EIBA – Track 3: Organizational structures and subsidiary evolution

Workshop Paper

"The modern network MNC: the influence of external relationships on the value added of headquarters"

Abstract:

MNC HQ value added is a much-discussed issue but characterized by a dearth of empirical work. We investigate the subsidiary perceptions of HQ value added empirically and shed new light on this issue. In particular, based on comprehensive data on 114 European manufacturing subsidiaries, we build and test a model which is able to explain HQ value added. We find that the extent to which subsidiaries embed externally is negatively correlated with their perceptions of the value added of their HQs. Furthermore, subsidiary embeddedness effects become irrelevant under the condition that HQs themselves build up their knowledge and understanding of the local context through their own relationships to the local subsidiaries' network partners.

Key Works: local linkages, embeddedness, HQ value added, HQ-subsidiary relationships

1 Introduction

The external relational embeddedness of subsidiaries and its effects on the MNC are well-researched research streams (Frost 2001; Gnyawali & Madhavan 2001; Hakanson & Nobel 2001; Andersson et al. 2002; Chen et al. 2004; Boehe 2007). However, the conceptualization of the embeddedness of the MNC has been very limited in many respects (Dacin et al. 1999). One of the most fundamental shortcomings of extant conceptualizations is the overemphasis of researchers on the subsidiaries' external relationships especially to local contexts (Dacin et al. 1999; Nell & Raab 2007). The majority of scholarly work investigates subsidiary-level external relationships and their effects on the subsidiary, its ability to acquire and generate new knowledge, and the subsidiary's relationship to other units of the MNC including the HQ (Forsgren et al. 2005). Previous research neglects to a large extent relationships that MNCs build on other levels of the organization and, hence, it suffers from a simplified picture of the external embeddedness of the MNC as a whole (Nell et al. 2009).

This gap is particularly striking in view of the well-acknowledged work on the multinational corporation as a differentiated network and the role the HQ is supposed to play in such an organization (Hedlund 1986; Ghoshal & Nohria 1989; Nohria & Ghoshal 1994; Nohria & Ghoshal 1997). For the modern network MNC the question of how HQs can add value is much discussed but characterized by a dearth of empirical research. One key idea is the suggestion that HQs differentiate coordination and control mechanisms according to the subsidiary characteristics (Nohria & Ghoshal 1994). The need to differentiate is based on the fact that subsidiaries differ in terms of their resources and capabilities as well as the importance of their markets (Ghoshal & Bartlett 1990; Nohria & Ghoshal 1997). These heterogeneous resources and capabilities are furthermore said to be developed to a large extent by the subsidiary in embedded relationships with local external actors such as customers and suppliers which differ from country to country (Nohria & Ghoshal 1994; Andersson et al. 2001; Almeida & Phene 2004).

To this end, a dilemma arises. While the HQ is required to have a deep knowledge and understanding of the local context in order to be able to adjust coordination and control mechanisms to these circumstances and to add value, the very process of how heterogeneous subsidiary resources are built through close interaction with network partners inhibits the HQ from acquiring this knowledge (Holm et al. 1995; Forsgren et al. 2005; Andersson et al. 2007). Furthermore, HQ attention is reported to be severely harmed by bounded rationality (Bouquet et al. 2009). Attention allocation mechanisms are also influenced not only by certain structural characteristics of the subsidiary (such as their actual level of capabilities) but by the voice of subsidiaries, i.e. the extent to which subsidiaries engage in selling and advertising their abilities and wishes (Bouquet & Birkinshaw 2008). This process can lead to isolated subsidiaries which do not receive attention from the HQ or HQ misjudging the capabilities of local units (Monteiro et al. 2006).

In sum, there are strong arguments that question the ability of HQs to understand the local context which is a important requirement for it to add value to local operations. This area of research is surprisingly under-researched and this paper aims to shed light on these issues. We link recent literature on the multi-level embeddedness of MNCs (Nell et al. 2009) with an analysis of HQ value added (Chandler 1991; Goold et al. 2001). Thereby we build on the idea that HQs which build up direct relationships to the local subsidiary networks increase their knowledge and understanding of the network (Forsgren et al. 2005; Yamin & Forsgren 2006; Andersson et al. 2007). The paper analyzes the separate and joint effects of both the extent of subsidiary external relationships to the local context and HQ external relationships on the value added of the HQ as being perceived by the subsidiary.

We contribute to the literature in two important ways:

First, we add to the literature of the differentiated network MNC itself embedded on multiple levels to external environments (Ghoshal & Bartlett 1990). We advance a more holistic concept of MNC external embeddedness by integrating not only subsidiary-level external relationships but also external relationships

of HQ units. Second, we add specifically to the concept of the differentiated MNC by investigating the effect of such multi-level external relations on the value-added of the HQs.

2 Theory and hypothesis development

Within this manuscript, in a manner consistent with previous international business scholars (Andersson et al. 2001), we conceptualize subsidiary external embeddedness in terms of the extent to which a subsidiary has developed local environmental ties as opposed to organizational ties to the MNC network. This is based on the idea that firms are embedded in social networks and that this shapes its behavior and performance (Granovetter 1985; Burt 1992; Uzzi 1996; Dyer & Singh 1998).

Subsidiaries create local relationships due to several reasons. Some authors stress that it is necessary to gain legitimacy in the local environment (Luo et al. 2002). Local embeddedness also helps subsidiaries to access local knowledge pools and to create new knowledge together with their partners (Almeida & Phene 2004). Furthermore, strong ties to the local environment have been shown to influence the position of the subsidiary within the MNC (Andersson & Forsgren 2000; Frost et al. 2002). For example, there is strong empirical evidence that the degree of subsidiary embeddedness drives its importance for other MNC units in terms of capability development (Andersson et al. 2007).

However, the process of embedding externally has several effects on the subsidiary and the mindset and attention focus of subsidiary managers (Newburry 2001). In general, it is claimed that employee attention focus might be influenced by factors both within and outside the MNC (Gardner et al. 1989). Yet, scholars have described the embedding process as a development which moves the attention of the embedding organization towards the external network (Gulati & Sytch 2007). This is in line with Granovetter (1992) who claimed that the location of a person in a social network focuses its attention to advantages of that network. Within the context of the MNC, it has been shown that there is a tension between the external and the internal embeddedness of subsidiaries. For example, Asakawa (2001) reports that foreign R&D units'

embeddedness and their internal integration are differentiated according to their life cycle; seldom achieving both external and internal embeddedness to a high degree simultaneously.

In sum, subsidiaries which are strongly embedded externally in a local context could favor interaction and closeness with external instead of with internal counterparts. The network whose benefits seem more attractive – because of its higher importance for subsidiary success – is rather the external and not the internal MNC network of sister units (Newburry & Yakova 2006). Furthermore, the increased orientation towards the external network heightens the unit's evaluation of smooth relationships with and solidarity to external partners which could come to the detriment of internal partners (Heide & Miner 1992; Gulati & Gargiulo 1999)

While we have argued that the extent of subsidiary local embeddedness has a strong impact on the subsidiary's attention focus and evaluation of intra- vs. extra-organizational issues, we now specifically elaborate on the relationship between subsidiary embeddedness and the HQ role.

Subsidiary local relationships and HQ Value Added

It has been proposed that in the modern network MNC HQ units add value through parenting activities. These can be distinguished into a minimum parenting role, value-added parenting role, and shared services role (Chandler 1991; Goold et al. 2001). The minimum role pertains to basic control and compilation and publishing of accounts. The activities of the value-added role are supposed to add value to sub-units and are based on issues such as strategic guidance, synergy facilitation, and knowledge management. We are focusing on the value-added role of headquarters.

One key question in the literature on the differentiated network is how HQs are able to design an efficient and matching coordination and control system so that strategic guidance, synergies, and knowledge transfer can be effectuated (Nohria & Ghoshal 1997). The most criticized issue is the supposed lack of knowledge of the HQs regarding their local subsidiary conditions and operations. MNCs operate under

conditions which make internal information processing difficult (Birkinshaw et al. 2000; Denrell et al. 2004). Indeed, it is claimed that the more the subsidiary is locally embedded, which is one of the key reasons why subsidiaries of a MNC develop different resource stocks and capabilities in the first place, the lower HQ understanding of the local context (Holm et al. 1995). The assumption that HQs can design coordination mechanisms according to the subsidiary characteristics or initiate effective knowledge transfer is therefore problematic (Forsgren 2004).

A lack of HQ understanding of the local context has strong effects on how subsidiaries could perceive the value added of HQs. Arvidsson (1999) claims that HQs might misjudge capabilities of other units which might lead to "bad practice transfer". Subsidiaries receiving such knowledge would probably rate HQ value added as relatively low. Birkinshaw et al. (2000) find that different perceptions about subsidiary roles have in the end a negative impact on cooperative behavior. In addition, dissatisfaction at the subsidiary level is increasing the more corporate and subsidiary managers suffer from perceptional differences for example regarding the amount of shared information (Asakawa 2001; Chini et al. 2005).

Beside the potential "failure" of HQ value adding activities, embedded subsidiaries might also become isolated since the context specificity alienates them from the rest of the MNC. For instance, Andersson and Forsgren (1996) report that embedded subsidiaries perceive only a low level of control as executed by HQs. In such a situation, alienated subsidiaries might not perceive the value of HQ activities positively.

In essence, we argue that the embeddedness process alienates subsidiaries from the rest of the MNC and undermines HQ understanding of the local context so that HQ activities are misguided or underestimated in terms of their value added.

H1*: The more the subsidiary has built relationships to the external local network the lower the subsidiary perceives the value added by HQs.*

HQ local relationships

Embeddedness research in international business has mostly used the concept of subsidiary relational embeddedness (Andersson & Forsgren 1996). It is assumed that each subsidiary develops direct relationships of varying strength and intensity to actors in its local environment – but previous research has neglected other organizational levels such as HQs or regional HQs (Dacin et al. 1999; Nell & Schlegelmilch 2008). Therefore, the subsidiary role has frequently been characterized as a quasi-firm (Forsgren 2004) which occupies a bridging position between the environment and the MNC (Asakawa 1996), and which therefore has dual allegiance to the host country and the MNC (Andersson & Forsgren 2000; Almeida & Phene 2004).

However, by focusing on the local subsidiaries previous literature largely ignored the fact that headquarters build up relationships to local actors as well. In fact, first evidence shows that headquarters (HQs) and subsidiaries quite often share relationships with the same business partners (Forsgren et al. 2005; Andersson et al. 2007). Research has just started to acknowledge the role of HQ external relationships to local network partners of their subsidiaries (Birkinshaw et al. 2001; Frost 2001; Forsgren et al. 2005). The scarce research has shown that HQ local embeddedness varies in strength and that only a fraction of all subsidiary networks are strongly connected directly to the HQ. For example, Forsgren et al. (2005) report that HQs have built strong relationships to local networks in approximately 10% of all subsidiaries in their sample – weak relationships are built to roughly 30% of all subsidiary networks.

HQs build direct linkages to the local subsidiary networks for several reasons. Most emphasized in the literature is the HQ's ability to overcome their lack of knowledge of the local context when they form direct linkages to these actors. This is supposed to be crucial for effective management and HQ influence on subsidiary operations (Holm et al. 1995; Yamin & Forsgren 2006). Furthermore, HQ knowledge of the local context has been used as an element of procedural justice measures (Kim & Mauborgne 1991). The underlying idea is that HQs which understand local contexts can implement fair and appropriate

coordination and control methods. This is generally appreciated by subsidiaries and under such circumstances HQ activities are accepted to a larger extent.

Hence, we argue that by building their own network relationships, HQs can overcome their knowledge gaps and identify where and how to add value to subsidiary operations (Nell et al. 2009) which improves the perceptions of the subsidiaries. We hypothesize the following relationship:

H2*: The more HQs have built relationships to local subsidiary partners the higher the subsidiary perceives the value added by HQs.*

We have argued that HQs build up their knowledge and understanding of the local context when they create their own linkages to the local subsidiary's network. However, subsidiaries which have developed strong ties to some actors in their environment – such as customers – might have rather weak ties to other actors such as governments or suppliers. Hence, the subsidiary's embeddedness process probably builds information asymmetries between the HQ and the subsidiary especially with regard to those specific actors to which the subsidiary has built up strong ties.

Therefore, it is probably not the overall aggregate level of embeddedness which is crucial in determining the extent to which HQs suffer from information-asymmetries and which is linked to subsidiary perceptions of how HQs add value. Instead, most crucial from the HQ perspective is to increase the information about those partners to which the subsidiary is strongly connected. In other words, instead of the overall, aggregated level of embeddedness, the difference in tie strength between the HQ and the subsidiary with regard to the same actor or actor group is most crucial. The overall level of embeddedness of the subsidiary is then irrelevant.

Furthermore, this idea is also linked to the fact that relationship building is a very costly undertaking and consumes substantial managerial resources (Mizruchi & Galaskiewicz 1994; Luo 2003). HQs which

develop a selection mechanism and try to build up local linkages only to those external network actors to which the subsidiaries are strongly connected are much more efficient than HQs which use the expensive information-source of direct relationship to all kinds of partners of the subsidiaries irrespective of the extent to which their subsidiaries' tie strength varies across these partners. If we then assume that a large portion of the HQ's overhead costs are usually born by the subsidiaries and that subsidiaries appreciate if HQs intervene only in specific matters and not across the board, then we can hypothesize that subsidiaries perceive the value added of those HQs as higher which apply such a selection mechanism, i.e. under a situation of small differences between HQ and subsidiary tie strength to specific local actors.

Hence, we hypothesize the following:

H3: *The lower the level of embeddedness distance between the HQ and the subsidiary, the higher the subsidiary's perception of HQ value added.*

3 Research Methodology

3.1 Sample and data collection

The study involves 114 European manufacturing subsidiaries of MNCs. Subsidiaries were defined as organizational units which have international shareholders with at least 51% of ownership, and which have more than 50 employees. Data collection was embedded in a larger project in which we were successful in contacting randomly sampled 1500 subsidiary companies. All these subsidiaries received questionnaires. We undertook several efforts to enhance response rates. We conducted 2 follow-up calls after 2-3 and after 5-6 weeks after the initial sending of the questionnaire. When requested we resent hardcopy and/or pdf questionnaires. Confidentiality was assured reducing respondents' incentive to artificially inflate or disguise their responses: We used 4 digit serial numbers on the email and on the hardcopy survey instrument to keep track of respondents and non-respondents (Sharma 2000). Total return of 193 questionnaires represented a response rate of 12.8%. However, in this paper we are only using

manufacturing subsidiaries to test our sample. We analyzed non-response bias and late-response bias and found no significant differences between the used sample and the target population regarding the age and size of the subsidiary (number of employees and sales). Furthermore, there was no evidence of data collection bias (via mail vs. via eMail/pdf).

In total, the large majority of the subsidiaries belong to manufacturing industries with two industries "Machinery" and "Chemicals, Petroleum, and Coal" being the most important ones. The subsidiaries are located in more than 20 countries with the largest countries Germany, Spain, the United Kingdom, Poland and France making up 40% of the sample. Regarding the location of the HQs, approximately one third of the firms are coming from the German speaking countries Germany and Austria. HQs located outside Europe (US, Japan) make up 12% of the sample. It was the aim of the study to receive responses from subsidiary general managers as it was necessary to have a person that is knowledgeable of the whole subsidiary company. In sum, 85% of the sample is made up of responses from very senior executives such as CEOs. The data also shows good variance across key demographic variables for the subsidiaries. Roughly 30% of the subsidiaries were between 6 and 10 years old, another 30% between 11 and 20 years. The number of employees spread across the sample with 32% of all subsidiaries having between 200 and 500 employees. Average sales were roughly 50 million EUR in 2007.

3.2 Measures

Perceived HQ Value Added

Our measure of HQ value added was designed to incorporate important elements of the value-added parenting role as described above (Chandler 1991; Goold et al. 2001). In particular, we integrate items in which HQ activities are described to have cost saving effects, information benefits, and strategic guidance and support effects. Subsidiary managers were asked to indicate their agreement with the following items on a scale from 1 to 5: Your parent's way of challenging your subsidiary's strategies and tactics has improved your local performance; Activities managed by your parent have relieved your local

management from administrative work; Your parent's activities have lead to substantial cost savings at your subsidiaries; Without your parent your subsidiary would receive less information which is important to your business. (Cronbach Alpha .70).

In order to counter common-method bias – the question pertaining to HQ value added was put at the very end of a lengthy questionnaire which also covered other aspects of MNC management not covered in this paper (Podskoff & Organ 1986). Furthermore, there were a number of questions unrelated to this study in between the independent variables and the dependent variable. This usually helps to decouple the independent and dependent variables from each other. To further confirm that common-method bias is not present in our study we conducted a Harman's one factor test which did not support the idea that all variables load on one factor. We also validated in part the independent variable of the local relationships of the HQ. We collected additional telephone data from some HQs of the subsidiaries and found a very high inter-rater reliability for 120 external relationships between the subsidiary and the HQ responses. We protected respondent anonymity to avoid consistency motif and social desirability, we used improved scale items after extensive pre-testing, and most of the constructs are based on well-established scales in the literature (Podsakoff et al. 2003). The question measuring the relationship strength of the subsidiary as well as the HQ also had a special question initiation to avoid social desirability (cf. Martinez & Jarillo 1991; Harzing 1999)[1].

Subsidiary Relational Embeddedness and HQ relational embeddedness to the external network

We measured subsidiary relational embeddedness as a composite of the relationship strength to several types of external actors (Luo 2001; Andersson et al. 2002). Instead of using a standard Likert scale, we used an adapted graphical scale based on a similar scale by Ambos and colleagues (Ambos & Schlegelmilch 2007) and measured subsidiary local embeddedness and HQ local embeddedness with the

[1] We initiated the question asking for HQ local relationships with a statement indicating that some firms use networks extensively while others do not to indicate that both answers are fine.

same question. This approach proved very useful in the pretests to emphasize that the HQ relationship strength needed to be indicated with regard to the subsidiary network partners of the subsidiaries and not to others. Respondents were asked to estimate the strength of the relationships between their subsidiary and the network actor, and their HQ and the same actors by assigning two numbers from 0 (no relationship) to 5 (very strong relationships) to each actor. The following local actors were given: domestic actors (domestic suppliers; domestic customers), multinational actors (local units of multinational suppliers, local units of multinational customers), and political actors (local governments, local industry associations). (Cronbach's Alpha .70). As mentioned before, the same measurement approach was used also for HQ relational embeddedness. The six items of local network partners are all significantly correlated to each other, but not to a degree higher than 0.7. In exploratory factor analysis we derived one single factor which explains 55.2 % of the variance (Cronbach's Alpha .84).

Embeddedness Distance

As mentioned above, one problem of the HQ relational embeddedness measure is its aggregation across the six different actor categories of the measurement. Therefore, similar average values of subsidiary and HQ relational embeddedness to the same actors do not necessarily mean an absence of information asymmetry with regard to some dimensions. They can occur with HQ being strongly related to different actors than the subsidiary and vice versa.

To test hypothesis 3, we created a measure of embeddedness distance between the HQ and the subsidiary which takes into account all six actor categories separately. For illustrative purposes, we will give a simple example for an environment in which only 1 actor category is active. If the subsidiary has a relationship strength of 4 and the HQ of 2, then the distance between the two is 2. If the subsidiary has a relationship strength of 5 and the HQ of 1, then the distance is 4. Hence, our variable "Embeddedness Distance" becomes smaller, when the HQ as well as the subsidiary relationships become more similar to each other,

because then distances are small. To aggregate this information over the six actor categories, we calculate the Euclidean distance for embeddedness distances in a multi-dimensional space:

Formula for Euclidean distance between subsidiary and HQ embeddedness:

$$\text{Embeddedness Distance} = \sqrt{\sum_{i=1}^{6} (Sub_{ij} - HQ_{ij})^2}$$

With:

- Embeddedness Distance = the distance between subsidiary j's and HQ j's embeddedness values (strength of relationship)
- Sub_{ij} is the subsidiary j's score on the i^{th} embeddedness dimension (the i^{th} actor category).
- HQ_{ij} is the HQ j's dimension on the i^{th} embeddedness dimension (the i^{th} actor category).

Control variables

In order to control for effects other than induced by the external network relationships we particularly integrate the MNC internal network into our analysis, i.e. in our case characteristics of the coordination and control mechanisms as applied by the HQ. It is well accepted in the literature that the HQ's application of coordination and control mechanisms influence subsidiary perceptions and behavior (Baliga & Jaeger 1984; Martinez & Jarillo 1989). We used three variables that emerged from our exploratory factor analysis. We measured the factors with 5-point Likert-type scale that asked the respondents to indicate the extent to which they agree/disagree.

Social integration

We measured the extent of training and social integration with a 4-item scale modified from Martinez & Jarillo (1991) and Harzing (1999). The following items were rated by the respondents: There is a strong commitment to training and developing skilled managers; Your HQ puts a lot of effort to establish a common corporate culture; Your subsidiary executives participate in extensive international trainings initiated by your HQ; Subsidiary managers share the values of your HQ (Cronbach Alpha .83)

Output Control

This is measured using a 4-item Likert-type scale with the following items: Specific performance programs are imposed top-down by your HQ; Numerical records (e.g. financial ratios) are used as the main measure of subsidiary effectiveness by your HQ; Overall, detailed performance goals for your subsidiary are set by your HQ; Primary weight on results in subsidiary performance is placed by the HQ). The scale is an adaptation of the scale "output control" by Snell (1992). (Cronbach's Alpha .74)

Formalization

The last two items loaded on the factor we named Formalization: Detailed rules and procedures used in your subsidiary are usually developed by your HQ; There are written rules and processes stating how to perform daily business activities (Cronbach's Alpha .70).

Furthermore, we used a number of additional common control variables that characterize the subsidiary as well as the MNC. ***Subsidiary age*** was measured as the number of years between the subsidiary's date of establishment and the year 2007. The size of the subsidiary can be a sign of accumulated know-how and power within the organization. ***Subsidiary size*** was measured as the number of employees of the subsidiary. We used the natural logarithm of age and size. We used two dummy variables as controls for ***formation*** of the subsidiary (Greenfield investments and acqusitions; baseline: joint ventures).

Furthermore, on the firm level we integrated a dummy variable for a **matrix-organization** in the model. Finally, the **subsidiary know-how** was measured calculating the mean of the subsidiary's know-how relative to other subsidiaries with regard to ten functions (Technology Development (R&D), Product Development, Purchasing, Manufacturing, Marketing & Sales, Logistics and Distribution, HR, Finance, Stakeholder Management, and General Management). We used a 5-point scale from 1 (much below average) to 5 (much above average) to measure this variable.

The following Table 1 contains an overview of means, standard deviations and correlations of the variables used in the model.

---- Insert Table 1 about here -----

4 Analysis

4.1 Statistical methods

Our data were examined to fit the requirements of OLS regression analysis. We analyzed linearity, checked for outliers and cases with undue influence and leverage, investigated multicollinearity, and normality of residuals. Plotting standardized residuals against standardized predicted values showed no strong violations of OLS regression assumptions. The variance inflation factors (VIF) were all well below 2 and the bivariate correlations did not exceed .249. Heteroscedasticity was not an issue (the performed Cook-Weisberg test was not significant). Based on these results we assume OLS regression technique as being appropriate. We used hierarchical regression methods subsequently. First, we entered the control variables and the variable Subsidiary Relational Embeddedness (Model 1). Second, we added the variable HQ relational embeddedness to the local subsidiary context (Model 2). Finally, we substituted the variable of HQ relational embeddedness with the variable embeddedness distance (Model 3).

------ **Insert Table 2 about here** ------

5 Results

Model 1 produces a significant regression model. From the control variables, both subsidiary ages as well as the extent of training and socialization are significantly related to the extent of HQ value added as perceived by the subsidiaries. The model also supports hypothesis 1: The extent to which subsidiaries have developed strong ties to their local network is significantly and negatively related to HQ value added. In Model 2 we test hypothesis 2. The variable HQ relational embeddedness to the subsidiary network is significantly and positively related to how subsidiaries perceive the HQ value added supporting hypothesis 2. The adjusted R squared jumps from 10.2% in model 1 to 12.6 % in model 2 adding explanatory power. Finally, in model 3, hypothesis 3 is tested with the variable embeddedness distance being integrated into the model in substitution for the variable HQ relational embeddedness to the subsidiary network. Again, the regression model is significant with subsidiary age and the extent of training and socialization being significantly related to HQ value added. The model explains 23.8% of the variance (adjusted R squared = 15.5%). Hypothesis 3 finds support since embeddedness distance is negatively related to HQ value added while the variable subsidiary embeddedness becomes insignificant.

6 Discussion

Overall, the results support the idea of an interaction effect of subsidiary and HQ external relationships. Analyzed in an isolated way, both variables are significantly related to HQ value added. On the one hand, the embeddedness process of subsidiaries to their external network drives the subsidiary out of the MNC which decreases their appreciation of HQ activities. Their attention is probably more focused on the external network and under such circumstances the HQ is assumed to lack knowledge and understanding

of the operations the subsidiary is managing in connection with their external counterparts. On the other hand, HQs that do engage in the costly mechanism of enhancing their information about local operations by building up direct relationships to the local subsidiaries' partners achieve higher value-added ratings by their subsidiaries. The hypothesized mechanism underlying this pattern is that HQs learn about the local operations through their direct relationships and that this in turn enhances the HQ's ability to fine-tune their input, and to differentiate their coordination and control mechanisms.

This is a novel finding with regard to the antecedents of HQ value added. It extends the literature which emphasizes the HQ's specific functional activities which are supposed to build the HQ's role (Chandler 1991; Goold et al. 2001) and claims that the HQ's knowledge and understanding of the local context is of high importance. In this respect we empirically contribute to earlier conceptual work (e.g. Holm et al. 1995)

Our findings have also important implications for the theory of the differentiated network. We show that the differentiated network and the role the HQ plays in such a network can probably not be understood without integrating a much more complex understanding of the MNC's external relationships on multiple levels of the firm. The internal network characterized by the activities of the HQ is only in part important to the subsidiaries' perceptions of the HQ value added. Socialization is the only variable of the internal MNC context (besides subsidiary age) which is statistically linked to how HQs are perceived to add value across all models. This is in line with much of the earlier literature on the differentiated network which has attributed a very important role to the "corporate glue" achieved through socialization mechanisms and normative integration (Ghoshal & Nohria 1989; Nohria & Ghoshal 1994). However, the MNC as an interorganizational network which is in turn embedded to external networks receives a different notion. The functioning of the network MNC depends on a stronger extent on the inter-organizational relationships built on multiple levels of the organization than previously assumed. Future research should build on our findings and integrate the relationships HQs build to the external environment since this seems to have important implications on the MNC.

This study is one of the first attempts to investigate the value added of MNC HQs empirically and to link that to characteristics of the MNC network organization, i.e. its internal and external network. There are of course also some limitations of this study.

First, we conducted cross-sectional research and hence our findings primarily indicate association, not causality. It is therefore necessary to interpret the results with caution. Future research could investigate longitudinally the effect of internal and external network characteristics on how the HQ unit is able to add value

Second, we conducted our analysis on the nodal level and we treated types of external actors (such as suppliers, governments, and customers) as the relevant partner categories for the measurement of embeddedness. This is based on common approaches in the field (Luo 2001). However, future research could build on this and develop a more fine-grained measure of external relationships. For example, specifically actors in the network could be analyzed (Andersson et al. 2002). This would avoid the problem that we cannot be sure that both HQs and subsidiaries relationship strength values are indicated with regard to the exam same partner.

Third, our dependent variable is of course only the perception of the subsidiaries and not necessarily reflecting the true value added by the subsidiary. However, this approach also has some advantages. For example, it is in the end usually perceptions upon which managers – in this case subsidiary managers – act. Very high or low levels of perceived value added probably triggers (dis-)satisfaction and counter-measures from the part of the subsidiaries which could further influence the MNC. To this end, our dependent variables reflects a very important and relevant issue of MNC management. However, future research could further develop the measurement of HQ value added especially on the corporate level.

Table 1: Means, standard deviations, and correlations among variables

		Mean	Std.Dev.	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Perceived HQ Value Added	2.922	0.755	1.000												
2	Formation Dummy (Greenfield)	0.265	0.443	-0.076	1.000											
3	Formation Dummy (Acquisition)	0.575	0.496	-0.034	-0.628	1.000										
4	Matrix Structure	0.187	0.391	0.036	0.008	-0.077	1.000									
5	Subsidiary Relative Competence	3.409	0.605	0.055	-0.031	-0.051	-0.190	1.000								
6	Subsidiary Age	1.137	0.414	-0.252	0.159	-0.105	-0.031	-0.009	1.000							
7	Subsidiary Size (Employees)	2.402	0.511	-0.045	0.033	0.025	0.103	-0.158	0.146	1.000						
8	Extent of training and socialization	-0.057	1.007	0.243	0.060	-0.102	0.091	-0.133	-0.020	0.128	1.000					
9	Extent of output control	-0.038	0.975	-0.003	-0.194	0.074	0.075	0.089	0.073	-0.149	-0.035	1.000				
10	Extent of formalization	-0.084	0.963	0.104	-0.006	-0.131	0.001	-0.027	-0.110	0.127	-0.016	-0.099	1.000			
11	Subsidiary Relational Embeddedness	3.477	0.788	-0.172	0.112	-0.152	0.187	-0.001	0.041	0.249	0.055	0.015	0.149	1.000		
12	HQ Relational Embeddedness to subsidiary network	1.681	1.092	0.287	-0.056	-0.060	0.013	0.212	-0.171	0.107	0.183	-0.104	0.072	-0.030	1.000	
13	Embeddedness Distance	4.654	1.781	-0.367	0.034	0.012	0.030	-0.161	0.221	0.010	-0.038	0.159	-0.111	0.379	-0.690	1.000

TABLE 2: OLS Regression models – dependent variable: Perceived HQ value added

	Coef.	Std. Err.	Sig.	Coef.	Std. Err.	Sig.	Coef.	Std. Err.	Sig.
Constant	3.722	0.589	***	3.677	0.581	***	4.080	0.586	***
Formation Dummy (Greenfield)	-0.141	0.193		-0.101	0.192		-0.131	0.188	
Formation Dummy (Acquisition)	-0.139	0.172		-0.104	0.170		-0.112	0.167	
Matrix Structure	0.095	0.165		0.082	0.163		0.059	0.161	
Subsidiary Relative Competence	0.109	0.111		0.050	0.113		0.040	0.110	
Subsidiary Age	-0.379	0.158	**	-0.326	0.158	**	-0.287	0.157	*
Subsidiary Size (Employees)	0.016	0.132		-0.024	0.132		-0.028	0.129	
Extent of training and socialization	0.178	0.064	***	0.153	0.065	**	0.167	0.062	***
Extent of output control	0.011	0.068		0.025	0.067		0.037	0.067	
Extent of formalization	0.076	0.068		0.072	0.067		0.051	0.067	
H1: Subsidiary Relational Embeddedness to external network	-0.189	0.086	**	-0.174	0.085	**	-0.079	0.092	
H2: HQ Relational Embeddedness to subsidiary network				0.120	0.061	**			
H3: Embeddedness Distance							-0.111	0.041	***
n	114			114			114		
F	2.28			2.48			2.89		
Sig.	**			***			***		
R Squared	0.018			0.211			0.238		
Adj. R Squared	0.102			0.126			0.155		

*** p<0.01, ** p<0.05, * p<0.1.

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