A Subsidiary Perspective on Organizing—Costs in Multinational Corporations: The Roles of Distance, Coordination, and Relationship Atmosphere

Randi Lunnan
Department of Strategy
BI Norwegian Business School
Nydalsveien 37, 0484 Oslo, Norway
Phone: (+47) 46410479
randi.lunnan@bi.no

Sverre Tomassen
Department of Strategy
BI Norwegian Business School
Nydalsveien 37, 0484 Oslo, Norway
Phone: (+47) 46410490
sverre.tomassen@bi.no

Ulf Andersson
School of Business, Society and Engineering
Mälardalen University
Box 883, 721 23 Västerås, Sweden
Phone: (+46) 736620943
and
Department of Strategy
BI Norwegian Business School
ulf.r.andersson@mdh.se

Gabriel R.G. Benito *
Department of Strategy
BI Norwegian Business School
Nydalsveien 37, 0484 Oslo, Norway
Phone: (+47) 46410455
gabriel.r.g.benito@bi.no

* Author for correspondence.

This version January 12, 2016

Submitted to AIB Annual Conference 2016, Track 11 “Global Strategy, Alliances and Acquisitions”.
A Subsidiary Perspective on Organizing-Costs in Multinational Corporations: The Roles of Distance, Coordination, and Relationship Atmosphere

Abstract
Previous studies of organizing-costs in multinational corporations have taken the view of the parent corporation. In this study, we turn the table around and examine how subsidiaries experience organizing-costs as they deal with demands from and interactions with corporate headquarters. Specifically, we examine how distance, coordination mechanisms, and atmosphere influence the level of organizing-costs in the headquarter-subsidiary relationship. We focus on two types of organizing-costs; bargaining costs and information costs. Using survey data collected among subsidiary managers in two Norwegian companies in the consulting and certification services industry, we show that business atmosphere significantly reduces both types of organizing-costs, whereas distance increases bargaining costs. Organizing-costs are also influenced by the coordination mechanisms used in the headquarter-subsidiary relationship. We find that centralization and formalization reduce information costs, whereas social integration, contrary to our hypothesis, increases bargaining costs.

Key words: Headquarter-subsidiary relations, organizing-costs, coordination, distance, atmosphere.
A Subsidiary Perspective on Organizing-costs in Multinational Corporations: The Roles of Distance, Coordination, and Relationship Atmosphere

Introduction

Most research on multinational corporations (MNCs) has taken a “view from the top” in the sense that it has focused on the strategic decisions typically made at headquarters by top-level corporate managers; see Menz, Kunisch and Collis (2015) for a recent comprehensive overview of the corporate headquarters literature. The dominant perspective has assumed, if not taken for granted, that headquarters aim at making cogent decisions that maximize the benefits for the whole corporation and its key stakeholders. The “view from the top” is, of course, a fully legitimate perspective on MNCs, but it does not convey the entire picture of how such large and complex companies actually work. This paper offers a complementary perspective focusing on the organizing-costs subsidiaries experience in their dealings with their headquarters, and the factors driving these costs.

A “bottom up” approach, in which an organization is looked at from the viewpoint of a given subsidiary has gradually become more prevalent amongst scholars interested in MNCs (Holm and Pedersen, 2000). Initially inspired by groundbreaking work such as Hedlund’s (1986) treatise on the heterarchy, and White and Poynter’s (1984) study of heterogeneity among foreign-owned local subsidiaries, it has evolved into a rich stream of literature looking into a diverse range of topics. Issues like subsidiary roles and evolution (e.g. Benito, Grøgaard and Narula., 2003; Birkinshaw and Morrison, 1995; Birkinshaw and Hood, 1998; Dörrenbächer and Gammelgaard, 2006), reverse knowledge transfer (e.g. Rabbiosi and Santangelo, 2013), local embeddedness (e.g. Andersson and Forsgren, 1996), subsidiary autonomy (e.g. Ambos,
Asakawa and Ambos, 2011), and subsidiary initiatives (e.g. Ambos, Andersson and Birkinshaw, 2010; Strutzenberger and Ambos, 2014), rank prominently in this line of research.

The top-down and bottom-up views of the MNC have recently been brought closer together by the recognition that headquarter-subsidiary relationships can be crucial for the overall functioning of MNCs. However, the views still differ on how best to describe headquarter-subsidiary relationships and their consequences. Foss, Foss and Nell (2012) argue that the existing literature on the MNC and its headquarters fundamentally considers the HQ as well informed – if not omnipotent – and benign in its activities and managerial actions. In the case of MNC research, the interest seldom extends beyond the point at which major decisions are taken; for example where and how to enter a foreign country and how to organize its activities there. This is intuitive as headquarters ought to make sensible decisions, also in the long run.

In the context of international business activity, MNCs’ distinctive way of expanding abroad is that of making foreign direct investments (FDI), i.e. they establish subsidiaries when they regard the commitment as justified by the need for control over activities and assets in a foreign country. Everything else constant,¹ MNCs would choose FDI over other modes of operation (say, exporting products from a home base, or licensing rights to local production) when governance costs are minimized by operating through a subsidiary that they own and control (Buckley and Casson, 1976; Hennart, 1991; Benito and Tomassen, 2010).²

¹ The “everything else constant” condition is crucial, as many other considerations are also important; including the costs of carrying out activities in various locations, transportation and distribution costs, location-dependent risks and uncertainty, and non-economic issues such as legitimacy and political benefits.
² Conveniently, we start out from the assumption of rational HQ. The assumption that HQ actions add value to the MNC is both influential and enduring. Headquarters actions are supposedly done to ensure that subunit activities keep on being effective and efficient. However, such assumptions do not hold true if a specific action leads to demotivated subsidiary management and employees, or if the governance costs of an initiative outweigh the benefits. Specifically, it has been recognized that HQ actions might be sub-optimal due to sheer ignorance (Forsgren, Holm and Johanson, 1995), information overload (Egelhoff, 2010) and pervasive uncertainty (Forsgren and Holm, 2010). More generally, it has been noted that any unit and individual will struggle with bounded rationality (Simon, 1976).
Yet, as demonstrated by, for example, Tomassen and Benito (2009), Tomassen, Benito and Lunnan (2012) and Richter (2014), operating through foreign subsidiaries is not an end-solution, especially in terms of organizing-costs. Making an FDI does not rule out organizing-costs once and for all. MNCs are complex organizations. They are per definition multi-unit, multi-location organizations, and geographical space as well as cultural and institutional diversity pose challenges for how headquarters and subsidiaries relate to each other. These challenges expose themselves in terms of organizing-costs: Adaptation problems, bargaining issues, resources spent on developing common norms and goals, and communication distortions are all common traits of international business activities.

In this study we zoom in on the relationship between HQ and subsidiaries, and examine what drives organizing-costs as seen from the perspective of subsidiaries. Understanding such costs can constitute major competitive advantages for companies, but that involves knowing more about the antecedents of organizing-costs, and learning about how to arrange and manage foreign operations in ways that minimize organizing-costs.

The main roles of HQ are to handle the MNC’s overall strategy and to secure control and coordination of subsidiaries (Chandler, 1991), which should provide value-adding benefits to the subsidiary. Headquarters offer value to the extent that they are good parents (Ambos and Mahnke, 2010; Campbell, Goold, and Alexander, 1995), by being able to understand the challenges of subsidiaries as well as supporting the resources that subsidiaries need to develop. However, subsidiaries experience organizing-costs when dealings with HQ are seen as difficult, time consuming and resource demanding. These costs may arise because of lack of HQ attention (Bouquet and Birkinshaw, 2008), HQ ignorance (Holm, Johanson and Thilenius, 1995), HQ understanding (Campbell, Goold, and Alexander, 1995), or subsidiaries falling off the HQ radar.

---

3 As such, any MNC is more complex than its otherwise identical, but purely domestic twin, and are hence highly suitable “laboratories” for examining governance issues arising from complexity.
(Monteiro, Arvidsson and Birkinshaw, 2008). In this study, we focus on two types of organizing-costs: bargaining costs and information costs. These types of costs potentially disturb subsidiary value creation by directing valuable time and effort towards renegotiations with HQ as well as coping with coordination failures.

Previous research has identified several factors influencing organizing-costs (see e.g. Tomassen et al. 2012), but have solely looked at such costs from the viewpoint of HQ. Also, previous studies have not empirically examined how organizing-costs may vary depending on characteristics of the HQ-subsidiary relationship. A favourable relationship atmosphere may facilitate communication and as such reduce costs, whereas distance should be expected to increase these costs (Casson, 1999). Further, costs can be reduced with appropriate coordination mechanisms (Baliga and Jaeger, 1984). Our empirical context consists two Norwegian MNCs in the certification business; one, ALPHA, is a large company operating globally across a range of different services, whereas the other, BETA, is smaller and more focused enterprise in terms of its product and geographic diversification. In addition, while ALPHA has a very long history of international operations, having set up its first foreign office 150 years ago, BETA has an internationalization story that stretches just a little more than 20 years. This research context give us the opportunity to control for variation in terms of nationality and industry – which the two firms have in common – and at the same provide variation in key aspects of subsidiary control and coordination. From initial interviews, we know, for example, that BETA centralizes fewer decisions, and leaves more autonomy to their subsidiaries. As such, HQ visibility is higher in ALPHA, which can lead to variation in terms of perceived organizing-costs.

Our findings show that organizing-costs in MNCs have distinct drivers. This study focus on two types of costs that both have the potential to cause great inefficiencies in subsidiaries. Due to their distinct character, HQ managers must attend to formal mechanisms that simplify
coordination and control for subsidiary managers, but must also overcome and mitigate relational tensions occurring in social interactions in culturally heterogeneous settings.

Theory and hypotheses

The economics of organization fundamentally involve making efficient alignments of transactions to different governance structures conveying different levels of organizing-costs. These costs occur *ex ante* and *ex post* (Williamson, 1985). The former are the costs of drafting, negotiating, and safeguarding an arrangement. The latter are the costs related to (i) mal-adaption when transactions drift out of alignment, (ii) haggling to correct misalignment, (iii) setting up and running the contract, and (iv) bonding the parties involved in the transaction. Hence, organizing-costs are costs related to the governance of a relationship, be it within or across organizational boundaries, and according to transaction cost economics and internalization theory, the most efficient governance structure will be the one that minimizes governance costs in the long run (Buckley and Casson, 1976; Hennart, 1982; Williamson, 1979). It seems naive to presuppose that organizing-costs simply vanish with the internalization of the transactions, and previous studies have indeed documented their presence within MNCs (Tomassen et al., 2012). While governance structures may promote or curb certain behaviours, they do not fundamentally transform human nature. This means that organizing-costs should be expected to vary even within different internal transactions depending on characteristics of the HQ-subsidiary relationship as well as external conditions.

*Ex post* organizing-costs can be classified into four main types: bargaining costs, information costs, monitoring costs, and bonding costs (Benito and Tomassen, 2010; Tomassen

---

4 In our further discussion, the attention is on *ex post* costs – i.e. the costs that occur after the governance structure has been settled.
and Benito, 2009). In this study, we focus on the first two types of costs, since they are the ones that are most relevant from a subsidiary perspective. Both monitoring and bonding costs reflect costs of misalignment from a HQ point of view, and are less relevant from a subsidiary perspective.

**Bargaining costs** arise due to renegotiations and changes in agreements between the MNC HQ and its various subsidiaries (Andersson, Forsgren and Holm, 2007). Both time and resources spent on bargaining, and losses that occur due to non-efficient agreements can be classified as bargaining costs (Dahlstrom and Nygaard, 1999). Typical examples include disagreements regarding various aspects of the transfer prices and deliberate withholding of knowledge.

**Information costs** arise from communication and coordination failures between HQ and subsidiaries (Casson, 1999; Fisch and Zschoche, 2011; Richter, 2014). These costs are significant if they in turn make subsidiaries less capable to react rapidly to changing conditions. When the environment is diverse and volatile, adaptation issues are of special importance. Appropriate responses to environmental changes require prompt but correct information, and incomplete, inaccurate or poorly formulated information prepared by the subsidiary may lead to sub-optimal decisions.

Our perspective deals with ex post organizing-costs as perceived by subsidiary managers, and as such our study falls within the subsidiary initiative theorizing (e.g. Ambos et al., 2010), which springs out of the corporate entrepreneurship literature (e.g. Birkinshaw 2000). A subsidiary initiative is defined as “entrepreneurial proactive behavior in organizational subunits aiming to influence strategy-making in the organization” (Strutzenberger and Ambos, 2014:314). Although no studies to our knowledge have measured subsidiary ex post organizing-costs, the relation between subsidiary initiatives and HQ monitoring is not novel. Ambos et al. (2010) found a positive relation between subsidiary initiatives and HQ monitoring. Excess
monitoring from HQ limit subsidiary autonomy, which in turn negatively affect subsidiary initiatives (Bouquet and Birkinshaw, 2008). Following this logic, we argue that subsidiary managers’ perception of *ex post* organizing-costs influence their ability to make strategies locally. The higher organizing-costs vis-à-vis their global headquarters, the more time and effort they use in bargaining agreements, securing timely and accurate information, communicating and developing a common culture. If the relationship with HQ is perceived as being friction-free and less costly to maintain, the subsidiary manager could spend time more efficiently securing and increasing subsidiary performance.

From established literature, we find three potential antecedents to organizational costs that all have implications for HQ managers. First, the *distance* between HQ and subsidiaries challenges their relation, and is therefore an important factor to include. Second, *coordination mechanisms* are introduced by HQ with the aim to ease coordination and control, and should therefore limit perceived costs in subsidiaries. Third, the general *atmosphere* between HQ and subsidiaries should ease communication and therefore lower costs. In this study, we focus on these three antecedents.

**Distance and subsidiaries’ perception of *ex post* organizing-costs**

The concept of distance is central in the IB literature (e.g. Ghemawat, 2001). The costs of overcoming distance include those of moving goods to foreign markets (geographical distance) and learning about as well as operating in new markets (cultural/psychic distance) (Ellis, 2007). Both cultural and geographical distance indicates that the firm has less control due to unfamiliarity with language, customs and behavior. In addition, time zones and physical distance make it difficult for headquarters to exert direct control.
Distance generally limits subsidiary visibility from HQ and increases costs of activity coordination (Ricther, 2014). Distance between headquarters and subsidiaries decreases interaction and thereby communication and information (Casson, 1999; Fisch and Zschoche, 2011). The more different the regions are in terms of culture, growth and competitive conditions, the more this information asymmetry prevents global headquarters from performing value-adding activities, and we would expect high information costs as a result. Parenting becomes more complex as new locations are different from the home region opening up for communication failures and mal-adaptations, leading to bargaining about which investments and resources dispositions are best. Bouquet and Birkinshaw (2008) found a positive relationship between subsidiary initiative taking and headquarters attention as distance increases. Their argument is that subsidiaries close to home have more mechanisms for getting attention from HQ than distant subsidiary managers that need to put more effort into getting the attention from HQ. These initiatives could potentially be outside the scope of HQ and therefore incur costs of renegotiation. We therefore expect that:

H1: Organizing-costs increase with increased geographical distance.

**Coordination mechanisms and subsidiaries’ perception of ex post organizing-costs**

The IB literature (see e.g. Baliga and Jaeger, 1984) generally divides coordination mechanisms into centralization (i.e. HQ take critical decisions), formal mechanisms (such as common rules and standards, and organization-wide information systems) and social mechanisms (i.e. committees, meetings, liaisons). Social mechanisms are becoming more widespread in MNCs, albeit used differently as they are perceived as more costly (O’Donnell 2000). Centralization, formal and social coordination mechanisms define norms and expectations, clarifying behavior and performance (Roth, Schweiger and Morrison, 1991), and it is reasonable to expect that
when these mechanisms are in place, *ex post* organizing-costs are reduced. Overall, we expect that:

H2a: *Organizing-costs decrease with enhanced use of social coordination mechanisms.*

H2b: *Organizing-costs decrease with enhanced use of formal integration mechanisms.*

H2c: *Organizing-costs decrease the more centralized the decision making in the HQ-subsidiary relationship is.*

Centralization refers to a process where the headquarters make most of the strategy and policy decisions, and shifts the locus of power in favor of HQ (Ghoshal and Nohria, 1989). A centralized HQ influences what subsidiaries do and how they do it; for example, what projects they decide to pursue, how they allocate resources, and how they deliver services. A centralized HQ suggests more standards developed at HQ, limiting the opportunity to seek locally oriented solutions for each individual subsidiary (Bartlett and Ghoshal, 1989). Centralization could hence lead to disagreements, especially in situations where the subsidiary is growing strong, and less dependent on the subsidiary. We therefore propose an alternative hypothesis:

H2d: *Organizing-costs increase the more centralized the decision making in the HQ-subsidiary relationship is.*

---

**Business atmosphere and subsidiaries’ perception of *ex post* organizing-costs**

The social aspect of the relation between subsidiaries and HQ has been the focus of much IB literature, either in the shape of general trust or a shared philosophy (Roth et al. 1991), or what we may call business atmosphere. A beneficial business atmosphere is characterized by shared identity, common norms and trust, and is particularly relevant in a MNC due to geographical, cultural and linguistic differences (Mäkelä, Kalla and Piekkari, 2007). Development of a good
business atmosphere usually happens when the MNC over time has initiated a set of activities, including actions like establishing personal ties between parties, developing common identities, building incentive systems, and spending time together to solve third party problems (Rabbiosi, 2011). When subsidiary managers perceive the relationship to HQ as characterized by trust and mutual understanding, re-negotiations should be taken on in a more conducive environment, and information exchange more trusted. Hence:

\[ H3: \text{Organizing-costs decrease the better the subsidiary perceives the quality of the business atmosphere.} \]

**Data and measures**

**Context and data collection**

The data in this study comes from two multinational companies in the consulting and certification services industry. We have followed these companies over several years through a larger research project involving both quantitative and qualitative data collection strategies. In this paper, we mainly rely on quantitative data, collected through a questionnaire. However, the interpretation of both the variables and the results of the regressions are also influenced by our in-depth knowledge obtained from a rich set of qualitative interviews across all management levels across several geographic regions in the two organizations.

Both organizations are headquartered in Norway. ALPHA is an experienced and well recognized international actor, having established its first foreign office as early as 1873 in London. At the time of the survey (2008), the company had 177 wholly owned business units located in 24 different countries across Asia, North- and South America, Europe, and Australia. We sent the questionnaire to the leaders of each of these units and received responses from 115 out of the 177, hence a response rate of over 60%. We have complete data from 105 leaders.
located in 17 countries in ALPHA. The other organization, BETA, is substantially smaller and has a much shorter international presence and recognition, although its history in Norway can be traced back to the early 1930s. BETA was until the early 1990s a national monopoly protected by law. However, because of a deregulation of the industry for testing and approval of electrical components, BETA was transformed into an independent, self-owned private foundation in 1991 with headquarters in Oslo. The first international step came just after the formation of the new company. By the time the survey was conducted BETA had 13 wholly owned business units located in nine different countries in Europe, North America, and Asia, and all the 13 leaders completed the questionnaire, i.e. a 100% response rate. Together these two organizations provide an excellent setting for testing our hypotheses. On the one hand, they share important similarities as both are Norwegian and operate in overlapping industries. On the other hand, they are different in terms of their international experiences and the complexity of their international operations.

Measures

Wherever possible, we have used well-established instruments when measuring both independent and dependent variables. However, in order to be contextually aware we discussed the measurements with a reference group consisting of practitioners and researchers specialized on professional service firms, and based upon this, some of the wordings in the measures were slightly changed to adapt the instrument to the type of industry the two firms are in. See Appendix 1 for the full set of measures and reliability values.

To validate our model, both uni-dimensionality and reliability analyses have been conducted. We ran exploratory principal component analyses (PCA) with oblique (promax) rotation resulting in seven distinct factors from a total of 35 items – all in accordance with our
theoretical model. We used the Cronbach’s alpha measure as reliability assessment and all variables were well above the 0.70 threshold (Nunnally and Bernstein 1994:264-65).

Following current practice, we took precautions to reduce common method bias issues: (a) some of the scales were reversed; and (b) questions of interest for this study were mixed with other, less relevant questions. We also run a Harman's single factor test (Podsakoff et al., 2003; Podsakoff & Organ, 1986). Seven factors with an eigenvalue over one emerged from the factor solution and no first factor explained the majority of the variance in the variables (e.g. the first factor explained less than 30 percent of the variance). This suggests that the problem of common method bias should not significantly influence our results.

**Measurement of the dependent variables: organizing-costs**

Seven point multi-item reflective scales were used to measure organizing-costs (Bollen & Lennox, 1991). The measures were taken, but in slightly adapted form, from Tomassen and Benito (2009) and Dahlstrom and Nygaard (1999).

*Bargaining costs* are perceived expenses related to negotiations between the subsidiary and the HQ. Three items were used to measure this variable (Cronbach’s \( \alpha = 0.76 \)).

*Information costs* are perceived communication and coordination costs related to information from HQ to subsidiary. We used four items when measuring this variable (Cronbach’s \( \alpha = 0.90 \)).

**Measurement of independent variables**

We measure formal integration mechanisms through three distinct variables: (i) Common Rules, (ii) Communication Systems, and (iii) Centralization. The measurements were adapted from
Gupta and Govindarajan (2000), Kim et al. (2003), and Martinez and Jarillo (1989, 1991). A seven-point scale was used for all items.

*Common rules* measures whether the companies have specified rules, standards and procedures across business units. Two items constitute this variable (Cronbach’s α = 0.86).

*Communication systems* measures to what extent the organizations have systems that support seamless communication across organizational units. The variable is measured by five items (Cronbach’s α = 0.79).

*Centralization* is a composite variable existing of 12 different items that describe HQ vs subsidiary influence regarding important decision areas such as R&D, project selection and priorities, resource allocation, pricing, marketing, and services (see appendix 1 for a full list of items) (Cronbach’s α = 0.88).

The variable *Social integration mechanisms* measures the extent of social interaction across organizational units, and to what extent the organization promote informal social contact across the organization (Kim et al., 2003). It is measured by 3 different items (Cronbach’s α = 0.83).

*Relationship atmosphere* is a 6-item construct taken from Tomassen et al. (2012), but reversed and slightly adapted in order to provide a more pertinent understanding of the variable in the particular setting of this study. It describes whether the relationship between HQ and the local unit can be characterized as open and supportive or as a relationship where attitudes such as ignorance and broken promises illustrate the relation (Cronbach’s α = 0.91).

*Distance* was measured as a simple categorical variable indicating the distance from HQ to the focal subsidiary (1=Nordic countries, 2=Europe, 3=Rest of the World).

*Control variables*
We have included three control variables that might lead to variation in bargaining as well as information costs: (1) Size of the local unit (measured as “number of employees in the local unit”, (2) local experience (measured as “number of years in the particular location”, and (3) establishment mode (1=acquisition, 2=merger, 3=organic).

**Estimation**

Before estimating the models, we tested for the assumption of normality, linearity and multicollinearity; see also Appendix 2 for descriptive statistics. No problems were detected regarding normality and linearity. Multicollinearity, if existent, should be identified by inspecting the variance proportion matrix and comparing with the variance inflation factors (VIF). No such problems seem to be present. VIF values were all below 1.5, and no dimension accounted for more than 66 percent of the variance for two or more variables (one dimension explained 65 percent of the variance in “Employees in local unit” and 66 percent in “Local experience”). This is far below what Hair et al. (2009) describe as a critical value (90 percent). Hence, OLS regressions were used for testing the hypotheses.

**Results**

The results of the OLS regressions are reported in Table 1 below.

```
<table>
<thead>
<tr>
<th>Table 1 approximately here</th>
</tr>
</thead>
</table>
```

The two first estimated models (model 1 for bargaining costs and model 2 for information costs), which only include control variables, reveal that size (number of employees in local unit) has a
negative effect on both bargaining and information costs. Subsequently, four full models were estimated. Since we uncovered that communication systems and common rules may have a substituting effect (corr. = .635; and the significant effects disappeared for both when they were included in the same model), we decided to separate the two variables into different models.

All four full models are significant with $F$-values of 3.62 (sig. $F<.000$) for Model 3, $F=3.41$ (sig. $F<.001$) for Model 4, $F=4.15$ (sig. $F<.000$) for Model 5, and $F=3.79$ (sig. $F<.000$) for Model 6.

The results for model 3 and model 4 reveal that both distance and social integration mechanisms have significant positive effects on bargaining costs ($\beta$ _distance_Model3 = .25, $p < .05$; $\beta$ _distance_Model4 = .25, $p < .05$; $\beta$ _social_Model3 = .27, $p < .01$; $\beta$ _distance_Model4 = .26, $p < .05$). The positive effect of distance is in accordance with our hypothesis (H1). Concerning social integration mechanisms (H2a), we hypothesized a negative effect, but uncovered the opposite effect – a strong positive relationship towards bargaining costs. Conversely, neither distance nor socialization mechanisms are associated with information costs (Model 5 and 6).

Hypothesis H2b on the relationship between formal integration and organizing costs is generally supported. First, Model 3 reveals that there is a weakly significant negative relationship between common rules and bargaining costs ($\beta$ _Common_rules_Model3 = -.17, $p < .10$). Likewise, Model 5 shows a significant negative effect of communication systems towards information costs $\beta$ _Common-rules_Model5 = -.31, $p < .01$). Finally, Model 6 shows a negative association between communication systems and information costs $\beta$ _Communication_Model6 = -.28, $p < .01$.

Looking at the effects of centralization, we find a mixed picture. On the one hand, data suggest that there is no significant effect between centralization and bargaining cost (H2c). On
the other hand, the hypothesized negative effect of centralization effect is significant for information costs; $\beta_{\text{Centralization_Model5}} = -.17, p < .10; \beta_{\text{Centralization_Model6}} = -.21, p < .05$. Hence, $H_2c$ is thereby partly supported, while hypothesis $H_2d$ is rejected.

Regarding relationship atmosphere our data demonstrate strong negative effects through all four models for both bargaining costs and information costs as hypothesized ($\beta_{\text{Atmosphere_Model3}} = -.29, p < .01; \beta_{\text{Atmosphere_Model4}} = -.30, p < .01; \beta_{\text{Atmosphere_Model5}} = -.29, p < .01; \beta_{\text{Atmosphere_Model6}} = -.30, p < .01$). $H_3$ is therefore supported.

**Discussion and implications**

In this study, we set out to test the concept of *ex post* organizing-costs in HQ-subsidiary relationships as seen from the perspective of subsidiary managers. Our analysis show the existence of *ex post* organizing-costs exist and demonstrate that they indeed vary across subsidiaries. Although more studies are needed to establish their implications more accurately, it seems reasonable to suggest that the existence of these costs take up subsidiary manager’s time away from other tasks and therefore reduce performance.

Three hypotheses receive support in our regressions: Business atmosphere (Hypothesis $H_3$) significantly reduces both types of organizing-costs, whereas distance (Hypothesis $H_1$) increases bargaining costs. Hypothesis $H_2a$ suggested that coordination mechanisms reduce costs. We find that centralization and formalization reduce information costs, whereas social integration contrary to our hypothesis, increases bargaining costs. No support was found for Hypothesis $H_2b$ claim of increased bargaining costs resulting from centralization.

These findings have four important implications for the management of the MNC. First, when transactions between HQ and subsidiaries are centralized and formalized, subsidiaries perceive information costs to be lower. This finding is straightforward and points to a clear
structure as a way to simplify expectations and interpretations of information from HQ to the subsidiary. Second, bargaining costs increase with geographical distance and the availability of social interaction. This finding adds to previous studies that have found that distance complicates HQ-subsidiary relations, but challenges arguments that disagreements are resolved through social interaction. On the contrary, social interaction may alleviate and highlight such disagreements. Third, experiencing headquarters as benign and trustworthy serve to reduce organizing-costs. Fourth, to understand frictions between subsidiary management and HQ, we argue that the identification and measurement of organizing-costs is a promising avenue forward. These costs, occurring in the relation between subsidiaries and HQ cannot be seen as a uniform category, but comprise different costs that arise due to different antecedents.

A factor that significantly contributes to the reduction of organizing-costs, atmosphere, develops through social interaction, which in itself may increase bargaining costs. Lowering the total \textit{ex post} organizing-costs may consequently appear to require the development of a comprehensive program within the MNC.

\textit{The Role of Structure: Centralization and Formalization and the Lowering of Information Costs}

Centralization shifts the locus of power in favor of HQ, leaving to HQ to define crucial strategy and policy decisions (Ghoshal and Nohria, 1989). A centralized HQ influences what subsidiaries do and how they do it; for example, what projects they decide to take on, how they allocate resources, and how they deliver services. One could claim that a centralized HQ is counting on precise and timely information from the subsidiary in question, and that might be perceived as an increase in efforts from the subsidiary, which could trigger information costs. When we find the opposite, this suggests that the more decisions are being taken at HQ, relying
on standards across subsidiaries, the clearer and less contestable the information received from HQ is perceived by the subsidiaries, thereby lowering their overall information costs.

The degree to which decision making in the MNC is centralized has been extensively studied in the international business literature (see e.g. Hedlund, 1981; Doz and Prahalad, 1981; Gates and Egelhoff, 1986). Doz and Prahalad (1981) found that as subsidiaries’ dependence on HQ for strategic resources diminishes if is more difficult for the HQ to enforce top-down decision making. Although research on centralization in MNCs has reported some inconsistent results (Gates and Egelhoff, 1986), it has been found to have a negative relationship with size (e.g. Blau and Schoenherr, 1971), complexity (e.g. Thompson, 1967) and environmental change (e.g. Lawrence and Lorsch, 1967).

Centralization decisions are influenced by the complexity of the MNC. The higher the extent and heterogeneity of foreign operations, the more complex the MNC becomes, which increases the wish to keep control of decisions at headquarters. Centralized decisions may also hinge on experience accumulated through international activities, which over time fine-tunes an organization’s structure, and its capabilities and routines associated with carrying out international activities. The more experienced the MNC, the more competent and confident it gets regarding managing its international activities, and consequently the more centralized it becomes.

Centralization is often used situations where much of the complexity in the subsidiary’s environment is relatively low, when changes are predictable, and when subsidiaries depend on HQ for resources. The certification firms in our study rely on standards, and they therefore centralize core procedures and modes of delivery. Other firms may operate under conditions where delivery processes of products and services differ between subsidiaries and over time, which could give different results on perceived costs. Future studies should explore what happens to information costs in MNCs that operate in volatile environments and under different
resource dependency conditions. We can conclude, however, that when HQ centralizes decision making, subsidiaries experience lower costs related to unclear and disputed information, which in turn makes them more efficient in allocating time to other value creating tasks.

An important aspect of formalization is the routinization of decision making, and hence the decreasing power of both HQ and subsidiaries (Ghoshal and Nohria, 1989). Regulating exchanges between headquarters and subsidiaries through clear procedures in a structured context (Burgelman, 1984) should increase predictability and expectations. Our study supports these predictions. Implementing common rules, policies and procedures as well as sharing information through common databases, intranet etc. make information from HQ more clear, complete, understandable, and available, and hence significantly reduce information costs.

Formalization, in the sense of common rules also has a positive effect on bargaining costs, whereas a common communication system (such as databases, intranet etc.) per se has no significant effect. Brockner (2006) argues that there is a strong link between management control and perceived fairness. Control mechanisms may assure fair outcomes (Luo, 2007). Procedural fairness is associated with formalized control (Long, Bendersky and Morrill, 2011) suggesting that formalized control, (in our case through common rules) could increase perceptions that company procedures are fair, thereby reducing bargaining costs.

Our results seem to indicate a distinction between general information and standard coordination (information costs) and costs related to specific projects and activities (bargaining costs). Formalization and standardization reduce the former, but have less clear effects on the latter. The exception is formalization through common rules that could also apply to specific projects through the general perceptions of fairness that evolve within an organization. These speculations lend themselves to future studies.
The Role of Social Coordination and Distance: Social Complexity as Driver of Organizing-costs

In the IB literature, several studies have discussed and typically found positive effects of normative integration (Ghoshal and Nohria, 1989), social control (O’Donnell, 2000), and boundary spanning interpersonal interaction (Nohria and Eccles, 1992; Kostova and Roth, 2003; Rabbiosi, 2011). The common mechanisms driving these issues are personal meetings and the facilitation of human interaction that enables two-way communication as opposed to formal and more detached mechanisms (Mäkelä and Brewster, 2009). O’Donnell (2000) found, for example, that vertical coordination mechanisms, such as formal training, visits and meetings were more frequently used when subsidiaries were more dependent on HQ as a way to increased shared understanding and the development of a common culture. Mäkelä and Brewster (2009) observed that expatriate/repatriate arrangements, and to a lesser extent cross-border teams were significantly associated with social capital and knowledge sharing, whereas inter-unit meetings and project groups to a lesser extent predicted these results. Our findings take previous research a bit farther, and suggest that normative/social integration mechanisms do not only create common norms and culture, but also provide platforms for subsidiaries to engage in activities and gain experiences that may subsequently result in higher bargaining costs with their HQ. The three types of indicators used in our study include transfers of people across subsidiary units, interaction through meetings and committees, and personal interactions across units. The more subsidiary managers and employees engage in face-to-face interactions with HQ representatives or managers and employees from other subsidiaries, the more likely that they discover resource allocations done by HQ that they deem unreasonable or unfair. As they engage in discussions leading to disagreements, the result becomes higher perceived bargaining costs. Our findings demonstrate that the positive effects from social interaction that are generally taken for granted in the IB literature, may be overrated or even mistaken. We should
not disregard the negative effects of human interaction among people who may not like each other, or who have different opinions and experiences. This study hence demonstrates that the commonly assumed positive effects of face-to-face interactions may have a flip side – they may trigger bargaining costs. The effects of social interaction do not, however, affect information costs, but occur as side effects of organizing activities and projects outside daily general information and coordination.

In his CAGE framework, Ghemawat (2001) suggests four types of distance: cultural distance (language, norms, religion, ethnicity), administrative distance (for instance different institutions, government policies, not sharing of political and monetary systems), geographic distance (physical remoteness, size of countries, differences in climate), and economic distance (differences in consumer incomes, cost and quality of resources and information).

When involvement of headquarters is limited due to distance, it is more difficult to unveil shirking (Foss, 1997). Higher cultural and geographical distances suggest that the firm has less control due to unfamiliarity with languages, customs and behaviors. In addition, time zones and physical distance make it difficult for headquarters to exert direct control. The more different locations are in terms of culture, growth and competitive conditions, the more the resulting information asymmetry hinders global headquarters in performing value-adding activities. Viewed from the perspective of subsidiaries, this study finds that organizational costs from increasing distance are linked to bargaining costs, not information costs. Interestingly, information sent out from HQ is not distorted as distance increases, but subsidiaries find it increasingly time consuming to renegotiate activities and resources. Foreign language, culture and differences in market conditions over distance challenges the understanding from HQ of local needs, hence the increasing need for bargaining and renegotiation.
The Role of Atmosphere in Reducing Organizing-costs

Atmosphere relates to behavioral and motivational assets in relationships, such as trust, norms of behavior and expectations (Kang, Morris and Snell, 2007; Nahapet and Ghoshal, 1998). Trust is particularly relevant in MNCs due to added complexity from distance and cultural differences (Westney, 2001). Trust denotes a willingness to be vulnerable to the actions of another party (e.g. Mayer, Davis and Schoorman, 1995), and has been shown to be positive for collaboration and performance (e.g. Zaheer et al, 1998). Trust develops through cognitive, behavior and affective mechanisms (Gambetta, 1988; Lewicki, Tomlinson and Gillespie, 2006), which means that in order to develop favorable expectations about HQ, subsidiaries not only rely on formal and written information (cognitive), but also on deeper relational expectations and affections that emerge from observations of behavior.

The development of a good atmosphere takes time and opportunities. When subsidiaries have reached a trusting relation with HQ, organizing-costs are perceived as significantly lower. However, our data show no correlation between atmosphere and social coordination, which suggests that subsidiaries where interpersonal coordination is prevalent do not have higher trust in their HQ.

Clearly, the relation between social control mechanisms and atmosphere is subtle, and frequent meetings in themselves do not lead to a better atmosphere. On the contrary, as already discussed, frequent social interaction may actually influence bargaining costs negatively. This suggests that what happens when companies interact socially is crucial, and that a trusting atmosphere may not only develop from positive personal interactions, but also from other sources, such as cognitive reliance on information sources, or previous interactions and history outside the scope of regular meetings.
The Role of Organizing-costs in the MNC

Previous studies have examined organizing-costs as perceived from the perspective of HQ. This study is the first, to our knowledge, to point to these costs from the subsidiaries’ point of view. Our findings demonstrate that subsidiaries indeed experience costs in their dealings with their HQ, and these costs seem to be driven by distinct mechanisms. A strong (centralized) HQ with formalized processes and well developed internal databases and communication structures limit information costs. This means that for MNCs where HQ are increasingly fragmented, subsidiaries need a clear HQ unit to relate to, in order to provide efficient information and coordination. Likewise, clear specific formalized processes and communication protocols help securing timely and correct information as well as facilitating coordination. The strategic consultancy Roland Berger reported in their 2013 study of 86 large multinational companies that there is a trend towards stronger and more centralized HQ. Based on results from our study, this trend supports increased value creation in subsidiaries by a reduction in information costs.

Our study shows that another type of organizing-costs, those due to bargaining, are driven by what we may see as mainly relational factors, namely geographical and cultural distances and personal differences revealed through social interactions. Subsidiaries in different locations offering services are exposed to different market conditions and opportunities for growth. Potential projects are held up against each other in social settings such as common meetings, and discussed in ways that subsidiaries may see as unfair or not beneficial to their operations. In such cases, subsidiaries seek to bargain with headquarters that not only may fail to understand local market conditions due to distance and cultural biases, but that also need to compare subsidiary needs and requests with those of other subsidiaries. A common setting allows for information exchange and exposure to other investment opportunities, and subsidiary have to develop arguments in their favor when competing for resources from HQ. Overall, this
results in increased time and effort that subsidiaries spend bargaining for resources with other subsidiaries as well as HQ.

Reducing overall organizing-costs in the MNC depends, on the one hand, on the ability to deal with complexity through standardization and offering formalized information channels, but on the other hand also on about learning how to deal with distance and managing social meeting places in the MNC. The latter, in particular, is a challenge since social interaction is necessary for trust and the development of common norms and identity that, subsequently, lead to a positive business atmosphere. As such, social interaction can have two effects; inducing a good atmosphere that reduces organizing-costs, or creating rooms for disagreements and conflicts, which increases bargaining costs. A major challenge for HQ is therefore to create arenas for social interaction that facilitate trust and limit bargaining. Of course, some bargaining may still be beneficial and necessary, but when bargaining turns into excessive time usage and unproductive interactions, subsidiary management attention could be spent on more productive tasks. This finding implies that HQ managers not only have to think about the structure of their organizations, but also about how they interact with subsidiaries in social arenas, and particularly how they identify and prioritize subsidiary investment projects and outline processes for dealing with them.

Facilitating the development of trust not only requires a careful scrutiny of what takes place in common meetings, but perhaps also points to the need for attention to subsidiary management recruitment and training. Securing a platform of trust before the manager even accepts the position could be essential. In addition, our data clearly suggest the consistency of HQ in behaving in transparent, predictable and fair manners improves the likelihood of developing a good atmosphere in HQ-subsidiary relationships.
Limitations, avenues for further research and conclusion

So far, the handful of studies that have focused on organizing-costs in international operations have taken the view of the parent corporation when looking at organizing-costs in headquarter-subsidiary relationships. Those valuable insights notwithstanding, in this study we have turned the table around and examined how subsidiaries observe organizing-costs as they deal with demands from and interactions with headquarters in MNCs. Specifically, we examine how distance, mechanisms of integration and atmosphere influence the organizing-costs in the headquarter-subsidiary relationship.

This study does not come without limitations. First, our study included only two multinational corporations. Our approach kept the industry and country of origin constant, which effectively “ruled out” variation along such characteristics. However, the companies and the industry in our study may have particularities that are less widespread in other industries and countries, and which, consequently lower our opportunity to generalize the results from the study.

Several issues, which may be subject to further research, arose from our study and its limitations. One exciting avenue is to study whether industry effects influence the organizing-costs ex post organizing-costs in HQ-subsidiary relationships. For instance; are information costs positively related to the degree of technological intensity in the industry? Do global industries face lower bargaining costs than industries where local adaptation is more prominent? Another interesting issue is the question of how intra-company networks between subsidiaries, and more complex HQ configurations, e.g. regional and divisional HQ, affect ex post organizing-costs as perceived by subsidiaries.

The primary contribution of this study is the examination of antecedents (distance, coordination mechanisms, atmosphere, and centralization) of perceived organizing
(information, and bargaining) costs. Understanding how these costs, at the subsidiary level, vary with the studied antecedents should enhance subsidiary managers’ ability to strategize around their future initiatives and to reflect on how taking such initiatives may affect organizing-costs. As a result, they may also gain insights into how to prevent or minimize such costs. Theoretically, we add to the literature on HQ-subsidiary relationships in complex MNCs as well as to transaction cost theory, which has only sporadically looked into what drives ex post organizing-costs.
References


Appendix 1: Measurement of variables (all items measured on 1-7 scales, apart from distance).

| **Bargaining Costs** | 1. We spend a lot of time in renegotiating agreements made with our headquarters | Cronbach’s Alpha: 0.76 |
| | 2. We spend a lot of time in coordinating activities with our headquarters | |
| | 3. The coordination of the relation with our headquarters is too costly compared with the outcome of these interactions | |

| **Information Costs** | 1. Information from the headquarters is often incomplete and difficult to understand | Cronbach’s Alpha: 0.90 |
| | 2. Information from the headquarters is often too voluminous and therefore difficult to understand | |
| | 3. Information from the headquarters is often poorly formulated and difficult to understand | |
| | 4. Information from the headquarters seldom comes at the right time | |

| **Atmosphere** | 1. Sometimes headquarters hide facts that can help us in doing a good job | Cronbach’s Alpha: 0.91 |
| | 2. The headquarters have not kept promises made then the relationship was established | |
| | 3. Occasionally, people at the headquarters alter information in order to carry out things their own way | |
| | 4. Sometimes people from headquarters promise to do things without actually doing them later | |
| | 5. Sometimes the headquarters ignore company policies that were designed to increase our ability to reach and service customers | |
| | 6. Whenever a conflict or difficulty arises, our headquarters always try to seek a solution that is in their own best interests, not considering our interests | |

| **Social Integration** | 1. We have meetings where managers from different international locations meet | Cronbach’s Alpha: 0.83 |
| | 2. There is personal contact between managers from different international locations in our company | |
| | 3. Committees meet regularly to plan and integrate activities internationally | |

| **Formal Integration: Communication Systems** | 1. We have databases where we share information internationally | Cronbach’s Alpha: 0.79 |
| | 2. We have worldwide electronic communications systems, like emails | |
| | 3. We have internationally, interconnected computer systems, like server systems | |
| | 4. We have internationally integrated software applications, like common use of applications | |
| | 5. We have worldwide integrated information systems, like Intranet | |

| **Formal Integration: Common Rules** | 1. We have well-specified worldwide common rules and policies. | Cronbach’s Alpha: 0.86 |
| | 2. We have well-specified worldwide standard operating procedures and common manuals | |

| **Centralization** | To what extent is there HQ versus local influence on the following decision areas: | Cronbach’s Alpha: 0.88 |
| | 1. R&D/Business development/Service development | |
| | 2. Project selection | |
| | 3. Project time schedule | |
| | 4. Project budget | |
| | 5. Project priorities | |
| | 6. Services | |
| | 7. Service delivery | |
| | 8. Project organization | |
| | 9. Resource allocations | |
| | 10. Marketing | |
| | 11. Brand name | |
| | 12. Pricing | |

| **Distance** | 1. Scandinavia | |
| | 2. Europe | |
| | 3. Rest of the World | |
## Appendix 2: Means and bivariate correlations of variables.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Bargaining costs</td>
<td>3.49</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Information costs</td>
<td>3.17</td>
<td>.321**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Distance</td>
<td>2.00</td>
<td>.235*</td>
<td>.076</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Social integration mechanism</td>
<td>4.86</td>
<td>.200*</td>
<td>-.147</td>
<td>.043</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Common rules</td>
<td>5.57</td>
<td>-.068</td>
<td>-.316**</td>
<td>.001</td>
<td>.331**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Communication systems</td>
<td>6.00</td>
<td>-.019</td>
<td>-.339**</td>
<td>.044</td>
<td>.455**</td>
<td>.635**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Centralization</td>
<td>4.94</td>
<td>-.114</td>
<td>-.175</td>
<td>-.239**</td>
<td>-.019</td>
<td>.049</td>
<td>.075</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Relationship atmosphere</td>
<td>3.84</td>
<td>-.286**</td>
<td>-.333**</td>
<td>.062</td>
<td>.143</td>
<td>.170</td>
<td>.241**</td>
<td>-.036</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Number of employees</td>
<td>189</td>
<td>-.181</td>
<td>-.111</td>
<td>-.325**</td>
<td>.028</td>
<td>.045</td>
<td>.111</td>
<td>.214*</td>
<td>.028</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Number of years in location</td>
<td>26.6</td>
<td>-.062</td>
<td>.028</td>
<td>-.433**</td>
<td>.003</td>
<td>.028</td>
<td>.074</td>
<td>.163</td>
<td>-.009</td>
<td>.501**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11 Establishment mode</td>
<td>2.48</td>
<td>.007</td>
<td>-.022</td>
<td>-.321**</td>
<td>.002</td>
<td>.216*</td>
<td>.061</td>
<td>.130</td>
<td>-.100</td>
<td>.175</td>
<td>.265**</td>
<td>1</td>
</tr>
</tbody>
</table>

* Significant at the 0.05 level (2-tailed); ** Significant at the 0.01 level (2-tailed)
Table 2: Regression results.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bargaining Costs</td>
<td>Information Costs</td>
<td>Bargaining Costs</td>
<td>Bargaining Costs</td>
<td>Information Costs</td>
<td>Information Costs</td>
</tr>
<tr>
<td>Constant</td>
<td>3.42***</td>
<td>3.13***</td>
<td>3.00***</td>
<td>3.21**</td>
<td>3.98***</td>
<td>4.68***</td>
</tr>
<tr>
<td># Employees in local unit</td>
<td>-.24*</td>
<td>-.20†</td>
<td>-.20†</td>
<td>-.18</td>
<td>-.14</td>
<td>-.10</td>
</tr>
<tr>
<td>Local experience</td>
<td>.05</td>
<td>.14</td>
<td>.14</td>
<td>.14</td>
<td>.16</td>
<td>.17</td>
</tr>
<tr>
<td>Establishment mode</td>
<td>.05</td>
<td>-.01</td>
<td>.08</td>
<td>.05</td>
<td>.08</td>
<td>-.02</td>
</tr>
<tr>
<td>Distance</td>
<td>.25*</td>
<td>.25*</td>
<td>.02</td>
<td>.02</td>
<td>.09</td>
<td>.09</td>
</tr>
<tr>
<td>Social integration mechanisms</td>
<td>.27**</td>
<td>.26*</td>
<td>.09</td>
<td>.09</td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td>Formal integration mechanisms:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common rules</td>
<td>-.17†</td>
<td>--</td>
<td>-.31**</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Communication systems</td>
<td>--</td>
<td>-.12</td>
<td>--</td>
<td>--</td>
<td>-.28**</td>
<td>--</td>
</tr>
<tr>
<td>Centralization</td>
<td>.01</td>
<td>.03</td>
<td>-.17†</td>
<td>-.21*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship atmosphere</td>
<td>-.29**</td>
<td>-.30**</td>
<td>-.29**</td>
<td>-.30**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted $R^2 / F$</td>
<td>.02 / 1.74</td>
<td>.00 / 1.32</td>
<td>.17 / 3.62***</td>
<td>.16 / 3.41**</td>
<td>.20 / 4.15***</td>
<td>.18 / 3.79***</td>
</tr>
</tbody>
</table>

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$ (N=104). Apart from constant, all reported values are standardized coefficients.