guidelines (P7a) and the selective allowance of initiatives with an impact on company’s global strategy (P7b). Companies also tend to have a structured knowledge aggregation process (P13), because the high need for global integration demands bundling of knowledge, skills, etc. (Bartlett and Ghoshal, 1989; Leong and Tan, 1993). Support for the proposition can also be found in the work from Leong and Tan (1993: 456): “*global corporations are more likely to be centralized [...], have their overseas operations as implementing tools of parent company strategies, and develop and retain knowledge at headquarters level.*” Altogether, subsidiary

entrepreneurship tends to be relatively low and headquarters actively involves in such activities due to a high global integration need. Therefore, headquarters approach can be summarized as *navigated subsidiary entrepreneurship strategy*.

Propositions with no observed differences for underlying environments

Surprisingly, no differences between the segments could be found with respect to (P5) subsidiary's motivation for acting entrepreneurial, (P8) headquarters change in attitude towards subsidiary entrepreneurship, (P10) incentive schemes used for fostering subsidiary entrepreneurship, (P11) control mechanisms used to supervise entrepreneurial subsidiary initiatives, (P14) knowledge exchange about entrepreneurial initiatives, and (P15) established learning structures with respect to subsidiary entrepreneurship activities.

(P5) All studied companies state that their subsidiaries are not equally entrepreneurially active. Also, the given explanations for the differences between subsidiaries tend to be similar with either subsidiary-related explanations (e.g., unit's maturity, historical connection, size, etc.) or employee-related explanations (e.g., people's entrepreneurial attitude, skill set, etc.). One observation is that the more mature a subsidiary, the more likely it will pursue entrepreneurial initiatives. Sohail and Ayadurai (2004), in contrast, state that the younger a subsidiary unit, the more likely it will pursue entrepreneurial initiatives. Their explanation is that younger subsidiaries have to establish a new business which they consider as entrepreneurial initiative taking. However, this is often directly supported and managed by headquarters and involves parent employees at the local site. Consequently, these activities might not be classified as entrepreneurial subsidiary initiative taking. A possible explanation for the linkage between mature subsidiaries and a higher degree of subsidiary entrepreneurship might be that established subsidiaries have fewer problems to overcome regarding existing resistances against such initiatives (Birkinshaw and Ridderstråle, 1999). Verbeke et al. (2007) mention that one environmental context factor might be "*strategic importance of the host country to headquarters*." However, no research so far has validated the linkage between this context factor and a subsidiary's initiative taking. The present thesis finds small evidence for this relationship at CaseCo6. Evidence for the linkage between an employee's entrepreneurial culture and the existence of subsidiary entrepreneurship was already proven by Birkinshaw et al. (1998) and Liouka et al. (2006) which can also be supported by the present thesis.

(P8) This thesis identifies that a company's organizational approach/attitude strives towards a medium position between centralizing and decentralizing. This is supported by various authors who state that most MNCs are currently developing towards a transnational organization model which corresponds to such a mixture of centralization and decentralization (Bartlett, 1986; Bartlett and Ghoshal, 1989; Westney and Zaheer, 2009).

(P10) The present analysis does not identify different incentives schemes for fostering subsidiary entrepreneurship across segments. It only seems that different approaches (financial vs. reward incentives, regular contests vs. irregular contests, etc.) exist which tend to vary in their success of fostering subsidiary entrepreneurship. However, no research to the best of my knowledge exists which has focused on exploring the correlation between incentives and a subsidiary's initiative taking. Therefore, further research into this topic is needed.

(P11) Although no differences in the control mechanisms across segments can be observed at the first view, a classification can be derived through existing literature. According to Meier (1997), the forms of managing, supervising subsidiaries differ for each environmental setting: the *multinational environment* is characterized by a relatively loose control with financial targets. It is the case that CaseCo1 and CaseCo2 strongly count their control on financials, but both state that they use further mechanisms beyond these financial controls. Therefore, it is a first indication to describe the control mechanisms as financially oriented, but supported by other instruments. Companies in the *transnational environment*, in contrast, tend to use differentiated tools from centralization, formalization, and socialization, which depend on a subsidiary's status and role (Meier, 1997). Surprisingly, CaseCo3 and CaseCo4 both refer to a centralized control for product initiatives (CaseCo3) as well as larger initiatives (CaseCo4). As a result, entrepreneurial initiatives in this segment are mainly managed by centralized control functions. Companies in the *international environment* tend to possess a formal, structured, and mature control system (Meier, 1997). The case findings support this: CaseCo5 (global expert teams) and CaseCo6 (investment and operational planning including entrepreneurial subsidiary initiatives) tend to have a structured and mature control. The *global environment* determines a tight and simple control including operations (Meier, 1997). This is supported by the observations of the present thesis: CaseCo7 operates a continuous control of initiatives via regular meetings and has established a respective reporting line. CaseCo8

has established innovation managers who ensure permanent control of all ongoing initiatives. It can be summarized that the control differences proposed by Meier (1997) can be transferred to the specialty case of subsidiary entrepreneurship. Therefore, it is necessary to adapt proposition P11a accordingly. However, most companies have not established an initiative adapted control and therefore P11b still holds.

(P14) The analysis does not reveal strong differences in knowledge exchange activities regarding entrepreneurial initiatives across segments. However, taking the literature into account, differences between the four environments might be reasoned. According to Meier (1997), knowledge in companies in the *multinational environment* seems to be developed and stored in each local unit separately. This seems to be slightly different in the studied companies: both companies try to aggregate all knowledge gained from entrepreneurial initiatives at the center; the knowledge is then distributed to knowledge-seeking units. Therefore, headquarters seems to partly operate as a knowledge hub. Meier (1997), states that for companies with a *transnational strategy*, knowledge is created and shared throughout the organization in which all units are involved. This seems to be supported by the case findings: CaseCo3 and CaseCo4 state that blog-like exchange platforms, which allow employees to directly interact and share knowledge with each other, are established. Meier (1997) characterizes the knowledge generation and exchange of companies in the *international environment* as centrally driven: knowledge is established at headquarters and afterwards transferred to the subsidiaries. Both companies (CaseCo5 and CaseCo6) have established expert groups consisting of parent and subsidiary employees who facilitate knowledge aggregation and distribution. Therefore, it can be said that knowledge sharing is highly driven and managed by parent employees, but with the addition of involved subsidiary employees. According to Meier (1997), companies with a *global organization* strategy are characterized as companies who develop and store knowledge mainly at headquarters. This is partly true for the two studied companies: Both have established corporate counterparts who generate, collect, and manage the knowledge, but at regular meetings subsidiary employees have the chance to involve in knowledge exchange activities. Altogether, the described differences in the knowledge exchange activities by Meier (1997) seem to be adaptable for the case of subsidiary entrepreneurship. Therefore, it is necessary to adapt proposition (P14) accordingly.

(P15) The observation of a learning structure with respect to a subsidiary's entrepreneurial initiative-taking, reveals that almost all studied companies in all environments have not yet established mechanisms to ensure learning from entrepreneurial initiatives. Therefore, currently no characterization of the environments with respect to the resulting learning attitude is possible.

6.2.2 Integrated validation of the adapted I/R-framework

This chapter on both derives the final validation of the developed framework and reveals correlations of this framework to another framework in the subsidiary entrepreneurship literature.

As a reminder: in chapter 3 the two theoretical pillars, subsidiary entrepreneurship and I/R-framework research, were combined and a framework combining those two was developed (Figure 15). Furthermore, two leading research questions were derived:

RQ1: How does headquarters' strategy towards subsidiary entrepreneurship look like?

RQ2: Which different patterns in headquarters' strategy towards subsidiary entrepreneurship can be observed and how can they be explained based on MNCs environmental situation?

The previous case study analysis supports that a contingency between the environment of a company and its pursued subsidiary entrepreneurship strategy exists. Also, the analysis adduces evidence that the pursued subsidiary entrepreneurship strategy differs for each environmental setting. Therefore, the developed framework from chapter 3 seems to hold true. As a result, the following framework can be proposed (Figure 30)⁴²:

⁴² However, the framework needs to be tested in large-scale before manifestation.

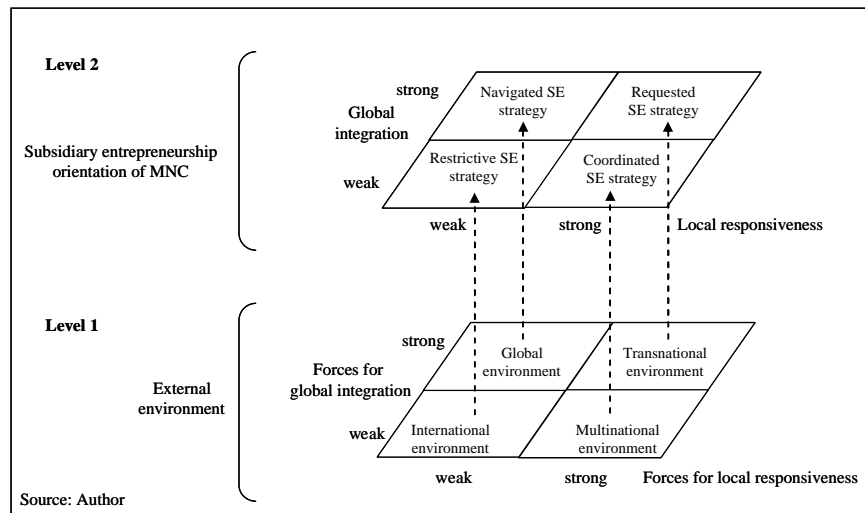


Figure 30: Integration of subsidiary entrepreneurship and I/R-framework

According to Figure 30, the contingency between level 1 and level 2 suggests that companies operating in a multinational environment tend to pursue a *coordinated subsidiary entrepreneurship strategy*, companies in the transnational environment a *requested subsidiary entrepreneurship strategy*, companies in the international environment a *restrictive subsidiary entrepreneurship strategy*, and companies in the global environment a *navigated subsidiary entrepreneurship strategy*. It is important to note that the contingency character of the I/R-framework indeed suggests a certain resulting strategy, but it does not necessarily mean that a company in a certain environment will definitively pursue the respective strategy.

Certain similarities and differences across segments can be observed which are linkable to the underlying dimensions of “local responsiveness” and “global integration.” The first observation explainable by the dimension “*local responsiveness*” is that companies in the multinational and global environment tend to show a higher degree of subsidiary entrepreneurship than companies in the international and global environment. This might be explained by a higher need for local responsiveness in these two segments in comparison to a lower need in the global and international environment. This observation is supported by the following assumption: “*Since being locally responsive is a key strategic requirement for both multidomestic companies and transnational companies, we expect a relatively large proportion of products that are sold by their subsidiaries to be adapted or modified to the local market.*” (Harzing, 2000: 108) Harzing’s assumption emphasizes the need of these two segments to locally adapt, which can be realized by

entrepreneurial subsidiary initiatives. The previously explained greater importance of subsidiaries for the MNC might also explain how companies in the transnational and multinational environment are more likely to encounter global impact initiatives than companies in one of the other two environments. One explanation might be that subsidiary initiatives are more accepted by headquarters in the multinational and transnational environment than in the global and international one and therefore become more easily global. It also seems that a higher need for local responsiveness leads to a more positive attitude towards entrepreneurial subsidiary activities. This might also be explained by a headquarters decentralized organization approach (Bartlett and Ghoshal, 1992; Meier, 1997; Westney and Zaheer, 2009). Another observation which can be explained by the underlying forces for local responsiveness is that companies in the international and global environment tend to support entrepreneurial subsidiary initiatives more with personnel than with financial resources. The lower need for local responsiveness in those two segments does not force the companies to give their subsidiaries more autonomy to pursue ideas on their own. Consequently, headquarters tends to involve itself much more to ensure alignment with overall company strategy.

The dimension “*global coordination*,” in contrast, only partly explains differences across segments: the need for global integration is assumed to have an impact on the parent-subsidiary relationship. Various authors suggest that a higher need for global integration leads to a more centralized and headquarters-driven organization (Bartlett and Ghoshal, 1992; Meier, 1997; Westney and Zaheer, 2009). However, this is only true for the global and not for the transnational environment in the present thesis. Furthermore, the literature suggests that the need for global integration will trigger a higher parent involvement and therefore, one assumption might be that headquarters will become involved in entrepreneurial subsidiary initiatives more strongly in the global and the transnational environment than in the other two environments. However, this is only true for the global and not for the transnational environment.

Altogether, the developed framework holds true for most of the characteristics and explains most of the differences between segments. Therefore, the following summary of the headquarters subsidiary entrepreneurship strategy in each segment can be given⁴³:

⁴³ Adjustments of propositions derived in the following analysis are already included in the overview.

Global environment: navigated SE strategy Subsidiaries with uniform innovation role “Medium-leash” parent-subsidiary relationship Status differences between subs mainly HQ-driven Medium degree of subsidiary entrepreneurship Sub- and employee-related factors motivate SE Local initiatives likely Global initiatives seldom HQ “favors” SE, but only within certain guidelines HQ selectively allows SE an impact on company’s strategy HQ attitude currently decentralizing to a mid-position Medium HQ involvement in SE Stronger support with personnel than with financial resources Medium amount of incentives Tight and simple control mechanisms Structured knowledge aggregation process HQ mainly develops and stores knowledge, subs not involved	Transnational environment: requested SE strategy Subsidiaries differ in their innovation role ⁴⁴ “Long-leash” parent-subsidiary relationship Status differences between subs mainly sub-driven High degree of subsidiary entrepreneurship Sub- and employee-related factors motivate SE Local initiatives highly likely Global initiatives likely HQ fully “favors” SE without constraints HQ allows SE an impact on company’s strategy HQ attitude currently centralizing to a mid-position Low HQ involvement in SE Equal support with personnel and financial resources Medium amount of incentives Centralized control that differs for subs Unstructured knowledge aggregation process All units in knowledge exchange involved (e.g., blogs)
International environment: restrictive SE strategy Subsidiaries with uniform innovation role “Long-leash” parent-subsidiary relationship Status differences between subs mainly sub-driven Medium degree of subsidiary entrepreneurship Sub- and employee-related factors motivate SE Local initiatives likely Global initiatives seldom HQ “favors” SE, but only within certain guidelines HQ does not allow SE an impact on company’s strategy HQ attitude currently centralizing to a mid-position Medium HQ involvement in SE Stronger support with personnel than with financial resources Medium amount of incentives Formal and structured control system Structured knowledge aggregation process Knowledge established, concentrated at HQ, transferred in subs (HQ operates as knowledge hub)	Multinational environment: coordinated SE strategy Subsidiaries differ in their innovation role ⁴⁴ “Medium-leash” parent-subsidiary relationship Status differences between subs mainly HQ-driven High degree of subsidiary entrepreneurship Sub- and employee-related factors motivate SE Local initiatives highly likely Global initiatives likely HQ “favors” SE, but only within certain guidelines HQ selectively allows SE an impact on company’s strategy HQ attitude currently decentralizing to a mid position Medium HQ involvement in SE Equal support with personnel and financial resources Medium amount of incentives Control mainly based on financial controls supported by personal controls Unstructured knowledge aggregation process Most knowledge stays in subs, HQ operates partly as knowledge hub

Figure 31: Subsidiary entrepreneurship strategy by environmental I/R segment⁴⁵

Source: Author

In addition, linkages between the present framework and the one from Boojihawon et al. (2007)⁴⁶ can be revealed. The authors define in their work four different forms of subsidiary entrepreneurship which are classified by headquarters (vertical axis) and the

⁴⁴ A few are innovation leaders, while most are innovation followers.

⁴⁵ Each segment’s description is meant to give a first indication, but a verification based on a large-scale investigation still required.

⁴⁶ Please see Figure 6 at page 37.

subsidiary's (horizontal axis) influence on entrepreneurial subsidiary activity. While the dimensions in the I/R-framework are based on a company's environmental context, the dimensions in the framework from Boojihawon et al. (2007) are based on headquarters or the subsidiary's notion towards subsidiary entrepreneurship. However, a certain link exists: in an environment that demands a high level of local responsiveness, subsidiaries are more likely to have a higher degree of autonomy and therefore will have a higher influence on subsidiary entrepreneurship activities. In an environment which demands a high level of global integration, subsidiaries are more likely to have a lower degree of autonomy and therefore headquarters will have a greater influence on subsidiary entrepreneurship activities. Altogether, it seems reasonable that companies in a multinational environment tend to encounter "*subsidiary-driven entrepreneurship*," companies in a transnational environment "*jointly-driven entrepreneurship*," companies in an international environment "*limited or no entrepreneurship*," and companies in a global environment "*headquarters-driven entrepreneurship*."

Altogether, the integrated model of subsidiary entrepreneurship and the I/R-framework seems reasonable, a contingency between company's specific environment and headquarters' subsidiary entrepreneurship strategy seems to exist, and each segment in the framework seems to have a certain subsidiary entrepreneurship strategy pattern.

7 Conclusion and implications for future research

This final chapter summarizes the results of the underlying thesis and highlights the contribution this thesis makes to the research field (7.1); additionally, further research needs are delineated based on the shortcomings of this thesis (7.2).

7.1 Summary of results and contributions

The main insight which can be drawn from this thesis is that the environmental setting of a MNC seems to be interrelated to headquarters-pursued subsidiary entrepreneurship strategy. This thesis, based on the well-accepted I/R-framework, elaborated the interrelations between MNC's environment and headquarters' pursued subsidiary entrepreneurship strategy. It also aimed at integrating the subsidiary entrepreneurship phenomenon in the existing I/R-framework.

The derived integrated I/R-framework proposes that MNCs tend to pursue different subsidiary entrepreneurship strategies dependent on their respective environmental setting. In accordance with the I/R-framework, four different environmental settings exist and therefore four different patterns of headquarters' approach towards subsidiary entrepreneurship can be observed: companies operating in a multinational environment tend to pursue a *coordinated subsidiary entrepreneurship strategy*, in a transnational environment a *requested subsidiary entrepreneurship strategy*, in an international environment a *restrictive subsidiary entrepreneurship strategy*, and in a global environment a *navigated subsidiary entrepreneurship strategy*. However, it is important to note that the contingency character of the I/R-framework only gives evidence that a certain strategy in a certain segment is highly likely, but in reality a company might pursue another strategy.

The leading characteristic of a coordinated subsidiary entrepreneurship strategy is a high degree of subsidiary entrepreneurship that is well-accepted by headquarters but at the same time coordinated by headquarters to ensure alignment of global impact initiatives with corporate strategy. The requested subsidiary entrepreneurship strategy can be characterized by a very high degree of subsidiary entrepreneurship and headquarters positive attitude towards subsidiary entrepreneurship: headquarters fully favors such activities and even allows subsidiary initiatives an impact on global strategy. The restrictive subsidiary

entrepreneurship strategy, in contrast, is much more controlled: companies tend to encounter the lowest level of subsidiary entrepreneurship and headquarters strongly involves itself in entrepreneurial initiatives. The navigated subsidiary entrepreneurship strategy is, as the previous strategy, restrictive and headquarters is involved in subsidiary entrepreneurship activities. However, headquarters currently relaxes its attitudes. It is important to note that the previous characterizations are only a first indication of headquarters' different patterns to deal with subsidiary entrepreneurship.

This thesis is also able to link the results with the insights from Boojihawon et al. (2007): it can be concluded that each environmental setting will encounter a specific entrepreneurial motivation. Companies in the multinational environment tend to encounter “subsidiary-driven entrepreneurship”, in the transnational environment “jointly-driven entrepreneurship”, in the international environment “limited or no entrepreneurship”, and in the global environment “headquarters-driven entrepreneurship.”

In addition, it seems not only that an MNC's environmental setting is linked to headquarters' attitude towards subsidiary entrepreneurship, but also the MNC's pursued growth path: companies pursuing a non-organic growth path seem to encounter a higher degree of subsidiary entrepreneurship than companies with a mainly organic growth path. The same is true for initiatives with a global impact and headquarters attitude towards such subsidiary activities.

Despite increasing pressure to innovate, MNCs are still relatively unaware of the large innovation potential that rests in entrepreneurial subsidiary initiatives. Therefore, most of the companies observed do not possess a specific subsidiary entrepreneurship strategy that headquarters is aware of, but rather possess an implicit approach. Consequently, most of the companies studied have not yet established an initiative-adapted incentive and control scheme. Also, knowledge management mechanisms are often missing; these would allow aggregation of initiative results as well as the leveraging of insights for the overall organization. Therefore, the managerial implication is to increase headquarters awareness of the slumbering potential within the organization and hence to establish the relevant tool and skill set to tap the full innovation potential.

Altogether, it is important to note that the previous conclusions give a first indication of the relationship between headquarters' approach towards subsidiary entrepreneurship and its environmental setting. The managerial implications should be understood as a starting point for further discussions. Therefore, the present thesis lays the foundation for a more integrated observation of the subsidiary entrepreneurship phenomenon especially from headquarters perspective. However, future research is needed to strengthen the existing findings. The shortcomings of this thesis are sketched in the following and future avenues of research are proposed.

7.2 The road ahead

However, the underlying thesis also has some shortcomings which are delineated in the following section and future avenues of research are developed. The research area of subsidiary entrepreneurship is still in its infant stage and this thesis, to the best of my knowledge, is one of a few that tries to advance the subsidiary entrepreneurship phenomenon from headquarters perspective. The thesis especially focused on headquarters' approach towards subsidiary entrepreneurship and integrated the observed patterns in the well-accepted I/R-framework. The subsidiary perspective towards headquarters approach was partly taken into account either by speaking with people at subsidiary units or by speaking with people at headquarters who have previously possessed roles at subsidiary sites. However, the results of this thesis should be further validated by taking the subsidiary's perspective on headquarters approach into greater account. Therefore, future research should strongly aim to further integrate subsidiary's perspective in the developed concept. This would ensure a fully integrated picture.

This thesis's character is explorative, because no research aiming at this topic (studying the subsidiary entrepreneurship phenomenon from headquarters perspective) existed. Therefore, the major goal of this work was to develop an understanding of the topic and to derive a first set of propositions. Consequently, the most suitable approach for this thesis was to work with case studies, because a large-scale quantitative assessment would not have been able to deliver those explorative insights. However, it now would be interesting to test the developed framework with a large-scale questionnaire and to achieve wider validation and acceptance of the concept. In addition, this thesis focused on German-

speaking headquarters and it would be interesting to test the developed framework in other geographical settings.

Furthermore, the present thesis developed a first idea of how the different patterns of headquarters dealing with subsidiary entrepreneurship look like, but with respect to some parts of the approach (e.g., governance mechanisms for managing subsidiary entrepreneurship, results usage, and learning from entrepreneurial subsidiary initiative-taking), only limited information could be gathered. Future research should therefore try to supplement the existing findings by especially focusing on headquarters incentive scheme fostering entrepreneurial activities, knowledge mechanisms employed to leverage subsidiary entrepreneurship activities, and headquarters' learning approach towards such entrepreneurial subsidiary activities. In addition, further insights from the subsidiary entrepreneurship literature should be set into perspective to the developed framework: for example, in which form does the resistance against an entrepreneurial initiative differ for each of the four environments? How do the uncertainties an entrepreneurial initiative faces differ for the four environments?

The I/R-framework suggests that companies who adopt the strategy fitting their environment tend to experience superior performance; this idea was not examined in this thesis. It would be interesting to investigate if this relationship can be transferred to the case of headquarters subsidiary entrepreneurship strategy. For example, do companies who use the appropriate subsidiary entrepreneurship strategy perform better than companies that do not pursue the appropriate one? Does the appropriate subsidiary entrepreneurship strategy lead to a better innovation performance? Andersson et al. (2001) also stress that past research often focused on typologies and classifications and often neglected performance implications.

During the research, it was also discovered that a relationship between company's growth path and its approach towards subsidiary entrepreneurship seems to exist. However, the focus of this analysis was to discover the relationship between MNC's environmental setting and its approach towards subsidiary entrepreneurship. Therefore, the present thesis did not engage fully in the analysis of the relationship between growth paths and pursued subsidiary entrepreneurship strategy. Future research should further investigate this topic.

The concluding remarks are that this thesis was able to answer the questions from the beginning, but at the same time opened a new field for investigation which was not obvious at the beginning of the work. Nevertheless, there is hope that this thesis made a first important step towards exploring the subsidiary entrepreneurship phenomenon from headquarters perspective and therefore opened up future avenues of research.

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