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RESEARCH ARTICLE

# Beyond Simple Configurations: The Dual Involvement of Divisional and Corporate Headquarters in Subsidiary Innovation Activities in Multibusiness Firms

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**Abstract** We investigate "dual headquarters involvement", i.e., corporate and divisional headquarters' simultaneous involvement in innovation development projects hosted by subsidiaries of multibusiness firms. Drawing on selective hierarchical involvement theory and the literature on subsidiary network embeddedness, we analyze 83 innovation projects in 22 multibusiness firms and find that the number of partners in the projects, rather than subsidiary intra- and inter-divisional embeddedness acts as a driver of dual headquarters involvement. We do however find that intra- and inter-divisional embeddedness is positively related to dual headquarters involvement when the number of partners in the innovation project is relatively large. These results lend support to the idea that parenting in complex organizations entail complex headquarters structures. Our results suggest that we need to go beyond simple conceptualizations of headquarters and that considering different dimensions of the innovating subsidiary's network helps in explaining dual headquarters involvement.

**Keywords** Parenting · Headquarters · Selective involvement · Subsidiary · Embeddedness · Innovation

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## 1 Introduction

During the last decade, research on the role and function that headquarters play in complex multibusiness organizations such as multinational corporations (MNCs) has been invigorated. Recent contributions have investigated how headquarters attempt to add value to the organization (Nell and Ambos 2013), for example by transferring knowledge to their subsidiaries (e.g., Nell et al. 2016; Parmigiani and Holloway 2011), by enabling the development and the sharing of innovations within the firm (e.g., Ciabuschi et al. 2011a; Dellestrand and Kappen 2012; Un and Cuervo-Cazurra 2004), or by managing inter-divisional conflicts and uncertainty (Poppo 2003).

While this stream of literature has substantially advanced our understanding of headquarters roles and functions (also called parenting activities), it is surprisingly silent on one of the key characteristics of parenting in complex organizations—parenting configurations. Goold and Campbell (2002) are among the first to highlight that parenting in complex organizations usually goes hand in hand with a more complex structure of parenting itself. For example, in complex organizations, parenting activities are often allocated to several headquarters (Alfoldi et al. 2012; Birkinshaw et al. 2006; Nell et al. 2017) or even to subsidiaries (e.g., Centers of Excellence, cf., Frost et al. 2002). Furthermore, complex organizations experience that multiple headquarters simultaneously interact with a particular subsidiary when they attempt to add value. For example, a subsidiary in Japan, engaging in a new innovation project, might simultaneously coordinate its actions with the divisional headquarters for wind turbines in Denmark, but it might also interact and experience involvement from corporate headquarters in the United States.

Current research largely disregards these nested and interdependent headquarters' structures and instead tends to focus on individual headquarters (see Baaij and Slangen 2013; Hoenen and Kostova 2015). This is unfortunate because issues such as matrix structures and complex multiple headquarters organizations seem to re-emerge in many companies (Birkinshaw et al. 2016; Egelhoff et al. 2013; Wolf and Egelhoff 2013). Furthermore, simultaneous linkages between a subsidiary and multiple headquarters can create overlaps of authority and interaction, and maintaining such redundancies is costly (Williamson 1975). For example, the joint venture literature has shown that the involvement of a larger number of parents can have detrimental performance implications for subsidiaries (Gong et al. 2007; Luo et al. 2001) and the matrix literature has emphasized dysfunctional conflicts arising due to several intervening headquarters (Galbraith 2009). Or, as Egelhoff (1988, p. 4) puts it, "dual hierarchies involve more managers and staffs, and since the goals and strategic concerns of the two often concern the same resources, considerable managerial effort has to be put into constructive conflict resolution". Although multiple parenting structures can be harmful for the subsidiaries, we still have a limited understanding of the questions why and under which circumstances firms nevertheless opt for organizing their parenting in such a way.

This article sheds light on the issue of multiple headquarters involvement in the context of innovation development projects hosted by subsidiaries. Drawing on

selective hierarchical involvement theory (Poppo 2003) and the literature on subsidiary network embeddedness (Andersson et al. 2002; Meyer et al. 2011), we investigate drivers of divisional and corporate headquarters involvement in subsidiary innovation development processes in terms of the allocation of (managerial) resources to the same innovation development projects. We refer to this phenomenon as "dual headquarters involvement" (Birkinshaw et al. 2016). We use the MNC as our research context and depict such a multibusiness firm as a complex organization with multiple headquarters and subsidiaries that are internally embedded (Meyer et al. 2011). Our overarching argument is that the way in which the subsidiary is embedded within the organization drives dual headquarters involvement. Specifically, we explore instances where the subsidiary innovation project is internally embedded in the corporate network—both within and beyond its business division—and use this as a marker of organizational complexity. Moreover, we consider the size of the subsidiary's innovation network in order to further investigate organizational complexity.

For headquarters, it is a critical task to govern inter-unit relationships within multibusiness firms and manage the development of innovations that may be critical for the competitive advantage of the organization (Edwards et al. 2015; Hong Chung et al. 2006). By focusing on the nature and role of multiple headquarters in complex organizations, we address a phenomenon that has remained largely unexplored in the literature, both from a theoretical and an empirical perspective. Consequently, our findings contribute in a number of ways. First, we contribute to the literature on parenting in complex structures (e.g. Birkinshaw et al. 2006; Foss et al. 2012; Galbraith 2009; Kostova et al. 2016; Poppo 2003). This literature predicts that dual headquarters involvement is unlikely to occur since it is costly and draws on the scarce resources and attention of headquarters staff (Ambos et al. 2010; Nell et al. 2011; Poppo 2003), since it runs counter the traditional M-form logic (Chandler 1991; Verbeke and Kenworthy 2008; Williamson 1975), and because it increases the likelihood of conflicts and coordination problems (Goold and Campbell 2002; Gong et al. 2007). Yet, we highlight circumstances under which we can expect to observe overlapping headquarters' involvement.

We find that innovation network size, rather than subsidiary embeddedness within and beyond their division (later referred to as intra-/inter-divisional embeddedness), acts as a driver of dual headquarters involvement. However, intra-/inter-divisional embeddedness is positively related to dual headquarters involvement when the innovation networks are relatively large. In this paper, we thus identify and explain a rationale for what may appear as redundant and costly headquarters-subsidiary interaction patterns. To this end, we extend what Poppo (2003, p. 405) called a "theory of selective corporate involvement" by specifying influencing factors and their interactions when explaining more than the involvement of just one single (corporate) headquarters. A second contribution of our paper is that it responds to the call for further research on internal embeddedness of subsidiaries (Garcia-Pont et al. 2009; Meyer et al. 2011). We add understanding to the issue of headquarters involvement in subsidiary activities in terms of elucidating a variation in headquarters involvement as contingent on subsidiary network elements (i.e., intra-/inter-divisional embeddedness and network size) (Saka-

Helmhout 2007). Third, we contribute to the literature on the management of dispersed innovations in large diversified firms (Regnér and Zander 2014). We provide support for the presence of simultaneous headquarters involvement in innovation development projects. To our knowledge, this phenomenon has received only scarce attention. Thus, we hereby extend previous work on single headquarters' involvement in innovation projects (Ciabuschi et al. 2011a; Dellestrand and Kappen 2011). Furthermore, we suggest that taking into account the involvement of several headquarters in the same innovation projects can capture a more holistic view of the innovation governance mechanisms applied within firms.

## 2 Theoretical Background

### 2.1 Parenting in the Multibusiness Firm

Multibusiness firms can be defined as organizations that operate in more than one product or geographic market and that, as a consequence, structure their corporation into separate divisions (e.g., business units with a particular product or geographic area focus) (Chandler 1962). This type of organization has been termed the "M-form" organization (Williamson 1983) and is considered one of the most important organizational innovations. The M-form organization usually goes hand in hand with the establishment of different types of headquarters such as corporate, divisional, and regional headquarters (Stopford and Wells 1972). These headquarters co-exist and it has traditionally been argued that they are responsible for a differentiated set of tasks and activities (Chandler 1991; Foss 1997). The reasoning is based on theories of information processing and transaction costs (Martin and Eisenhardt 2010). The information processing view argues that individual top managers at the corporate center suffer from cognitive limitations. In turn, delegating operational decision-making to divisions is thus considered to be efficiency-enhancing. However, the corporate center has presumably superior knowledge regarding the overall external business environment of the firm and the linkages that exist between separate divisions. For example, Martin and Eisenhardt (2010, p. 267) summarize that, "although not fully developed […], the information processing view does suggest that corporate executives are likely to have the best information about the most valuable cross-BU collaborative opportunities and thus are likely to orchestrate the most effective cross-BU collaborations". From a transaction-cost perspective, it has been argued that divisional headquarters are better positioned to oversee and monitor activities within the division as compared to corporate headquarters but that the latter would focus on firm-wide incentives and control systems (Williamson 1975). Furthermore, Williamson (1975) claimed that in "corrupted" M-forms, corporate managers would be intensively involved in divisional affairs, which diverts them from objectively evaluating divisions and allocating resources. Thus, the literature suggests a clear separation between corporate headquarters activities such as performance evaluation (financial control), resource allocation, and (long-term) corporate strategy formulation and divisional/regional headquarters activities which are more oriented towards the operational

activities of their divisions. That is, there is, in principle, only selective involvement of the corporate headquarters in divisional affairs and there is relatively limited coordination of activities across divisions (Verbeke and Kenworthy 2008).

In sum, the classic M-form posits a strictly hierarchical organization with corporate and divisional headquarters justifying their existence by adding value to the corporation in specific ways. However, despite the general appeal of these claims, many scholars have identified its limitations. While it is generally acknowledged that top management's resources are limited, scholars started offering contingencies that warrant a deviation from the classic organization. For example, Poppo (2003) summarizes that corporate headquarters activities (also called "parenting activities", Goold et al. 1998) are not necessarily destructive but that inter-divisional collaboration and coordination initiated and managed by the corporate center can represent a source of advantage. She identified a gap in specifying under which circumstances corporate headquarters might steer and involve itself in inter-divisional affairs. Her results show that higher uncertainty as well as the existence of valuable assets used across divisions increase the likelihood that corporate headquarters involves itself in inter-divisional dispute resolution. Similarly, Eisenmann and Bower (2000, p. 349) argue that the classic M-form is suitable in cases of unrelated diversification. The existence of economies of scope potentials would warrant "fundamentally different management practices". Under such conditions, corporate headquarters should be involved in divisional operating decisions, delegate less to the divisions, and employ more mechanisms that help promoting inter-unit cooperation (Eisenmann and Bower 2000; Gupta and Govindarajan 1986; Hill et al. 1992).

This research has contributed to our understanding of the inner workings of large corporations and the role different types of headquarters play in these organizations. However, there are still a number of outstanding issues. While prior research has highlighted some contingencies to the classic M-form organization, "empirical findings have often been statistically modest" (Martin and Eisenhardt 2010, p. 266) and a theory of selective involvement of headquarters can still be considered underdeveloped (Foss et al. 2012; Poppo 2003). Furthermore, extant research focuses nearly exclusively on the firm-level and investigates corporate headquarters involvement in divisional affairs (Martin and Eisenhardt 2010). That is, it disregards that the parenting processes can be more complex and that corporate and divisional headquarters might simultaneously involve themselves in and interact with units below the divisional level. This issue is particularly visible in the literature on subsidiaries of MNCs where individual subsidiaries are usually conceptualized as units dealing with only one single headquarters which could be the corporate or divisional headquarters. Put differently, current research largely disregards nested headquarters structures within large firms and the fact that subsidiaries might experience involvement in its activities by more than just one headquarters unit (Hoenen and Kostova 2015). Such multiple interaction patterns between one subsidiary and several types of headquarters would reflect complex parenting situations which are covered in extant literature only to a very limited extent (see Goold and Campbell 2002).

In this paper we define a situation where both corporate and divisional headquarters are involved in particular subsidiary-level processes and activities as a

situation of *dual headquarters involvement*. We describe innovation activities in large multibusiness firms that are also internationally dispersed and focus on these activities as they provide an appropriate empirical setting for dual headquarters involvement (Edwards et al. 2015; Regnér and Zander 2014). While we have advanced our knowledge on selective corporate headquarters involvement (Poppo 2003), we think that a theory of selective dual headquarters involvement would complement extant research and provide valuable insights into multibusiness firms' organizations.

### 2.2 Innovation in the Multibusiness Firm

Traditionally, for firms leveraging their innovation capabilities across product markets and country borders, early processes of innovation and upgrading of capabilities was a corporate, i.e., a headquarters matter. Over time, however, subsidiaries have come to account for an increasing share of all innovation initiatives within the firm (e.g., Cantwell 1989; Dunning 1994; Reger 2002). Firms realized that they can profit from the multitude of unique environmental contexts in which they are embedded via their subsidiaries (Regnér and Zander 2014). Asmussen and Pedersen (2009) show that specific subsidiary capabilities are developed in locations where these capabilities are necessary to compete or survive in the market. In other words, the international dispersion of the firm enables it to develop innovations somewhere in its network that it would not develop in the home location due to differences in environmental factors such as demand or supply conditions, or the level and type of competition (Asmussen and Pedersen 2009). The firm profits from dispersed innovative activities when it manages to leverage resources across the rest of the firm, that is, when it realizes economies of scope. In fact, it has been argued that the MNC exists because it is a superior vehicle to manage such transfer of innovations, knowledge, and capabilities across borders as compared to the market (Kogut and Zander 1993).

In sum, within multibusiness firms operating in several country markets, subsidiaries have become important actors in developing innovations (Birkinshaw and Hood 1998). However, Asakawa (2001) argue that most subsidiaries are quite disconnected from the rest of the firm when they are working on new innovations. Such isolation can be detrimental for subsequent transfer to the rest of the firm as possible transfer channels and relationships to other units within the firm have to be re-developed or installed newly. Furthermore, a relatively isolated development process leads to information asymmetries. Other units of the firm—including headquarters units—are likely to lack in-depth knowledge of the kind of innovation that the subsidiary is developing. To this end, previous literature has investigated the role of headquarters' involvement in subsidiary innovation activities (e.g., Ciabuschi et al. 2011b; Dellestrand and Kappen 2012). The central idea is that headquarters involves itself because some of the above-mentioned problems can be overcome. Dual headquarters involvement, however, has not been covered so far in extant literature. We focus on explaining dual headquarters involvement in innovation projects in the following sections.

## 3 Hypothesis Development

Given that a lot of innovation development in the multibusiness firm takes place at the subsidiary level, and that innovations substantially contribute to the competitive advantage of the entire firm, it seems plausible that headquarters (both divisional and corporate) have an interest in involving themselves in subsidiary innovation development processes. Headquarters involvement can be conceived as non-financial resource allocation (Bower and Gilbert 2005). It corresponds to managerial skill, knowledge of organizational processes and routines, the ability to identify complementarities within the organization, and information make up a differentiated set of tangible and intangible resources (Barney et al. 2001; Dellestrand and Kappen 2011). We are focusing on such non-financial resources allocated by headquarters which we conceive as related to the notion of positive attention received by subsidiaries (Ambos and Birkinshaw 2010; Bouquet and Birkinshaw 2008).

For headquarters, it makes sense to focus on becoming knowledgeable of and to participate in the incidence of innovation development since innovations are costly to develop but potentially crucial for the competitive advantage of the whole organization (Teece 1977). Trying to facilitate innovation development can thus be understood as a part of the value adding role of headquarters. It can also have the additional benefit of headquarters being more knowledgeable about innovations once they are ready for subsequent transfer throughout the organization. As a corollary, involvement during the development phase enables headquarters to perform its knowledge directing function (Foss 1997) and provide appropriate support during a subsequent innovation transfer phase. Put differently, by involving itself in innovation development processes at a focal subsidiary, it becomes a participant in the innovation development network and is thus not an outsider of the specific innovation network, decreasing any potential liability of outsidership (Johanson and Vahlne 2009; Vahlne et al. 2012).

However, while being involved is a way for headquarters to create value, headquarters need to be selective about when to become involved. Indeed, managerial attention and resources are limited and headquarters cannot be involved in all subsidiary processes (Ocasio 1997; Bouquet and Birkinshaw 2008). Thus, headquarters will choose to become involved in subsidiary innovation processes when it perceives that it can help and/or gain from these processes. Corporate and divisional headquarters will follow a similar reasoning in deciding where to direct their attention and resources. This implies that both headquarters can be involved in the same subsidiary innovation processes. Yet, this simultaneous involvement of multiple headquarters is less likely to add value. Managers from divisional and corporate headquarters have different—and sometimes divergent—interests and concerns (Egelhoff 1988). Thus, when managers from both types of headquarters are involved in the same subsidiary innovation processes, this will result in overlaps of authority and interaction that are likely to create conflicts (Williamson 1975). Because the simultaneous involvement of multiple types of headquarters can be

inefficient and costly, it is important to understand why multibusiness firms opt for this activity.

The question then becomes: what drives the dual involvement of headquarters in the same subsidiary innovation development processes?

As suggested, resource constraints force headquarters to selectively rank-order and pick innovation projects to support. This winner-picking situation is likely to be driven by the perceived importance of the innovations in terms of the potential to add value to the firm. Innovations that are considered important drive the attention of headquarters and its involvement in the development process, because headquarters will want to help and benefit from these innovations. This builds on the notion that innovations with greater importance for the firm are expected to add more to its competitive advantage than less important innovations.

An important signal of the importance of the subsidiary innovation process is the embeddedness of the innovative subsidiary within the firm (Teece 1977). Despite the fact that the innovating subsidiary is probably collaborating with actors external to the firm, most subsidiaries still maintain linkages to units within the firm (Andersson et al. 2002; Ghoshal and Bartlett 1990). That is, innovative activity at the subsidiary-level does seldom occur in complete isolation from other activities inside the firm but is embedded within the firm. We argue that the way the innovative subsidiary is internally embedded within the firm allows for explaining the occurrence of dual headquarters involvement.

We propose that subsidiaries within the division as well as subsidiaries in other divisions (but inside the firm) may participate and provide resources to the innovation development process (Ghoshal and Bartlett 1990). For example, within the Swedish multinational Eriksson, an innovative unit that develops technology ideas would maintain linkages to and draw on insights from the network equipment division as well as the mobile devices division. This way of embedding itself internally provides the innovating unit with a heterogeneous set of knowledge, ideas, and opportunities that facilitates innovation development.

Subsidiaries that maintain linkages within and beyond their divisions during innovation development processes send a strong signal of centrality and potential importance of the project to both corporate and divisional headquarters. In particular, embeddedness within the division shows that the innovation being developed has not only potential for the subsidiary but also for other subsidiaries within the division. Thus, intra-divisional embeddedness is likely to drive the involvement of divisional headquarters in the innovation development. Similarly, linkages with subsidiaries in other divisions show that the innovation being developed has potential benefits and applications for other divisions as well. As a result of inter-divisional embeddedness, corporate headquarters is likely to become involved in the innovation process. This echoes the notion of innovations being strategically important issues to which hierarchical units pay attention to (Dutton and Ashford 1993). Along these lines, subsidiaries that maintain linkages both within and beyond their divisions are likely to attract the attention and involvement of both corporate and divisional headquarters.

In addition to making the potential benefits of the innovation more visible, the linkages that the subsidiaries maintain within and beyond their divisions increase

the potential for conflicts within the division and with other divisions, respectively. For example, units outside the innovating subsidiary's division might be reluctant to spend time and managerial resources on a "foreign" innovation project. Furthermore, compensation issues can occur that might require internal transfer pricing when new innovations draw directly on proprietary assets from other divisions. As the intra-/inter-divisional embeddedness makes the importance of the innovation to both corporate and divisional headquarters more visible, both headquarters will have larger incentives to solve the conflicts that might arise as a result of the increased complexity. Divisional headquarters are likely to become involved to address issues between subsidiaries of the division while corporate headquarters are likely to become involved to solve conflicts between divisions (Poppo 2003).

This argumentation is also valid when corporate and divisional headquarters interact with each other, as each of the two wants to be involved in order to (potentially) direct and benefit from the innovations. Thus, we argue that intra-/inter-divisional embeddedness leads to dual headquarters involvement in order to solve problems as well as to add value:

*Hypothesis 1: Intra-/inter-divisional embeddedness of the innovative subsidiary is positively related to dual headquarters involvement in innovation development processes.*

One of the characteristics that depict well the complexity of an innovation process is the size of the innovation network (Capaldo 2007; Cuevas-Rodríguez et al. 2014; Schilling and Phelps 2007). This builds on the idea that the innovating unit needs to collaborate with many different partners within and outside the firm (Andersson et al. 2002). A larger innovation development network implies a greater complexity to manage (Dhanaraj and Parkhe 2006), i.e., the developing subsidiary may not on its own possess the resources to handle all network relationships. A large innovation network is also frequently related to conflict and uncertainties during the development process (Håkansson and Ford 2002; Koch 2004).

Divisional headquarters are likely to become involved in such large projects as they are closer to the subsidiaries and have a better understanding of the subsidiary, its business network, and the innovation requirements (Benito et al. 2011; Dellestrand 2011). As such, divisional headquarters may help steering the network and handle or negotiate conflict with multiple partners (Poppo 2003). Simultaneously, these large projects are likely to attract attention at the overall firm-level, and thereby the involvement of corporate headquarters. A larger innovation network size signals that the project is important and while corporate headquarters usually restrain their involvement in business matters, they are likely to become involved in large-scale and resource-intensive projects (Verbeke and Kenworthy 2008). For large projects, corporate headquarters will try to complement the value-adding activities of the divisional headquarters. As a result, we argue that the size of the innovation network leads to dual headquarters involvement:

*Hypothesis 2: Innovation network size is positively related to dual headquarters involvement in innovation development processes.*

Large innovation projects embedded within and beyond the division as well as involving many partners within and outside the firm will be the ones most likely to lead to dual headquarters involvement. Indeed, both divisional and corporate headquarters will see enhanced potential for value addition and problem solving in these innovation projects.

First, while intra-/inter-divisional embeddedness makes the potential benefits of the innovation projects for the division and the firm more visible to both types of headquarters, we argue that this embeddedness in combination with a larger network size will be associated with even more potential benefits. Seeing more potential in the innovation projects for the division and for the firm, divisional and corporate headquarters will have more incentives to become involved in order to secure the associated benefits.

Second, the complexity and conflicts associated with innovation projects embedded within and beyond the division are heightened when the projects are large (Verbeke and Kenworthy 2008). Thus, these projects have greater needs for coordination. For these projects, both divisional and corporate headquarters can help because the increased complexity brought by the larger network size makes the coordination needs more salient at the divisional and at the firm level (Ciabuschi et al. 2011a; Foss 1997). Divisional headquarters will become involved in these innovation projects because a larger innovation network makes intra-divisional conflicts potentially more frequent and harmful. Similarly, corporate headquarters will become involved in these innovation projects because the inter-divisional conflicts will be potentially more recurrent and detrimental. Thus, we suggest that the subsidiary innovation projects that comprise of actors within and beyond the division as well as a large number of partners within and outside the firm, will lead to dual headquarters involvement.

*Hypothesis 3: The interaction between innovation network size and intra-/inter-divisional embeddedness will be positively related to dual headquarters involvement.*

## 4 Data and Methods

This study is part of a larger research project that focuses on innovation activities in international multibusiness firms. The project includes information about innovation development activities, as well as innovation transfer activities. This paper focuses on the innovation development part. A standardized questionnaire was developed to study innovation development structures and processes in subsidiaries. The questionnaire has been pre-tested in pilot studies on managers in order to eliminate or modify ambiguous questions, with the aim of increasing the reliability and face validity of questionnaire items. Data was collected from 63 subsidiaries of 22 firms. At the subsidiary level, information concerning 83 innovation development processes was collected. The average subsidiary in our sample has 740 employees

(min 3; max 6000) and has been on the market for 51 years (min 3; max 205). The average division has 13,517 employees (min 100; max 120,000) and the average firm has 76,812 employees (min 1400; max 420,000).

Data was collected by approaching multibusiness firms that were likely to be involved in innovation development and transfer processes, asking them to participate in the study. During the initial meeting with top management, we asked them to identify subsidiaries that could have been undertaking innovation endeavours in recent years. Consequently, the sample was generated with the help of the participating firms which is an appropriate sampling strategy because no publicly available detailed information on subsidiaries and their innovation processes exists (Hair et al. 2006).

Data collection focused on subsidiaries because many innovation development projects are hosted at this level, an assertion which is supported by prior findings in the literature (Birkinshaw and Hood 1998). Themes that data was collected about entailed for instance headquarters-subsidiary relations, innovation features, as well as network relationships. The selection criterion for innovations was based on the definition of an innovation as "an idea, practice, or object that is perceived as new by the individual" (Rogers 1983, p. 11). The developing subsidiary made this estimation with respect to innovations that potentially could be included for data collection.

The data were collected through face-to-face interviews with subsidiary managers or equivalent respondents who were deemed knowledgeable about the field of inquiry, namely innovation development, transfer, and exploitation. The detailed access to innovation development projects and subsidiaries hosting them increased the possibility of gaining deeper understanding of the questions at hand. The approach also allowed the detection of inconsistencies during the interviews and permitted respondents to ask questions about the indicators if they were uncertain about their meaning. Each of these measures adds to an increased data quality.

*Dependent variable* We assessed the simultaneous involvement of both corporate and divisional headquarters along four dimensions: (1) headquarters has participated closely in developing the innovation, (2) headquarters has brought competence of use for the development of the innovation, (3) headquarters has been important through specifying requests, and (4) the cooperation with headquarters has been characterized by frequent interaction. Subsidiary managers responded to these items on a scale from 1 (totally disagree) to 7 (totally agree) for both types of headquarters. To ensure that our measure was capturing the simultaneous involvement of corporate and divisional headquarters, we created dummies to clearly separate the cases in which both headquarters were involved from those in which only one type of headquarters was (i.e., 1 if the item score was strictly above average for both types of headquarters; 0 else). Analogous to Laursen and Salter (2006), we used the sum of the four dummies. Thus, our dual headquarters involvement measure range from 0 to 4.

*Independent variables* Intra-/inter-divisional embeddedness was derived from a list of the most important counterparts with which the subsidiary interacted with during the innovation development process (excluding headquarters). We coded

intra-/inter-divisional embeddedness as 1 if the subsidiary had important partners both within its division as well as in other divisions of the firm, and 0 otherwise. Subsidiary innovation network size was measured by counting the number of organizations within and outside the firm with which the developing subsidiary has had important exchanges. The scale included the following options: 1 (none), 2 (between 1 and 3), 3 (between 4 and 9), 4 (between 10 and 20), 5 (between 21 and 30), 6 (between 31 and 50) and 7 (more than 50).

*Control variables* We employ a number of controls in order to further specify our regression model. To control for location effect, we included a binary variable of 1 if the subsidiary was located in the same country as the corporate headquarters (0 else). Subsidiary size and age were included as the natural logarithms of the number of employees and years since the subsidiary was founded. Regarding the specificities of the innovation under development, we included a dummy variable that was coded 1 if the innovation was deemed as a core innovation and 0 otherwise. Also, to investigate the resource requirements of the innovation, we asked the respondents to evaluate the following statements on a scale of 1 (strongly disagree) to 7 (strongly agree): to develop the innovation technology/process know-how, you had to invest significantly in (a) specialized equipment and facilities and in (b) skilled human resources (Cronbach's alpha = 0.67). Finally, we controlled for innovation significance. This measure aims at capturing if the innovation is potentially valuable only within the developing subsidiary's division or also within the rest of the firm. Respondents were asked to assess the importance of the innovation to (a) the division/business area, and to (b) the firm as a whole, on a scale of 1 (very low) to 7 (very high). We transformed these answers into a dichotomous variable by coding 1 if both answers received values above 3, and 0 otherwise.

Regarding method bias, several ex ante and ex post treatments were performed. First, the questions and indicators used in this study were spatially separated in the questionnaire which reduces the risk of respondents' rationalizing their answers (Podsakoff et al. 2003). Second, data collection was made in face-to-face settings with each respondent. This should increase the quality of the data and consequently also decrease the risk of biases. Third, we combined questions measured on attitude or perceptional scales with more objective questions in forms of simple counts (e.g., size of innovation development network), which should reduce the risk of a common variance. Finally, as an ex post test, a 'marker variable', i.e., a variable theoretically unrelated to the constructs of interest, was used as a surrogate for method variance (Lindell and Whitney 2001). This variable answers a question about the level of agreement (1–7) with the statement 'Informal communication channels make you aware of your performance relative to other units'. As expected, we found marginal and non-significant correlations between the 'marker' and the main variables in the study. In sum, we are confident that our study is not significantly impacted by common method bias.

## 5 Results

Table 1 contains the correlations of the variables in our study. Table 2 presents our OLS regression results. We used cluster-robust standard errors to account for the nested data structure in 63 subsidiaries (Bliese and Hanges 2004). Model 1 includes all direct effects of the proposed model. The model is significant at $p < 0.01$ with an R-squared value of 0.28. Of the control variables, the innovation significance dummy and the investment requirements are positively related to dual headquarters involvement, at $p < 0.01$ and $p < 0.05$, respectively. Subsidiary age is negatively related to dual headquarters involvement ($p < 0.05$). These results are stable across the models. 60% of the innovation projects in our final sample were taking place in foreign subsidiaries and the colocation control variable was insignificant across the different models. The other control variables of core innovation and subsidiary size were also insignificant in the two models.

Regarding the direct effects of the main variables of the model, i.e., intra-/inter-divisional embeddedness of the innovating unit and the innovation network size, the data shows no support for hypothesis 1 while hypothesis 2 is supported ($p < 0.05$). Namely, innovation network size is positively and significantly related to dual headquarters involvement. Model 2 adds the interaction term. This model is significant at $p < 0.01$ (R-squared 0.30) and provides support for hypothesis 3 ($p < 0.01$) while the other coefficients stay robust.

Additional probing of the data reveals that intra-/inter-divisional embeddedness only becomes significant at relatively larger network sizes (Kingsley et al. 2017). This infliction point lies at around 1.4 standard deviations above the mean (see Fig. 1). Thus, intra-/inter-divisional embeddedness is significantly different from zero and positive when the subsidiary is operating with a relatively large development network. Approximately 17% of the subsidiaries in our database operate with such large innovation networks. Thus, a relatively large network (and its corresponding larger visibility and complexity) is necessary for intra-/inter-divisional embeddedness to become significant.[1] Also, we explored different levels of intra-/inter-divisional embeddedness and found that the interaction with innovation network size is insignificant for projects in subsidiaries that are connected to many partners within the firm. This result suggests that both types of headquarters might see potential for benefits and conflicts growing with subsidiary embeddedness and network size and thus decide to become involved, but only until a certain point of subsidiary embeddedness after which the complexity might be too high for headquarters to consider their involvement valuable.

Furthermore, we explored several different variable specifications, changing cut-off values for applicable variables by either adding or subtracting one unit of the scale without any substantial change in results. Thus, we remain confident that our approach in terms of cut-off values is appropriate and robust to specification changes. We also tested for the potential effects of outlier firms and subsidiaries in the sample and found no reason for concern.

[1] Note that the distribution of our network size variable is not significantly different from a normal distribution.

**Table 1** Means, standard deviations and correlations (N = 83)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Dual headquarters involvement | 1.000 | | | | | | | | |
| 2 | Corporate headquarters-subsidiary colocation | 0.100 | 1.000 | | | | | | | |
| 3 | Core innovation | 0.126 | 0.361*** | 1.000 | | | | | | |
| 4 | Innovation significance | 0.315*** | 0.235** | 0.118 | 1.000 | | | | | |
| 5 | Investment requirements to develop the innovation | 0.306*** | −0.002 | 0.236** | 0.231** | 1.000 | | | | |
| 6 | Subsidiary age | −0.266** | 0.288*** | 0.094 | −0.009 | −0.013 | 1.000 | | | |
| 7 | Subsidiary size | 0.042 | −0.052 | 0.038 | 0.048 | 0.138 | −0.013 | 1.000 | | |
| 8 | Intra-/inter-divisional embeddedness | 0.118 | 0.017 | 0.108 | 0.070 | 0.105 | −0.015 | 0.437*** | 1.000 | |
| 9 | Size of the innovation development network | 0.223** | 0.128 | −0.112 | −0.077 | 0.096 | −0.029 | 0.049 | 0.103 | 1.000 |
| | Mean | 0.578 | 0.410 | 0.253 | 0.566 | 3.711 | 52 | 870 | 0.169 | 2.819 |
| | S.D. | 1.072 | 0.495 | 0.437 | 0.499 | 2.021 | 45 | 1337 | 0.377 | 0.799 |

*** $p < 0.01$, ** $p < 0.05$

**Table 2** Results of OLS regression models

| Dependent variable: dual headquarters involvement | Model 1 | Model 2 |
|---|---|---|
| Corporate headquarters-subsidiary colocation | 0.081 (0.259) | 0.031 (0.266) |
| Core innovation | 0.193 (0.303) | 0.229 (0.298) |
| Innovation significance | 0.511*** (0.160) | 0.573*** (0.156) |
| Investment requirements to develop the innovation | 0.198** (0.087) | 0.193** (0.083) |
| Subsidiary age | −0.284** (0.111) | −0.271** (0.113) |
| Subsidiary size | −0.016 (0.056) | −0.016 (0.056) |
| H1: intra-/inter-divisional embeddedness | 0.13 (0.224) | 0.029 (0.237) |
| H2: size of the innovation development network | 0.220** (0.098) | 0.173* (0.095) |
| H3: intra-/inter-divisional embeddedness * size of the innovation development network | | 0.472*** (0.157) |
| Constant | 0.719 (0.548) | 0.647 (0.555) |
| Observations | 83 | 83 |
| $R^2$ | 0.277 | 0.298 |
| F | 3.67*** | 4.78*** |

Subsidiary-clustered standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

## 6 Discussion

In this paper, we investigate "dual headquarters involvement", a phenomenon that has remained largely unexplored, both from a theoretical and an empirical perspective. We contribute to extant literature in several distinct ways. First, we contribute to the literature on parenting in complex structures (e.g., Ambos and Mueller-Stewens 2016; Birkinshaw et al. 2006; Foss et al. 2012; Poppo 2003) in explicating circumstances under which we can expect to observe overlapping headquarters' involvement. We theorize on network related aspects (i.e., intra-/inter-divisional embeddedness and network size) of organizational complexity, and how this is related to dual headquarters involvement. We identify drivers of and potential rationales for what may appear as redundant and thus costly headquarters-subsidiary interaction patterns. Specifically, we show that the size of the innovation network offers an explanation for such redundancies. Thus, we extend what Poppo (2003, p. 405) called a "theory of selective corporate involvement" by specifying influencing factors and their interactions when explaining more than the involvement of just one single (corporate) headquarters. Furthermore, we go beyond Poppo's findings by showing that corporate staff not only intervenes in exchanges between divisions but involve themselves together with divisional headquarters in subsidiary affairs, i.e., a level further down in the organizational hierarchy. This adds substantial credit to the idea of greater interdependence between corporate,

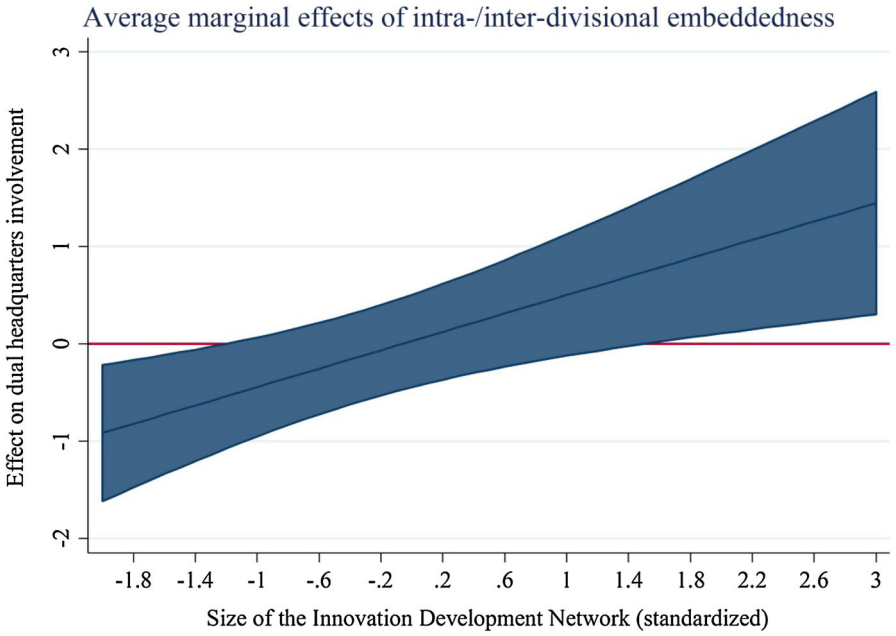


**Fig. 1** Marginal effects of intra-/inter-divisional embeddedness on dual headquarters involvement depending on the size of the innovation development network

divisional, and subsidiary activities—contrary to the traditional contingency logic that emphasizes clear task separation between the different levels of the organization. Thus, headquarters' need to create value to the firm leads headquarters staff to engage in "finding, creating, and influencing activities in the day-to-day operations" (Poppo 2003, p. 404) of their subsidiaries alongside other headquarters if necessary.

One principle of the M-form structure is the specialization in decision-making of corporate headquarters and the divisions: corporate headquarters are responsible for fundamental decisions such as the firm's boundaries while the divisions are responsible for business matters (Stopford and Wells 1972). As such, divisional headquarters have resources and capabilities that add to the ones of the corporate headquarters to manage the multibusiness firm. We extend Verbeke and Kenworthy (2008) argument that corporate headquarters involvement is limited to crisis situations and large-scale, resource-intensive projects in two ways. First, we show that a simultaneous involvement of corporate and divisional headquarters in subsidiary innovation projects is rather common (almost 30% of the projects in our sample). Yet, it could be that divisional and corporate headquarters engage in similar and redundant activities or that they engage in different activities that are complementary and create value. Second, our results also show that large projects involving many stakeholders attract the involvement of both divisional and corporate headquarters, especially for innovation projects involving partners within the business division and within other divisions of the firm. This highlights that

responsibilities are not clearly distinct between the divisional and corporate headquarters but that they can both become involved in the same business matters and in similar ways. The leveraging of assets across the whole organization apparently might not lend itself well to such relatively independent and separated tasks. Hence, we contribute to the literature that investigates headquarters as a potentially valuable source of resources and attention and extend the view of complementarity of headquarters activities in large and complex organizations. Ultimately, the effective organization of such complex parenting processes might be one source of competitive advantage of the firm.

Furthermore, we extend the literature that has investigated the question if headquarters should get involved in cross business unit collaborations or not. As outlined above, previous literature (mainly informed by the information processing view) has argued that corporate headquarters has a natural information advantage when it comes to synergy potential across different divisions. Therefore, we argued that corporate headquarters involvement and initiative to reap cross-divisional synergies are warranted. Based on their in-depth case studies, Martin and Eisenhardt (2010) summarize that cross-divisional initiatives based on rather informal, lateral networks of collaboration between divisions seem more successful. Our findings shed some light on this discussion. Based on our results we argue that intra-/inter-divisional networks are to some extent triggers of headquarters involvement—not substitutes. As a consequence, we believe that our context of subsidiary-driven innovation allows us to illustrate a more nuanced picture in which there is no simple differentiation between lateral networks vs. corporate hierarchy in which those two organizational processes are directly related to each other. This extends Martin and Eisenhardt (2010) either-or logic of lateral vs. corporate centric synergy processes.

Moreover, we shed light on a domain of research that has been subject to calls for more research, namely the issue of subsidiary internal embeddedness (Garcia-Pont et al. 2009). Besides showing that the internal embeddedness of innovating subsidiaries matters for the organizational setup of the firm (Meyer et al. 2011), our findings provide substance to the idea that the subsidiary's embeddedness in large innovation development networks affects hierarchical involvement in two distinct ways: (a) a larger network triggers broader involvement from the hierarchy on the corporate and the divisional level, and (b), it lets the organization react in a stronger way to intra-/inter-divisional embeddedness. With these findings, we add to previous research that has investigated subsidiary embeddedness effects on parent behavior (e.g., Andersson et al. 2007; Nell and Ambos 2013) by highlighting that not only the degree of embeddedness matters (the strength of ties or relationships) but also the type of network in which the subsidiary is embedded, and particularly the network size.

Finally, while our results are important for the literature on the multibusiness firm in general, they are also important for the literature on multinational firms in particular. MNCs are extensively using complex organizational structures with multiple levels of hierarchy. Not only are MNCs using divisional and regional structures (Benito et al. 2011; Piekkari et al. 2010; Schotter et al. 2017), MNCs are also disaggregating parts of their different headquarters in order to fully benefit from location advantages (Baaij et al. 2015; Slangen et al. 2017). As a result, subsidiaries

of MNCs have to manage multiple parents, located in different contexts and geographically dispersed. These complex headquarters systems make communication more costly and thus more difficult for the different headquarters to know what the other units (i.e., other headquarters and subsidiaries) are doing (Baaij and Slangen 2013). The different headquarters become involved in their subsidiaries in order to ensure that they are following the headquarters' interests. Yet, because of the difficulties of communication across contexts and distances, it is more difficult for the different headquarters to know when to be involved, and how (Ciabuschi et al. 2011b). As Foss and colleagues (2012) have argued, the network-based MNCs are more likely to experience harmful intervention of headquarters in their subsidiaries. This should especially be the case when there are multiple headquarters involved as the contexts in which they are embedded differ and so do their goals and interests. Our study shows that dual headquarters involvement is a common phenomenon, and although it is particularly relevant for MNCs, it has received little attention from international management scholars. Recently, a few have conceptually addressed the problems that can be associated with dual agency of corporate and divisional or regional headquarters (see Ambos and Mahnke 2010; Hoenen and Kostova 2015). We encourage international management scholars to pursue in this direction.

## 7 Concluding Remarks

The nature of the headquarters of multibusiness firms is only partially understood, and this study is an initial attempt to highlight the complexities that are inherent in contemporary headquarters. In a nutshell, our results suggest that parenting in complex structures is complex itself. It often involves the simultaneous involvement of more than one headquarters and because of the costs associated with such dual headquarters involvement, it is done selectively by multibusiness firms.

By questioning the overly simplistic views of the headquarters of the multibusiness firm, this paper contributes to the emerging literature on parenting in complex structures (e.g., Birkinshaw et al. 2006; Foss et al. 2012; Poppo 2003; Galbraith 2009). A key feature of the innovation development process is the network embeddedness of the firm hosting the development. Characteristics connected to the innovation development process is used for explaining what otherwise may be conceived as redundant, complex and overly costly headquarters-subsidiary interaction patterns, i.e., dual headquarters involvement in innovation development. We show that the configuration of the innovation network helps in explaining dual headquarters involvement. If the subsidiary engaged in the development process is embedded in a large development network, the effects of intra-/inter-divisional embeddedness are augmented. In short, this extends what Poppo (2003, p. 405) called a "theory of selective corporate involvement" by specifying factors and their interactions when explaining the involvement of more than a single (corporate) headquarters. This reasoning is in contrast to the additive nature of headquarters complementarities of the M-form organization where divisional and corporate headquarters activities are clearly separated from each

other (e.g., Verbeke and Kenworthy 2008). Hence, we conceptualize headquarters as a valuable source of resources and extend the understanding of potential complementarities of multiple headquarters activities in large and complex organizations. Furthermore, we show that the complexity associated with internal embeddedness and a large innovation network is related to dual headquarters involvement only until a certain point of internal embeddedness after which the complexity might be too high for headquarters to consider their involvement as a value-adding activity. This enables us to explain how headquarters act and how innovations are managed by different layers of the hierarchy above the focal innovating unit. Thus, this paper extends the understanding of the management of innovations in large diversified firms by bringing the presence of simultaneous headquarters involvement to the fore. This is a novel approach illustrating a phenomenon that has received scarce empirical and conceptual attention in the literature. This allows for a more holistic (and realistic) view that accounts for simultaneous governance by several headquarters within multibusiness firms.

Dual headquarters involvement is also important from a managerial point of view, especially in light of the importance attributed to dispersed innovation activities (Bartlett and Ghoshal 1989; Hamel and Prahalad 1994; Rugman and Verbeke 2001). To sustain innovation and the competitive advantage of the firm, managers must be able to recognize instances where multiple headquarters are likely to be pushed and pulled into increasing involvement. Important questions include which factors might call for stronger involvement and if it is enough to involve divisional headquarters. It is important to note that generic answers claiming that lean management styles and a general principle of non-interference of corporate headquarters in divisional affairs seems inappropriate. On the contrary, our findings mirror recent calls for more "active" headquarters where it is argued that headquarters need to get a better "feel" for their subsidiaries' operations in order to be able to add value (Goold and Campbell 2002).

Several limitations should be kept in mind in evaluating the findings and conclusions. First, while this is an initial attempt of going beyond simple conceptualizations of headquarters activities, it should be noted that we are scratching the top of the complexities that contemporary multibusiness headquarters are challenged with. As such, we consider our quantitative study to be one of the first to capture the top two layers of corporate units and their simultaneous interaction in innovation development projects. Relatedly, we employ relatively coarse-grained measures of our key constructs of dual headquarters involvement as well as intra-/inter-divisional embeddedness and innovation network size. However, we believe that our approach is justifiable because of the early status of the literature. Future research could measure dual headquarters involvement and its antecedents in a more elaborate way and detail further the way how we conceive multiple involvements from hierarchical levels above the innovating subsidiary. For example, it would be interesting to look into when divisional and corporate headquarters are involved over the development of the innovation projects and how both types of headquarters differ in the ways that they become involved. Second, while considering performance outcomes of dual headquarters involvement was outside of the scope of this study, it is a crucial element of complex parenting

structures. In particular, dual headquarters involvement has been considered unlikely because of the associated overlaps of authority and interaction (Williamson 1975) and future research should investigate how dual headquarters involvement influences the duration and costs of subsidiary innovation projects, as well as the subsequent impact on the performance of the subsidiary. Related to this point, the cross-sectional nature of our study was limiting our analysis and future research should investigate the antecedents of dual headquarters involvement prior to measuring the involvement itself and subsequently look at the outcomes of it (see e.g. the recent longitudinal study of boundary spanning activities of corporate headquarters by Birkinshaw et al. 2017). Third, while we contend that subsidiary innovation projects offer a fertile testing ground for the furthering of theory on the nature of the headquarters, the sample of innovations under study ran the risk of being successful, i.e., there is a risk under-sampling of failure (Denrell 2003). On the balancing side, we have empirically shown that the innovations are indeed heterogeneous in a number of dimensions ranging from relatedness to perceived importance. Fourth, given the absence of sampling frames for subsidiary innovations, we used managers and snowball sampling to identify the innovation projects to be investigated. Despite proving to be an effective way of identifying suitable innovation projects, this sampling approach potentially limits the generalizability of our findings.

Although the current study offers only initial insights into complex headquarters configurations, it highlights the importance of exploring subsidiary-level activities in greater detail in order to understand factors underlying headquarters involvement. In fact, while much is known of individual headquarters and their activities, we are witnessing an increase in the complexity of what could be named complex headquarters systems (Nell et al. 2017). For example, Desai (2009, p. 1284) formulates that we are now witnessing firms that are "Bermuda-incorporated, Paris-headquartered (…), listed on the NYSE [New York Stock Exchange] with US-style investor protections and disclosure rules, a chief information officer in Bangalore, a chief finance officer in Brussels and a chief operating officer in Beijing". Future studies could address the lack of attention to these complex headquarters systems and thereby break with the dominant logic that views headquarters as a single, identifiable unit located at the apex of the organization.

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