Impact of distance on the network management capability of the home base firm

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Abstract

For many globally dispersed organizations the home base (HB) is historically the locus of integrative, coordinating and innovating efforts, important for the overall performance. The growing concerns about the offshoring strategies posing threats to the capabilities of the HB draw attention to how a HB can continuously sustain its centrality. The well-known challenges of distance in the distributed working arrangements may be regarded as a major threat to the network management capabilities (NMCs) of the HB. Therefore, this paper investigates what role does distance between the HB and its subsidiaries play as the HB develops its NMCs.

Key words: Offshoring, Capability, Distance

Introduction

Challenges and opportunities of globalization tempt firms to reconfigure their operations and relocate discrete value-added activities to the most advantageous destinations (Jahns et al., 2006; Kedia and Mukherjee, 2009). This process may occur on an "intrafirm" basis (captive offshoring) or may involve the vertical disintegration of activities (offshore outsourcing to external suppliers). As a result the increased dispersion and specialization of firms occurs that requires a shift to collective organization form - the network (Ernst and Kim, 2002). Greater specialization promotes growing autonomy and capability of the sites, which is an important development driver in the network. However, it also makes it more difficult to achieve coordinated action, and some control is needed from a central entity that can perform the integrating function, as well as diffuse innovations and knowledge in the network (Bartlett and Ghoshal, 1999; Mugurusi and de Boer, 2013). For many companies the home base (HB) is historically the locus of such managerial centrality. It takes the lead in regard to setting and maintaining standards, as it embeds historical knowledge and capabilities.

In this light, concerns that the offshoring strategies endanger the HB capabilities deserve attention. Extant literature shows that these effects only become evident over a

longer time span and are, therefore, often not fully recognized. They describe a situation where the HB gradually loses the ability to evaluate suppliers' performance, innovate and coordinate in the network of its globally dispersed operations, etc. (Vining, 1999; Kotabe et al., 2008). Some authors argue that the HB loses its network management capabilities (NMCs) and the ability to bring value to the network due to its lack of insight into the increasingly dispersed and complex operations (Ciabuschi et al. 2012).

With regard to the latter view, the well-known challenges of distance to the knowledge transfer and communication may be suggested among the major threats to the HB NMCs. The extant literature, however, takes a static perspective on the role of distance, while offshoring is a constantly evolving process, where capabilities of the HB may change accordingly, and therefore, influence of distance may change as well. Thus, in order to understand the impact of distance between the HB and its offshore subsidiaries on the HB NMCs (and consequently on its ability to bring value in the network), it should be studied within the context of the company's offshoring process.

Theoretical background

Network management capabilities (NMC) of the HB

Recognizing the NMCs' importance, researchers disagree about its content. Some describe it as the traditional coordinating and controlling, others refer to more indirect forms of influence (Knight and Harland, 2005). Dhanaraj and Parkhe (2006) discuss network orchestration in general terms and refer to it as the ability of a lead organization to create value in the network. Focusing on the latter, we can refer to Forsgren and Holm's (2010) discussion of the value-bringing potential of the HQ of a multinational enterprise. The authors refer to "entrepreneurial functions" of the HQ, with which it can contribute to the sub-unit value-creating activities: policy, monitoring and cognitive functions. Further we will refer to these functions as the HB's NMCs. *Policy* function includes decisions on what value-creating projects should be carried out, and the allocation of resources to these projects. The *monitoring* function deals with the control of value-creating activities, including evaluating their performance. The *cognitive* function deals with the extent to which HQ contributes knowledge to value-creating activities at the subsidiary level through actual involvement in the processes and through transfer of expertise. Value creating activity is a process, by which a subsidiary masters and implements product designs and manufacturing processes that are new to it.

The effectiveness of these NMCs depends on how one views the HB's knowledge situation. For example, Forsgren and Holm (2010) describe two opposite perspectives on the latter. The "Rational perspective", rooted in transaction cost economics, advocates that, though the HQs lacks specific knowledge about the subsidiaries, it has a fair understanding of what kind of knowledge it requires. Based on this the HQs designs efficient structures, decision rules, and control systems, including its own role in value-creating processes at the subsidiary level. Another perspective - the "Radical uncertainty view" - is based on the belief that firms are distributed knowledge systems, where knowledge is socially embedded and cannot be controlled in its entirety by any single actor (Foss, 2002). Accordingly, the HQs not only lacks the knowledge, but also often does not acknowledge the lack, having a potential to destroy value. The HQs can only acquire such knowledge through direct involvement into the subsidiary's activities.

NMCs of the HB and distance

Distance is a well-acknowledged impediment to the distributed work (Abbott, 2007; Dankbaar, 2007), and particularly to knowledge transfer (Ambos and Ambos, 2009;

Cohen and Levinthal, 1990). Based on the earlier described importance of knowledge about the subsidiaries as a determinant of the HB's NMCs, it can be suggested that distance between the HB and its subsidiaries may contribute to the challenging knowledge situation of the HB, and consequently hamper its managerial functions.

Doz and Santos (1997) distinguish between several distance dimensions, as their various combinations may challenge the distributed work differently. They explicate them through contrast with the conditions of collocation and co-setting, where distance is determined by lack of co-location and lack of shared context. Collocation implies same time zones and shared space. Shared context may include a common language, shared national and organizational cultures, technology, administrative systems.

Offshoring process, distance and NMCs of the HB

In the literature distance is mainly discussed as a stable phenomenon. However, offshoring is a constantly evolving process, where capabilities of the HB change, which allows expecting that the impact of distance may vary in this process. Research taking a longer-term perspective on the challenges of distance advocates that the latter decrease, as the co-working parties adjust to each other (Håkanson, 2014). Others argue that, if to consider tendencies in the offshoring process of many companies, cultural and language differences between the parent and the offshore unit are challenging at the beginning of this process, while later the time zones cause most of the managerial challenges (Mugurusi and de Boer, 2013). Taking such views into account, we believe that, in order to understand the impact of distance on HB NMCs (and, therefore, on its ability to create value in the network), it should be studied within the context of the offshoring process. Thus, the research objective of this paper is to address what role various contextual differences play as the HB develops its NMCs. To capture the latter within the offshoring process we approach it as a temporal sequence of events that create and alter the global network configuration over time (Srai and Gregory, 2008).

Methodology

An in-depth retrospective case study strategy was chosen because it allows studying the longitudinal change process and focusing on the dynamics present within single settings (Eisenhardt, 1989). The case studies are often criticized for providing little basis for scientific generalization, as they are situation specific. Others consider this to be strength because, as the findings are unstable over time, the context gains particular importance, making a case study particularly beneficial (Dubois and Gadde, 2002).

The main selection criteria were company's long offshoring history and active altering of global operations. The case company originated in 1976 in Denmark and became one of the leading industrial goods companies. It has production facilities in Denmark, the United States (US), Slovakia and China; it employs 1,600 people worldwide; 80% of its products are customized solutions. The study focuses on the offshoring histories of two products, which have been produced by the company in the different global network settings during 1999 and 2014.

The data were collected through semi-structured interviews, archival documents and on-site observations to enable the triangulation of the findings. In total, 28 interviews lasting 1.5 hours each were conducted with managerial and operational staff at the Danish HB and affiliates in China and Slovakia. To capture the offshoring process in retrospect, an event-sampling approach was used. Subsequent data analysis was focused on the HB managerial functions as described in the Theoretical Background and the role of various contextual differences in their development and effectiveness. Initially, the product "stories" were written up based on the interviews at the HB and were then

presented to the key informants to verify the accuracy. Investigation at the subsidiaries allowed enriching it, and was followed by a workshop with the management.

Case descriptions

Product A. From knowledge transfer to joint solution development and coordination
Starting from 1999 a part of Product A capacity was relocated from the Danish factory to the US, China and Slovakia, driven by customer requests for better prices, larger volumes and faster delivery. Here the main HB task was to enable the sites' production according to specifications. First product introductions were described as periods of "active experimentation", based on which a set of practices and a checklist of what is ought to be carried out were turned into a corporate procedure. An important part of such implementations was replication of the production setup and practices from the HB to the sites. One of the biggest distance-related impediments mentioned in this process was the *language barrier*. Translation of documents, face-to-face training programs for the personnel and temporary placement of the domestic staff at offshore sites helped to overcome this problem. Moreover, the HB was continuously supporting the sites, referring to the HB production as a benchmark and the platform for problem resolution. *Language barrier* and *lack of shared organizational culture* were challenging here as well (Table 1a), but were offset by presence of Danish expatriates at the sites.

Later on, the appearance of global customer and the lack of the HB production capacity led to "joint" projects, requiring the HB to team up with subsidiaries. This brought to the surface *differences in production contexts* among the HB and the sites, which were previously non-apparent (for example, differences in the part numbering approaches, details of production and testing processes). From this point the HB was responsible for "aligning" these deficiencies and coordinating among the sites. Moreover, due to the increase in sites' product modification capabilities and localization of supplier bases, consultation requests towards the HB became more complex. The HB became less capable of suggesting quick solutions. Therefore, due to the increase in the *differences in production contexts* between the sites and the HB, it had to start devising solutions in cooperation with the sites. Thus, in the presence of interdependencies, the *differences in production contexts* made the HB take on largely coordinating roles, using its own production as a benchmark. The same change applied to the introduction of improvements to the product on sites. *Time zone* (Table 1b) and *cultural differences* (Table 1c-e) were the main challenges to these coordination and monitoring efforts.

Having gained experience with managerial activities, as well as facing an overload with its tasks, the HB staff created a variety of corporate procedures to replace them. To do this they relied on their knowledge of problematic issues and on the subsidiaries' assistance. Also some production processes were efforts were standardized. To tackle differences in cultural contexts the HB, introduced a practice of documenting the communication results, provided trainings on cultural differences and facilitated meetings of staffs from different sites. To encourage knowledge sharing and relief the HB staff of related burden official regular global meetings were established and global communication rules introduced. All this was supported by the introduction of advanced electronic communication systems and the partial automation of procedures.

Product B. From joint solution development and coordination to information transfer facilitation and advising
The offshoring history of Product B started similarly to Product A: with the HB introducing the product to the three subsidiaries and further coordinating and aligning

operations. However, after some time the Product B production was closed at the HB, transferring both production and product responsibility to the Slovakian subsidiary, while the HB resigned to the role of advising on "high level" product-related decisions.

However, the sites continued addressing the HB for advice due to the lack of experience and some tacit organizational knowledge. So the HB had to again occasionally take on its previous roles of technical support and developing solutions together with the sites. However, as time passed and the product evolved at the sites, the HB staff started increasingly finding themselves with residual product-specific knowledge, which becomes less and less sufficient to provide suitable advice (Table 1f). Thus, it may be concluded that growth in difference in the *production context* (due to elimination of the shared product from the HB) left the HB with a role of knowledge sharing facilitator, rather than transferring knowledge or developing it together with the sites, like it used to be before. Differences in the *production context* paired with *differences in cultural context* impacted the monitoring and control abilities of the HB as well. On one hand, having little product specifics in common, sites tended not to speak up, until getting into considerable difficulties. A more hierarchical mindset at the sites (comparing to Denmark) worsened this tendency. Many issues were detected and resolved late. On the other hand, differences in the production and cultural contexts tended to distort the perception of the HB staff about performance of the sites (Table 1g). Also some performance implications were attributed to the deviations from corporate standards, introduced earlier by the HB, which were partially attributed to the *differences in cultural context* as well (Table 1h). Such tendencies currently pose concerns to the HB management about the sustainability of the established alignment in the global organization, as well as product performance according to the high company standards. Currently they are trying to devise new measures of monitoring and follow-up in the operations. Moreover, given the increased gap in the production context, the HB started experiencing difficulties with introduction of product improvements. For example, having gained certain experience with the product the site's staff started to come up with product improvement suggestions (before they were coming only from and through the HB). However, it proved to be extremely difficult to get the HB consideration and approval, as drawing on its previous experience with the product, the HB did not take the site's initiatives seriously (Table 1i).

Table 1 - Quotes supporting the case descriptions

a) "When Denmark is asking X something and I see that what he is replying is not what they are asking about. I can understand it right away because I have an experience from Denmark. And then I can call him and ask to stop replying."
b) "Decision-making takes more time, as we have to check more "corners" with all the sites. And this person in charge is challenged by time zones, as he can't just grab the phone and run to another part of the building."
c) "We have to put more effort into this when making changes, do follow-ups – always asking them: have you changed? Instead of a normal Danish way: if I give you information and an assignment – you do it. But that's not the way it is in the US."
d) "China is a challenge, because if they can cheat you – they will. So we have to control and follow them up tight. Communication with Chinese is very difficult – they never say if something is wrong, or if they don't understand."
e) "The management on site [Slovakia] used to be Danish and it was much easier to make them fix mistakes. Now cultural differences are introduced on the management level. They are not just a phone-call away anymore, and they will start arguing out of independency."
f) "It is much easier to handle all this while we have the product on-site. I can refer any problems on sites directly to our local production. But on [product B] when they address me I

need to contact all other sites and push them to talk to each other. I am outside, but have to act like the center. I am facilitating the dialogue but I don't have competence anymore. Currently I am at least able to find those people who were related to this product."
g) "Denmark was supposed to test the products, and do the milestone audits. And this communication was not easy. Because in China everything is done faster (they invite people to the party a week before, while in Denmark – a month). So Denmark was very slow in responses. And people were just pointing at China, that we don't know how to do it."
h) "They allowed the supplier replace this component without permission. It is important in Chinese culture to be nice to their partners. And then other sites got "polluted" parts."
i) "That situation with spindles was very demotivating. We've been talking about the problem for a long time and no one believed us. Only after 5 weeks they agreed. From this we had an impression that engineers in Denmark are not looking at Slovakian engineers as partners."

Discussion

Described product histories can be approximated as a general company's history and development trajectory, as the Product A is likely to follow the Product's B history due to the growing scarcity of resources at the HB. Also the product responsibility delegation to the sites (like with product B) is an ongoing trend.

Dimensions of contextual differences emphasized by the interviewees along the offshoring process indicate that distance between the HB and the sites gradually increased, as the number of dimensions of contextual differences accumulated. As Doz and Santos (1997) put it, the fewer elements of context is there in common between two cooperating parties – the weaker is the form of co-setting and thus larger the distance is. At the beginning cultural, organizational, language differences were actually stimulating the HB to develop different approaches to cope with them. However, further addition of differences in production context (first process-wise and then product-wise) had a different implication. They impacted the frequency and nature of the HB-subsidiaries interaction: it changed from being based on details of the sites operations to general information and status updates. As a result, the HB started experiencing difficulties with monitoring, cognitive and policy functions, as will be discussed further.

Changeable knowledge situation of the HB

Later history of the product B illustrates the change in its knowledge situation from not possessing specific knowledge about the subsidiaries, but understanding what knowledge it requires - to not only lacking knowledge, but also not acknowledging the lack. The latter situation corresponds to the "Radical uncertainty" view (as described in the theoretical background). At the same time, the later history of Product A showed the ability of the HB to evaluate, what information about the subsidiaries it lacks, and design efficient structures, decision rules and control systems. Such ability of the HB to bring value without the direct involvement into operations is advocated by the Rational perspective. Such contrasting observations indicate that the ability of the HB to bring value to the network can be explained by both of these contrasting theoretical perspectives – but in the different stages of the company's history. To track this in detail we can look individually at policy, monitoring and cognitive functions of the HB in its offshoring history, using a framework by Forsgren and Holm (2010), characterizing these functions, depending on which of the two perspectives one choses (Figure 1).

At the start of the offshoring process the *policy function* (for example, introduction of new product or product improvements) was action oriented, "learning by doing" process, based on existing resources, rather than goal-oriented process - in accordance with Radical uncertainty perspective. Minor contextual differences stimulated the HB to interact more with the sites to overcome these differences. Thus, the HB was bringing

value through involvement into the value creating activities of the sites. However, as the HB gained experience in such implementations it was able to "standardize" the process, so that policy function became largely goal oriented and bringing value in accordance with Rational perspective. At the same time, later in the process, when contextual differences became larger and the value-creating initiatives (e.g. product improvement suggestions) started coming from the sites and not the HB – they met resistance of the HB, who acted based on role expectations, despite its lack of knowledge and based on its past experience – therefore bringing little value in accordance with the prediction of Radical uncertainty perspective. In the provided example of product B the subsidiary actually made the HB approve a change through finally involving it directly into the context of their production process (they made HB people visit their shop floor).

HQ's knowledge situation	HQ's entrepreneurial function in relation to sub-unit value creating activities		
	Policy function	Monitoring function	Cognitive function
Rationality perspective	In a goal-oriented process, HQ selects innovation projects to enhance the future competence of the MNC.	HQ designs the vertical information system so that the results of innovation processes can be judged from a distance against pre-set goals.	HQ evaluates sub-unit activities and, based on its own knowledge decides whether and how it will take part in the innovation process.
Radical uncertainty perspective	In an action-oriented, political process, HQ acts based on existing resources.	HQ cannot exert control from a distance, only exert influence by its own participation in the innovation process.	HQ acts based on role expectations and intervenes in projects despite its lack of knowledge, rather than because of its knowledge.

Figure 1 - Characteristics of the policy, monitoring and cognitive functions of the HB, depending on the perspective adopted (Rational vs Radical uncertainty) (Adopted from Forsgren and Holm (2010)).

In the alike manner *monitoring function* at the beginning was enabled by the HB own participation in the value creating activities of the subsidiaries. However, further some parts of this monitoring were substituted by procedures and formalized processes, which corresponds to value creation according to Rational perspective. However, in the case of product B not all of the monitoring needs were recognized, when the HB was actively involved in the sites' operations, and became apparent only later, when interactions seized and there were no means to establish required monitoring measures. This created monitoring challenges later. Currently the company is in search for appropriate measures, while temporary this function is performed by a designated manager, who performs frequent trips to the site to stay familiar with its production context.

Cognitive function was performed by the HB effectively from the start in accordance with Rational perspective, enabled by a much higher HB expertise, comparing to the sites. However, with the increase of contextual differences and worsening of the knowledge situation of the HB it indeed started acting largely out of the "role expectations", despite not having expertise at hand – in accordance with the Radical uncertainty prediction. However, these contributions were also valuable, because the HB was not advising something just for the sake of it, but tried to facilitate involvement of the people with relevant knowledge. Thus, cognitive function within the lack of shared context transformed into mobilization of network participants with appropriate expertise, and further bringing them into the same context with the subsidiary.

Sequential nature of value-creation/destruction by the HB

In the previous discussion we can see a certain sequence in the way HB brings (or destroys) value to the subsidiaries. Involvement into their activities in the shared context

allowed the HB to perform policy, monitoring and cognitive functions in accordance with Radical uncertainty perspective - bringing value through the direct involvement (Figure 2a). Accumulation of knowledge about the sites' operations and context in this process allowed the HB to further bring value with these functions, but based on Rational perspective: replacing its direct involvement into operations with rules and procedures (Figure 2b). However, reduction of the HB direct involvement, no shared context to stimulate it, and natural evolution in the subsidiaries' operations gradually made the existing knowledge of the HB obsolete. Thus, the effectiveness of the functions, based on this knowledge, was challenged. Therefore, the HB knowledge situation got back in accordance with Radical uncertainty perspective (Figure 2c). This explains the challenges, which the HB faced when performing its functions at the end of the offshoring process. In such cases the HB had to "get back" into the same context, get in touch with the actual experiences at the subsidiaries in order to bring value again (Figure 2d).

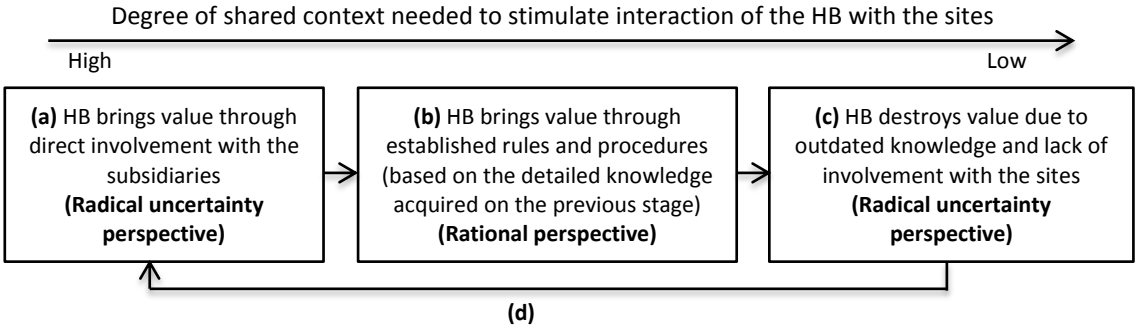

Figure 2 - Sequence of value-bringing/destruction by the HB

As the case showed, lack of HB knowledgeability about the network manifests itself over time, as the contexts of the HB and the sites grow apart (due to the network evolution), discouraging the detail-based interaction between the two. Ability of the company to avoid getting into the value-destruction stage (Figure 2c) is important here.

Therefore, it is important for the HB to recognize the tendencies of its existing knowledge becoming obsolete, pointing to the need to update it through returning to the same context with the subsidiary. In fact, this process of experiential learning and development of policy, monitoring and cognitive abilities may be regarded as a result of application of the dynamic capability of learning, where the outcome of such learning is actually development of certain managerial capability (e.g. monitoring) (Ambrosini and Bowman, 2009). Then for the HB it becomes very important to recognize, when the developed capabilities become ineffective, and the dynamic capability of learning needs to be re-applied. Such observations support the proponents of the "dual" view on dynamic capabilities (Schreyögg and Kliesch-Eberl, 2007), who argue that timely usage of dynamic capabilities is more important than their quality. Therefore, we believe that further research should be directed at studying "weak signals" of capability destruction (or knowledge obsolesce) in order to inform the practitioners when it is time to update knowledge about their network (Figure 2d).

Maintaining the HB ability to create value in the network – a framework

A need for the HB to stay knowledgeable about its subsidiaries' operations and their local networks is widely advocated by the researchers, concerned with the challenging knowledge situation of HQs in MNCs – the so called "liability of outsidership" (Vahlne et al. 2012). They recommend the HQs to continuously interact with key people at the

subsidiaries, compensating them for the resources spent on such cooperation. However, continuous interaction with the subsidiaries can be a burden for the HB, located in an expensive country, where slack resources are a luxury. However, as the case company's experience showed, there is a possibility of organizing this learning process and the basis for value bringing by the HB in a sequential way, which does not require continuous involvement of the HB into the subsidiaries operations (Figure 3).

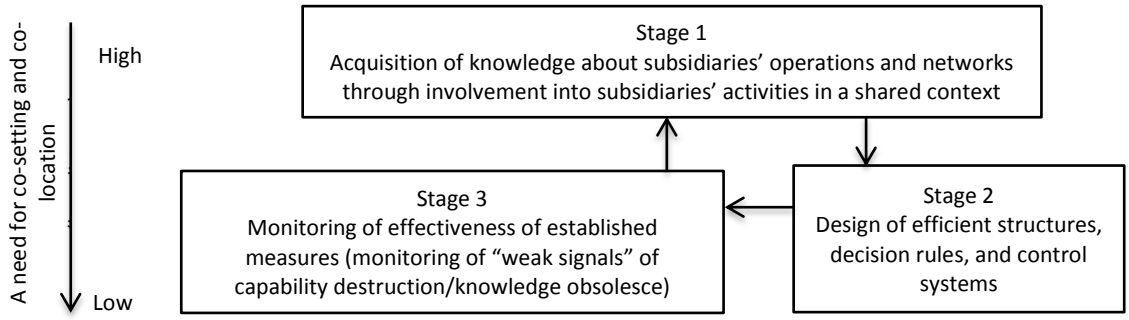

Figure 3 - Framework of sequential value-creation by the HB

Participation of the HB in the value creating activities of the subsidiary is an important prerequisite of developing sufficient knowledge (Stage 1) to further perform the same functions without involvement into the operations (Stage 2). Involvement of the HB in the context of the subsidiary on Stage 1 is important to facilitate interaction. At the same time, due to the tendency of subsidiary and HB contexts to grow apart, previously established measures may become obsolete. Therefore, there is a need to monitor when this happens (Stage 3), and bring the HB back in touch with the subsidiaries' context again (Stage 1). We expect that content of the activities on each stage will vary according to different HB functions (policy, monitoring, cognitive). However, precise definitions lie outside the scope of this paper and open avenues for the further research.

Conclusion

This work aimed to investigate the role of distance (as various contextual differences) in the HB ability to perform managerial functions (policy, monitoring and cognitive) in its global network over time. The findings showed that in the offshoring process the contextual differences between the HB and the sites gradually increased (new dimensions of contextual differences got added up). And, while at the beginning cultural, organizational and language differences were stimulating the HB to develop different approaches to cope with them, differences in production context (first process-wise and then product-wise) impacted the frequency and nature of interactions between the HB and the sites, which reduced the knowledgeability of the HB regarding the sites' operations, challenging its ability to perform its functions effectively. Based on the case company experience, the present work suggested a staged framework of how the HB can ensure to continuously stay knowledgeable and bring value to its network.

The paper contributes to the discussion of the conditions of value creation by the HQ in a multinational enterprise, and offers an attempt of resolution of an argument between two contradicting perspectives on knowledge situation of HQ. It also suggests avenues for future research. The main limitations of the study include the use of only one company, rendering highly suggestive results.

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