# Governance costs in foreign direct investments: a MNC headquarters challenge

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## ABSTRACT

According to transaction cost and internalization theories of multinational enterprises, companies make foreign direct investments (FDI) when the combined costs of operations and governance are lower for FDI than for market or contract based options, such as exports and licensing. Yet, *ex post* governance costs remain a conjectural construct, which has evaded empirical scrutiny, and the lack of focus on the implications of these costs constitutes a challenge for management in multinational companies (MNCs). What effects does the ensuing establishment of subsidiaries abroad have in terms of governance costs? What factors drive these costs? We hypothesize that such costs are driven by external contingencies as well as factors that characterize a particular company headquarters-subsidiary relationship. Using survey data from Norwegian MNCs, this study investigates 159 MNC-subsidiary relationships. Overall, our framework is corroborated by the data.

# Governance Costs in Foreign Direct Investments: A MNC Headquarters Challenge

## 1. Introduction

Why companies expand across borders by means of foreign direct investment (FDI) has been one of the central questions in international business research, and the subject of numerous studies since Stephen Hymer's seminal study of the economic rationale for FDI more than 50 years ago (Hymer, 1960). The transaction cost (or internalization) theory of multinational companies (MNC), arguably the key theoretical perspective in this line of inquiry, claims that companies make foreign direct investments (FDI) when the combined costs of operations and governance are lower for FDI than for market or contract based options, such as exports and licensing. From this perspective, MNCs – i.e. companies that have made FDIs – are a particular but increasingly common case of the general "boundaries of the firm"-problem (Hennart, 2000): companies extend (or re-trench) their boundaries beyond the boundaries of their home countries in their efforts to reach an optimal degree of integr ation. Transaction cost theory points to a comparative analysis of governance forms, where the relatively more efficient ones are selected and win out. In the case of FDI, internal governance (the use of hierarchy) supersedes external governance (the use of markets and contracts) due to market inefficiencies and failures (Buckley and Casson, 1976; Hennart, 1982; Rugman, 1986; Williamson, 1981).[1]

Efficiency refers to the minimization of costs of operations – such as production and logistical costs – and costs of organization, which typically are termed transaction costs (in market governance modes) or governance costs (in internal governance modes). Governance

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[1] According to Hennart (2000), MNCs integrate backwards as a response to market failures in factor and input markets; they deal with failures in markets for intermediate goods and technology by integrating horizontally; and, they engage in forward integration to deal with failures in the distribution and marketing of products.

costs are evidently crucial for the relative efficiency of FDI as a mode of operating and expanding abroad, but despite their key role in explaining the internationalization of companies, systematic analyses of these costs amount so far to just a few conceptual discussions (e.g. Benito and Tomassen, 2010; Buckley and Strange, 2011; Slangen and Hennart, 2008) and empirical studies (e.g. Buvik and Andersen, 2002; Tomassen and Benito, 2009). Tomassen and Benito (2009) demonstrate that governance costs have a sizeable impact on MNCs' performance. What factors drive these costs? Developing a better understanding of the nature and drivers of such costs would seem important for MNC headquarters in their strive to manage foreign operations in the best possible manner. Specifically, we point to three major reasons for why it is essential to examine governance costs in the context of the relationship between MNC headquarters and foreign subsidiaries.

First, MNCs make governance decisions, i.e. decisions about how to operate abroad – such as the choice of FDI over, say, a licensing contract – when they select countries to conduct a business activity, which could be production, R&D, procurement, sales and marketing etc. or a combination thereof. Such decisions are usually long-term, *inter alia* due to various costs of switching between foreign operation modes (Benito et al., 1999). As such decisions are made under imperfect information and with fallible foresight the choices made obviously do not guarantee flawless performance thereafter. Various external and internal factors could change, with consequent effects on governance costs.

Second, even if the choice of FDI is supposedly based on a comparative efficiency assessment across various possible modes of operation, the *level* of governance costs could still be improved for the chosen (and presumably most efficient) mode by gaining further knowledge about such costs. In other words, reducing governance costs *within* a chosen mode might be possible by choosing cost-reducing courses of actions and by avoiding circumstances and/or behaviors that are likely to escalate certain costs.

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Third, from the viewpoint of transaction cost theory the choice of governance form is principally a question of dealing *ex ante* with ownership rights pertaining to firms and their assets (Williamson, 1985); internal governance implies that owners of the firm hire labor over which they have the authority to instruct and command, but which they cannot own (in contrast to non-human assets residing within a firm), whereas in market or contract governance consensual exchanges of distinct transaction objects (goods and/or services) take place between independent parties based on expectations of private benefit. However, as pointed out by property rights theorists (see for example Hart (1989, 2011)) *ex post* property rights of many important, even crucial assets often reside with employees and outside parties – for example, unique knowledge and relationships – which in reality leaves the *ex ante* choice of governance form (e.g. FDI in the form of a wholly-owned subsidiary) as a rather incomplete structural solution to various kinds of encountered, anticipated, or potential market and contract inefficiencies. FDI is simply no panacea.

The decisions MNC managers make about where and when to establish subsidiaries in foreign countries have been studied in great detail from economic as well as behavioral perspectives (Aharoni et al., 2011). Fewer studies have gone beyond the initial, presumably more "strategic" entry decision. This is puzzling inasmuch as the period after entry is perhaps even more challenging in terms of managing the relationship between headquarters and subsidiaries, and among subsidiaries, and making local operations work. Here, we take a step in that direction by focusing on what factors drive *ex post* governance costs and result in variation in their levels. Our study probes into how and to what extent variation in such costs in general can be explained by the context in which the MNC-subsidiary relation is embedded, i.e. country (macro) factors, firm factors, as well relation-specific (micro) factors.

Using data from a survey of 159 Norwegian multinational companies, the study indicates that governance costs are present when the MNC evaluates its headquarters-

subsidiary relationship. Identifying these costs and their drivers are necessary first steps for MNC headquarters to design and implement actions to lower governance costs.

## 2. Theory

The conventional transaction cost economics (TCE) approach is concerned with the economizing consequences of aligning different types of transactions to genuinely different discrete governance structures or arrangements, which vary, among other things, with respect to levels of various governance costs. These costs can be categorized, according to Williamson (1985), as *ex ante* and *ex post* costs. The former are the costs of drafting, negotiating, and safeguarding an arrangement. The latter are the costs related to (i) maladaption when transactions drift out of alignment, (ii) haggling that occur in attempts at correcting misalignment, (iii) setting up and running the contract, and (iv) bonding the parties involved in the transaction. Hence, governance costs are costs related to the governance of a relationship – be it within or across organizational boundaries – and according to TCE and internalization theory, the most efficient governance structure will be the one that minimizes governance costs in the long run (Hennart, 1991; Williamson, 1979). In our further discussion, the main attention with regards to governance costs, will be the *ex post* governance costs – i.e. the costs that occur after the initial governance structure is settled, and MNC actions that may reduce the level of such costs.

If the choice of organization was FDI, it seems naive to presuppose that governance costs simply vanish with the internalization of the transactions. While governance structures may promote or curb certain behaviors, they do not fundamentally transform human nature or environmental contingencies. If we accept TCE assumptions about humans, their possible acts of opportunism and their cognitive limitations should create problems of governance even in ongoing relations united by common ownership. Furthermore, internalized transactions take

place in dynamic markets that makes planning difficult and adaptation costly. This means that governance costs can be expected to vary even within different internal transactions depending on characteristics of the MNC headquarters-subsidiary relation as well as on external market conditions.

We argue that operating through foreign subsidiaries is not any end-solution to the governance cost challenge. Selecting high control modes through FDIs *ex ante*, neither rules out positive governance costs *ex post*, nor assures that governance cost levels are essentially equal across MNCs. Adaptation problems, resources spent on supervision and fostering of common norms and goals, communication distortions etc., are all common traits, especially in international business activities, albeit substantial variation must be expected. *Ex post* governance cost can therefore generally be expected to be widespread in MNCs. Hence, understanding such costs, knowing more of their antecedents, and organizing and managing foreign operation in ways that minimize them could hence be turned into a strong competitive advantage for companies.

*2.1. Ex post governance costs in MNC headquarters-subsidiary relations*

Former studies have classified *ex post* governance costs into four main types: bargaining costs, monitoring costs, information costs, and bonding costs (Benito and Tomassen, 2010; Tomassen and Benito, 2009). Within the empirical setting of this study, these costs occur inexorably out of intra-organizational coordination, but the same categories are also valid for inter-organizational coordination (Dahlstrom and Nygaard, 1999).

*Bargaining costs* come about due to renegotiations and changes in existing agreements between MNC headquarters and its various subsidiaries (Andersson et al., 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). A typical example could be

disagreements regarding various aspects of the transfer prices as a result of changing circumstances. Another example could be a lack of knowledge sharing within the MNC due to the mismatch between incentive systems for local unit managers based on financial results and the often explicit promotion of knowledge sharing. Since knowledge sharing is time consuming and in some cases also weakens a unit's relative position, local management can consequently detain important knowledge if compensation is not agreed upon. This actuates some degree of bargaining (Mahnke et al., 2009).

*Monitoring costs* arise when control precautions are established to drive down shirking and when resources are used to assure that agreements are fulfilled (Dahlstrom and Nygaard, 1999; Hennart, 1991). In addition, when it is difficult to evaluate the different aspects of important value creating activities in the subsidiary, it will be necessary to impose control initiatives. Because MNCs operate in different locations they tend to have high auditing costs, language differences, and varying legal and accounting systems. MNCs are therefore often faced with higher monitoring costs than purely domestic companies. Such costs manifest themselves as for example time spent on controlling delivered services from the foreign subsidiary, time and money spent on accounting issues, and extra travel expenses to control working effort. Likewise, time and expenses are spent on controlling deliveries of crucial inputs to foreign subsidiaries (Tomassen and Benito, 2009).

*Information costs* arise from communication and coordination failures between MNC headquarters and a subsidiary, which in turn make headquarters less capable of reacting 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-optimization.

*Bonding costs* occur in general due to the need for securing the commitments made by the parties involved. Hence, bonding in a MNC headquarters-subsidiary relationship will comprise a varied set of constructive activities that might lead to commitments in a relationship. Such activities could include actions like establishing personal ties between parties, developing common identities, building incentive systems, spending time together to solve third party problems, and developing career possibilities within the MNC (Rabbiosi, 2011).

## 2.2. Drivers of ex post governance costs

We argue that the same set of human and environmental factors remain relevant for *ex ante* as well as *ex post* organizational governance (Williamson, 1975). *Ex post* governance costs are therefore, by and large, a consequence of human behavior, which is shaped by the settings in which business activities take place, be it factors related to the external market (external factors) or characteristics of the MNC headquarters-subsidiary relation (relational factors). Underlying this logic are important suppositions about human behaviour, such as opportunism (Williamson, 1975) and bounded rationality (Simon, 1957), and key dimensions of transactions; of which asset specificity and uncertainty are the most important (Rindfleisch and Heide, 1997; Williamson, 1975, 1985).

### 2.2.1. Relational factors.
Core factors from the TCE framework include assumptions of human behaviour as well as transaction characteristics. We argue that these factors are not only relevant predictors applicable to the choice of structure, but may also drive *ex post* costs in the headquarters-subsidiary relation over time.

Given the opportunity, decision-makers can cheat, lie, and violate agreements. All forms of organizations are subject to risks of opportunism (Williamson, 1975), but

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opportunism will not disappear with common ownership (Eisenhardt, 1989; Schotter and Beamish, 2011; Taplin, 2006). Cultural, spatial, and institutional distance decrease opportunities for headquarters to monitor subsidiaries, which makes opportunism particularly relevant in headquarters- subsidiary relations (Hennart, 1991), and if opportunities arise, opportunism from subsidiaries may drive *ex post* governance costs.

MNC headquarters undertake asset specific investments in subsidiaries for a variety of reasons. Examples include (i) product or service investments that are tailor made to meet requirements of the foreign country, (ii) specialized educational programs for different types of workers, (iii) valuable technology can be transferred, and specialized facilities could be needed to market a product (Aulakh and Kotabe, 1997; Klein et al., 1990). When asset specific investments are high, there is a need for exploiting the company's product/service technology in the local market, ensuring the accomplishment of the MNC's mission in the FDI, and integrating the company's business practices (Kogut and Zander, 1995). However, specific investments create lock-in effects, which make the MNC less flexible with respect to both operations within and between foreign countries. The key problem regarding opportunism occurs when specific assets are present in the relationship because such assets lead to safeguarding problems if the proclivity to behave opportunistically is not moderated by competitive markets. Asset specific investments therefore drive opportunities for relational *ex post* governance costs.

Another key assumption in TCE is that of bounded rationality (Simon, 1957) – i.e. decision-makers are limited in their ability to cope with an uncertain environment and/or have difficulties with validating human performance. Bounded rationality implies problems of getting information about other parties' performance (Williamson, 1985). The conventional way of dealing with uncertainty and safeguarding problems within TCE logic, is to bring both sides of a transaction into common governance, typically a firm; which hence explains the

vertical and horizontal boundaries of firms (Masten, 1984; Williamson, 1985). We argue that there may be variations in certainty about the behaviour of another party even between internalized transactions, and that these variations effect levels of *ex post* governance costs.

Subsidiaries may possess more knowledge than headquarters about certain technologies and local conditions causing major control challenges for MNC headquarters (Baliga and Jaeger, 1984; Bergen et al., 1992; Hennart, 1991). Some subsidiaries possess considerable bargaining power either because they have control over key assets such as information or specific knowledge, or because they are in charge of executing major strategic and/or rent generating activities for the MNC (Mudambi and Navarra, 2004). Such subsidiaries are usually high-performers, but may take actions that are incongruent with the corporation at large and thereby increase ex-post governance costs. In sum, we propose:

*Hypothesis 1: Ex post* governance costs are positively influenced by relational factors such as opportunism, asset specificity, behavioral uncertainty, and bargaining power.

*2.2.2. External factors.* Subsidiary activities are embedded in external markets. For MNC headquarters, located at a distance, characteristics of these markets create uncertainties – and – we argue governance costs. The more challenging the process of getting information about local markets, the harder it is for headquarters to manage their relation to foreign subsidiaries and the higher *ex post* governance costs.

According to Williamson (1985) external uncertainty leads to problems of adaptation. Hence, the MNC headquarters is, according to this logic, faced with both *ex ante* adaptation challenges – the make or buy decision – and *ex post* adaptation difficulties. In the latter, potential governance costs will be related to modifying the headquarters-subsidiary relationship to changing conditions. Due to uncertainty, communication and control, as well

as imposing general rules and routines are challenging and costly. Uncertainty is high when markets are volatile and hard to predict, the industry is growing fast or markets are diverse containing many different actors (customers, suppliers) with diverse needs. Uncertainty may also be high when home and host markets differ making it difficult for headquarters to understand actions and preferences of local market actors. In these situations of rapid chances and complexity, information will soon be outdated, and common activities become inefficient due to lack of adequate basis of information. Therefore, many companies will routinely increase their monitoring efforts.

When cultural differences are large, it is often difficult to create a common company culture where the managers of the subsidiary and at headquarters share the same values and beliefs. To compensate for the differences, both formal and informal initiatives will often be introduced by the companies (Nohria and Ghoshal, 1994; Rabbiosi, 2011). Along with formalized rules about behaviour and role clarifications, more informal action such as work rotation, project organizations across subsidiaries, common training of managers, open and extensive communication across the MNC, and socialization initiatives will often be introduced. Hence, we would expect an increase in monitoring as well as bonding initiatives due to high cultural differences. Hence, we propose:


*Hypothesis 2: Ex post* governance costs are positively influenced by external factors such as external uncertainty, industry growth and cultural distance.


**3. Methodology**

*3.1. Data collection and sample description*

The empirical setting for this study is the relationship between Norwegian MNC headquarters and their foreign subsidiaries (i.e. one subsidiary for each MNC).The target subsidiaries were

established within a time frame of eight years, and the information about the companies was collected three years after the end of this period. Hence, subsidiaries were between three and 11 years old (the mean age is 5.7 years) at the time of the study (2002). All subsidiaries performed a range of activities, and were majority or fully owned by the Norwegian parent company.

The sampling frame was extracted from the Dun & Bradstreet database of Norwegian companies. The original file contained 3082 foreign subsidiaries established by approximately 1300 Norwegian MNCs. Going through the entire database including telephone and e-mail contact if necessary, the database was further reduced to a set of 1652 foreign subsidiaries and 564 potentially relevant MNCs with one or more foreign subsidiaries established during the chosen time frame. [2] A second screening was conducted using annual reports, internet sources and other databases such as Amadeus, focusing on type of activities and ownership circumstances (e.g. that the companies were Norwegian-owned). After this screening, the appropriate sample frame was narrowed down to 370 MNCs, of which 346 MNCs were willing to participate. Questionnaires were sent by mail to these 346 companies.

The study relied on a single key informant approach, and the key informants were those persons in the MNC who had appropriate knowledge about the research issue and were willing and able to "talk" about it by answering the questionnaire (Campbell, 1955). In most cases, this person was the managing director, but division managers, finance directors, marketing directors, and owners of the MNCs were also among the key informants. The procedure to identify these persons was the following. First, all companies were contacted by phone with the intention to; (a) detect whether the company with a respective foreign subsidiary met the criteria for inclusion in the study, and (b) identify a key informant in the

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[2] The Dun & Bradstreet database turned out to be somewhat unreliable with regards to the subsidiaries and the MNCs listed. Many of the listed companies were sleeping constructions or not in operation at all. Likewise, accounting data and other information were in many cases outdated. Therefore, a lot of resources were used to construct a more reliable database for the study.

company. If the company met the criteria, and when the key informant was identified, he or she was asked to participate in the survey. Based on the result of the telephone conversation, a package that contained a cover letter, a questionnaire, and a prepaid envelope was sent within a week to the key informants. The total number of usable responses was 159 – one subsidiary for each MNC (i.e. 43 % response rate).

Following Armstrong and Overton's (1977) procedures, non-response bias was checked. No significant differences in the variables of interest between late and early respondents were found in the $t$-tests ($p > 0.05$ for all variables, two-tailed). Finally, variables from the survey responses that contained objective figures were checked against company reports and published data. A high degree of correspondence between published data and survey responses were found, supporting the veracity of the survey responses.

*3.2. Development of measures*

Uni-dimensional multi-item measures were developed according to guidelines given by Gerbing and Anderson (1988) and Churchill (1979, pp. 66-69). The preliminary instrument was then tested on six key informants who were all responsible for one or more foreign subsidiaries (both acquisitions and greenfields). Afterwards, problems regarding terminology, instructions, relevance of questions and scales, and volume, were discussed. Likewise, the same procedure was conducted among three research experts. In addition, a research committee went through the preliminary number of items on each variable. Overall, these procedures led to some minor corrections in the questionnaire, such as strengthening the initial instruction, adding a few new items on some of the constructs, and adding some more control variables. The last and final questionnaire was tested on four representative persons and no further problems with the scales were detected. All scales are reported in Appendix 2.

*3.3. Measurement of governance costs*

Multi-item reflective scales were used to measure governance costs (Bollen and Lennox, 1991). These scales were adopted from Tomassen and Benito (2009). Se also Appendix 2 for an overview of items used in the final models. All items were measured on 7-point Likert-type scales (Likert, 1932).

*Bargaining costs*: These are expenses related to negotiations between headquarters and the subsidiary. A five-item scale was initially developed, but based on subsequent analyses, this variable was finally measured by two items developed by Dahlstrom and Nygaard (1999) (Cronbach's $\alpha = .77$).

*Monitoring costs*: These are expenditures related to controlling shirking and the fulfillment of contractual agreements. A three item scale was constructed, originally from Dahlstrom and Nygaard (1999), but slightly changed to fit the setting (Cronbach's $\alpha = .72$).

*Information costs*: These are communication and coordination costs related to acquiring correct and prompt information. The items mapping this construct were originally taken from Dahlstrom and Nygaard (1999), but one item was later separated into two separate items since incompleteness and volume should be seen as two rather different aspects of the construct. In the end, the variable was measured on a three-item scale (Cronbach's $\alpha = .81$).

*Bonding costs*: According to Tomassen and Benito (2009), bonding costs are a result of activities that promote commitment in a relationship. In the present context, bonding costs are incurred as a result of actions that bind a foreign unit closer to the MNC. Four items are used to measure this variable (Cronbach's $\alpha = .71$).

See section 3.6 for a further validation of these dependent measurements.

A *composite governance costs* variable was also constructed. This variable was calculated as the mean value of the four governance costs added together.

*3.4. Measurement of independent variables[3]*

*3.4.1. Relational variables.* The study focuses on the following factors:

*Behavioral uncertainty* occurs due to the problems related to assessing how another party (in this case the subsidiary) performs (Williamson, 1985). The four items representing the construct are taken from Stump and Heide (1996). However, the scales are anchored differently since we asked about the informant's perception of the problem. All items were slightly changed and adapted to the present research setting (Cronbach's $\alpha = .70$).

*Opportunism* is, as mentioned in the literature review, an underlying assumption about human nature. This type of behavior can generate substantial governance costs for the MNC in the relationship with the foreign subsidiary. The variable is measured by four items. The first two items were taken from Dahlstrom and Nygaard (1999) and slightly changed for the purpose of this study. The next two were taken from Gulbrandsen (1998) and slightly changed to fit the empirical setting (Cronbach's $\alpha = .86$)

*Asset specificity* refers to what extent the supported assets in the relation are transferable across other relationships. Such assets can be described as sunk costs due to their substantial lesser value outside the relationship. The variable was measured by three items; two from Klein et al. (1990, p. 200) and Aulakh and Kotabe (1997), and one self-developed (Cronbach's $\alpha = .69$)

*Bargaining power* might create significant bargaining and monitoring costs if the subsidiary has some key assets that few other in the MNC possess (Mudambi and Navarra, 2004). This can be knowledge, information, the size relative to other entities in the MNC, or that the unit is a key strategic element in the overall international strategy of the MNC. Hence, we have chosen to measure this variable by three items that describe the strategic importance of the subsidiary. The items are inspired by Kogut and Kulatilaka's  (1994a, b) and Rangan's

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[3] If nothing else is stated, all scales were measured on 7-point Likert-type scales.

(1998) real options perspective. We presume that the subsidiary possesses bargaining power if it plays a key role for the MNC in making international operations more flexible (Cronbach's $\alpha = .84$).

*3.4.2. External factors.* Klein et al. (1990) argue that *environmental uncertainty* is a multi-dimensional construct. Rindfleisch and Heide (1997) also suggest that using a multi-dimensional construct is particularly important if the context of a study is international (in contrast to domestic). In agreement with Klein et al. (1990), the following three dimensions were used: (i) Volatility [three items] refers to the extent to which the environment changes rapidly and allows a firm to be caught by surprise. (Cronbach's $\alpha = .79$); (ii) diversity [three items], reflects the extent to which there are multiple sources of uncertainty in the environment (Cronbach's $\alpha = .65$); (iii) Country risk, as perceived by management. The five items on country risk were taken from Aulakh and Kotabe (1997), and slightly modified (Cronbach's $\alpha = .90$).

The following external variables were straightforwardly measured by single items (see appendix 2 for the wording used in the questionnaire); *industry growth* and *cultural distance*.

*3.4.3. Control variables.* Several other variables might influence the level of *ex post* governance costs. We have one item for past *local experience* describing MNCs' experience where the subsidiary is located. We also included items measuring past experience with FDIs (greenfields and acquisitions) to capture other aspects of international experience. Firm size might affect governance costs, as size affects complexity and the capacity to handle uncertainty. *Firm size* was measured by number of employees in the MNC. Degree of internationalization was proxied by *International sales*, i.e. the ratio of sales generated from

international activities to total sales for the MNC. Finally, *Subsidiary age* was measured as number of years since the subsidiary became part of the MNC.

*3.5 Common method variance*

Since most of the variables in the study come from a questionnaire, variables in the study may be affected by shared and spurious covariance (Buckley et al., 1990), which can be problematic since measurement artifacts and the phenomenon under investigation can be difficult to separate (Malhotra et al., 2006). Several precautions were taken to reduce this potential problem: (1) some of the scales were reversed; (2) questions of interest for this study were mixed with other questions not so relevant; and (3) items belonging to one theoretical construct were mixed with items belonging to another variable of interest (Podsakoff et al., 2003). In addition, we performed a Harman's single factor test by including all items in an exploratory (un-rotated) factor analysis (Podsakoff et al., 2003; Podsakoff and Organ, 1986). More than ten factors emerged from the factor solution and no first factor explained the majority of the variance in the variables (i.e. first factor explained less than 19 percent of the variance). This suggests that the problem of common method biases is not present.

*3.6. Validation of dependent measurements*

The following procedures were used to evaluate the scales of the dependent variables; (i) un-rotated principal component analysis (PCA) with subsequent (ii) pro-max (oblique) rotated PCA were conducted,[4] (iii) inter-item correlations and (iv) item-to-total correlations were assessed, and finally, (v) a confirmatory factor analysis (CFA) was done in LISREL 8.8.

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[4] An oblique rotation was used at this stage because it allows correlated factors instead of an assumption of independence among the factors as is maintained in an orthogonal rotation (Hair et al., 1998). However, a varimax rotation was also conducted to see any differences. No major dissimilarities were observed (see also Gerbing and Anderson, 1988, p. 189).

Running PCA, the loading for each item should be above .30 as the absolute minimum, and loadings above .40 are considered more important (Hair, et al., 1998, p. 111), hence the lower limit of factor loadings was set to .40. Seven initial items were deleted due to major cross loadings and unsatisfactory factor loadings – three on "monitoring costs", two on "bargaining costs", and two on "bonding costs". The deleted items on "monitoring costs" were the self-developed ones; they loaded on different factors with just marginal loadings on the factor that the three remaining items loaded on. Still, the original conceptual definition of the construct was not significantly changed by this deletion, although the definition may be somewhat limited in covering the whole range of monitoring costs.

The final measurement model shows excellent fit on all fit statistics: $\chi^2 = 53.00$ ($p >$ .28; RMSEA =.026; AGFI = .91; CFI = .99 (Bollen, 1989; Jöreskog and Sörbom, 1981; Tanaka and Huba, 1985). Reliability was assessed by three measures: Cronbach's $\alpha$ (Nunnally and Bernstein, 1994), individual item reliability, and average variance extracted (Bagozzi and Yi, 1988; Gerbing and Anderson, 1988). The Cronbach's $\alpha$ values (ranging from .71 to .84) indicate that the scales are reasonably reliable. All factor loadings are significant, and item reliabilities range from .15 to .72. Average variances extracted (AVE) range between .42 and .60, which is acceptable although "bonding costs" (and monitoring costs) is under the recommended level of .50 (Bagozzi and Yi, 1988; Fornell and Larcker, 1981). The reliability measures and pattern coefficients for the governance costs measures are reported in Table 1.


----- TABLE 1 about here -----


All factor loadings are significant, and values closer to one indicate high reliability, although no lower limit is recommended in the literature. According to Hair et al. (1998), the level of variance explained should exceed .20. The results in Table 1 imply that one item on the

''bonding costs'' construct captures only a very small portion of the construct's variance. All other items are well within significant limits. The AVE figure for "bonding costs" could be increased by deleting the item that loaded lowly on the construct. However, due to the exploratory nature of construct measurement we decided not to exclude any more items.

When testing for discriminant validity, three tests were conducted (Anderson and Gerbing, 1988; Fornell and Larcker, 1981). In addition, an orthogonal[5] (varimax) rotated factor analysis was carried out to verify the results from the CFA, (Buvik and John, 2000).

First, we checked whether the confidence interval ($\pm$ two standard errors) around the correlation coefficients between two latent constructs include 1.0. This seems not to be the case with our variables. Second, a $\chi^2$ difference test (with one degree of freedom) was performed, where each pair of constructs was compared across two models. In the first and restricted model, the correlation between the constructs was fixed to one. In the unrestricted model, the constructs were allowed to correlate freely. A significantly lower $\chi^2$ value in the unrestricted model indicates discriminant validity. According to our analysis, all constructs were highly significantly different from each other. Third, the average variance extracted for each construct was compared with the shared variance among each pair of constructs (Fornell and Larcker, 1981). The average variance extracted was greater than the shared variance for the same pair of constructs in all comparisons, thus passing the test. Finally, to verify the results from the CFA, a PCA with orthogonal rotation was conducted (Buvik and John, 2000). All items loaded properly on the theoretically correct factor.

*3.7 Estimation*

Before the models were estimated, we tested for the ordinary linear regression assumptions of normality, linearity and multicollinearity.

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[5] In contrast to the initial exploratory PCA, it is more reasonable to assume that the factors are orthogonal since all significant cross-loadings are removed.

No problems were detected although significant correlation coefficients were identified between the dependent variables; hence, the issue of multicollinearity needed attention (see Appendix 1 for correlation coefficients and mean values for all variables). Multicollinearity is often detected by using a two-step procedure. First, by inspecting the variance proportion matrix, and second, by comparing the results with the variance inflation factor (VIF) and tolerance values. A collinearity problem is present when the same dimension accounts for more than 90 percent of the variance for two or more variables (Hair, et al., 1998). There is no indication of this problem in the data set, which also is confirmed by a maximum VIF value of 2.107 with a respective tolerance value of .475 (for the control variable "foreign greenfield experience"). The average VIF value is 1.238 for a full model. According to Hair et al. (1998), a common cutoff threshold is a tolerance value of .1, and thereby a VIF value of 10.0 (since VIF = 1/tolerance). OLS regressions were therefore used for testing the hypotheses.

## 4. Results

The first estimated model (model 1a) included only the control variables, followed by a model (model 1b) with external and relational variables according to our two hypotheses. In models 1a and 1b the regression were run with a composite of governance costs as the dependent variable. The subsequent models have, respectively, bargaining, monitoring, bonding, and information costs as dependent variables. The results of the OLS regressions are reported in Table 2.[6]

----- TABLE 2 about here ------

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[6] Only six models are shown in Table 2, but additional models with controls only were also run separately for each specific type of governance cost. These additional models were all insignificant. To check the robustness of the results, we also entered additional control variables – type of industry of the MNC and the activities performed by the subsidiary – but these controls had no effect on the estimated results.

Including only control variables, the model was not significant although some significant relationships were observed.[7] Conversely, running the regression with all variables included (see models 1b-5b), all models are significant with $F$-values of 10.54 (sig. $F < .000$) for Model 1b, $F = 7.26$ (sig. $F < .000$) for Model 2, $F = 7.25$ (sig. $F = .000$) for Model 3, $F = 3.30$ (sig $F = .000$) for Model 4, and $F = 12.82$ (sig. $F = .000$) for Model 5.

Across four of the five models, a clear pattern is revealed: Opportunism in the subsidiaries is a strong driver for governance costs, as this kind of behavior has a very significant and positive effect on all governance costs except for the one that we label bonding costs ($p < .001$), for which the effect is insignificant.

A very similar pattern is detected for one of the three dimensions of environmental uncertainty, namely "volatility". An environment that is perceived to be volatile seems to generate both bargaining, monitoring, and information costs for the MNCs. All effects are significant either at $p < .01$ or $p < .05$. The observed positive effects of both these variables are very much in line with TCE predictions about the relationships (Rindfleisch and Heide, 1997).

A third variable that drives governance costs in general and monitoring costs in particular, is the perceived growth rate in the industry ($\beta_{\text{Industry growth, Model 3}} = .21$, $t = 3.11$, $p < .01$). Likewise, there is a strong and positive relationship between bargaining power in the subsidiary and bargaining and bonding costs ($\beta_{\text{bargaining power, Model 2}} = .14$, $t = 2.08$, $p < .05$; ($\beta_{\text{bargaining power, Model 4}} = .20$, $t = 2.60$, $p < .01$). This significant effect is also found in Model 1b ($\beta_{\text{bargaining power}} = .22$, $t = 3.49$, $p < .01$). However, the effect toward monitoring costs is rather weak ($\beta_{\text{bargaining power, Model3}} = .13$, $t = 1.88$, $p < .10$).

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[7] Specifically, entry mode (greenfield) is positively associated with bargaining and monitoring costs. Likewise, there is negative relationship between subsidiary age and bonding costs. However, these significant relationships disappear when our key variables are included.

## 5. Discussion and implications

Prior studies of governance costs in intra-organizational relations are scarce in number and little is known about their drivers. In international business studies much attention has been given to the choice of governance structure, but there has been limited interest in studying what happens after the choice of organizational form is made – do governance costs then fade away, or do they continue to play an important role in MNC management, also over time? Our interest in this study was therefore to look into this question and understand antecedents to *ex post* governance costs in internalized headquarters-subsidiary relations. If these costs exist in internalized relations, what are their main drivers, and what can subsequently be done to limit their impact? The main finding from this study is that there is variation in *ex post* governance costs across internalized headquarters-subsidiary relations. This implies that the choice of internalization does not eliminate governance costs. We were also able to identify several factors that drive these costs.

If we split governance costs into subgroups, we see a variation in mean values ranging from 2.33 for information costs to 4.26 for bonding costs, implying that some costs are relatively more important in MNC headquarters-subsidiary relations. It would have been rather surprising if the general level of the three types of governance costs had been substantially higher. By internalizing the market for intermediates governance costs should be reduced compared to a situation where the firm had relied solely on market transactions (Williamson, 1985). Even though it is tempting to conclude that any other non-equity solution would have implied a higher level of governance costs, our research cannot provide this information. The measurement of governance costs has been done after the choice of entry mode, so *ex ante* and *ex post* costs for the not chosen alternatives are not known. We can conclude, however, that the average levels of bargaining, monitoring and information costs are relatively low in headquarters-subsidiary relations.

The average level of bonding costs, on the other hand, is markedly higher. It is perhaps not so surprising that the level of bonding costs would be higher than the level of the three other types of governance costs, since a variety of bonding activities are often necessary for any MNC operating in different locations and markets, and which typically calls for integration across locations (Nohria and Ghoshal, 1994). Scrutinizing the content of the various governance costs we see that monitoring, bargaining and information are closely connected to classical bureaucratic control, in the sense of "hard" and direct/formal interventions from headquarters into the activities of subsidiaries, whereas bonding has a "softer" content describing headquarters attempts to create, but not command, a common understanding and culture.

If we look at the factors predicting governance costs, several interesting patterns were revealed through the analyses. Model 1b demonstrates that these governance costs can be explained by both relational and external factors; particularly opportunism, bargaining power, volatility and industry growth, which are the strongest and most distinct sources of governance costs within a MNC headquarters-subsidiary relationship. When these factors increase, MNC headquarters need to invest more in systems and procedures to increase control and coordination, and hence governance costs as a whole rise. Note that none of the control variables are significant, implying that *ex post* governance costs are independent of MNC size, headquarters experiences, subsidiary age, entry mode and MNC local experience. MNC governance challenges arise, in general, when subsidiaries are perceived as opportunistic, they have high bargaining power, or the markets are volatile and growing fast.

If we look more closely at what types of governance costs are related to each independent factor, we get a more detailed picture.

Concerning opportunism, its impact should not come as a surprise. According to TCE logic, opportunism together with specific assets is the key driver for contractual hazards

among cooperating parties. Further, according to theory, opportunism will be significantly reduced if those independent parties are incorporated within one single organization (Williamson, 1985); however, opportunism will not vanish (Eisenhardt, 1989; Schotter and Beamish, 2011; Taplin, 2006). While governance structures may promote or curb certain behaviors, they do not fundamentally transform human nature. The same set of human and environmental factors remain relevant for market as well as for organizational governance, and the governance costs that arise through intra-organizational coordination are similarly due to communication distortions, monitoring actions, bonding activities, and adaptation problems, which in turn can be traced back to opportunism, information asymmetries and uncertainty (Williamson, 1985). Our study reports relative low overall levels of opportunism, which is in accordance with TCE theoretical assumptions, but it also shows that opportunism is a key source for all governance costs, but one, namely the costs of bonding. Opportunism drives monitoring, bargaining and information search in subsidiaries and thereby increased governance costs.

Although behavioral uncertainty does not affect the total governance costs, we see that it positively drives bargaining and information costs, but negatively affects bonding costs. This implies that when it is difficult for headquarters management to get accurate information from subsidiaries, they tend to revert to "hard" control through bargaining and information and significantly reduce "softer" controls through bonding. Headquarters are less willing to invest in relations that are hard to understand (get information from) or where there already is some mistrust (through opportunism). In such cases, "hard" control is seen as more favorable.

When the environment is volatile or growing fast, MNC management seems to prefer "hard" controls through increasing bargaining, monitoring and information controls rather than investing in bonding. In these situations market situations are constantly changing, and to

ensure headquarters influence, MNC management uses considerable effort to keep track of how subsidiaries perform, and there is less time to focus on development of the relationship.

Most of our explanatory factors appear to drive the "hard" governance costs. The main exception is bargaining power that has a significant effect on bonding costs. Subsidiaries gain bargaining power when they possess strategic information and knowledge that other subsidiaries and headquarters in the MNC deem important, but that they find hard to access due to distance and lack of knowledge (Mudambi and Navarra, 2004). For example, the subsidiary could be a center of excellence within the MNC organization and have more expertise than even headquarters (Holm and Pedersen, 2000). When MNCs expand their operations abroad and either buy or develop a new subsidiary, they obtain ownership rights to this subsidiary, but often the subsidiary and its employees retain property rights to certain technologies and to relational and knowledge assets (Hart, 2011). The more tacit these assets, the harder it is for headquarters to use direct/formal or "hard" forms of control as the headquarters span of influence simply does not include areas where subsidiaries have property rights control. In such situations MNC headquarters must use more indirect and "softer" means of control such as investments in bonding. Our data indicate that when subsidiary property rights (and therefore bargaining power) are high, the composition of governance costs change towards the "softer" bonding costs. Since headquarters have less expertise and cannot detail the work of experts from a distant location, the use of more direct and formal mechanisms by headquarters could have resulted in decreased motivation in the subsidiary. In this sense, the MNC resembles a federative system where subsidiaries are embedded locally, pursue own strategies, and headquarters have a less pronounced hierarchical role (Andersson, et al. 2007). In such cases it could be better to invest in bonding and make sure that the subsidiary shares the same company culture and adheres to MNC rules of conduct (Hedlund, 1986).

This study demonstrates that TCE factors like opportunism and behavioral uncertainty as well as external market uncertainty drive *ex post* governance costs in on-going transactions and within internalized transactions such as headquarters-subsidiary relations. Since governance costs do not disappear when transactions are internalized, it should be exceedingly important for MNC management to strive to reduce these factors and hence minimize governance costs. Our study reveals three possible strategies to reduce these costs: (1) Reduce opportunism, (2) increase speed of information, and (3) manage knowledge relations.

One strategy pertains to reducing opportunism. Previous studies have demonstrated that opportunism can be reduced mainly through two mechanisms: Increased formalization and/or trust. Consequently, by implementing more formalized procedures such as rules and routines, clearer role responsibilities, and a better identification of complementary tasks and responsibilities between the MNC and the subsidiary, opportunities for opportunism are reduced (Dahlstrom and Nygaard, 1999; Gupta et al., 1987). Likewise, continuous evaluation of the results, as well as implementation of plans, and budgeting systems in the subsidiary, is sometimes required to limit opportunities for shirking (Baliga and Jaeger, 1984).

Furthermore, MNC headquarters may try to increase trust between headquarters and subsidiaries (Harvey, et al., 2011). Trust is normally a result of investment in bonding activities. As our study is cross-sectional, we cannot observe previous investments in bonding for each MNC in our study, but intuitively it seems reasonable that high opportunism may be a result of low bonding investments over time. Trust needs to be built over time and grows when one party starts to behave in a way the other party finds trustworthy (Serva et al., 2005). Trust begets trust, but for the process to activate it needs to be initiated (Das and Teng, 1998). MNC headquarters start trust processes with subsidiaries by behaving in a manner that subsidiaries see as competent, fair and transparent (Mayer et al., 1995). In our study high

opportunism seems to lead to more focus on "hard" governance which may signal distrust and hence lead to more opportunism. To break this circle, MNC headquarters may need to limit "hard" control and increase bonding, but if opportunism is already high this may be difficult, and consequently the mix of hard and softer controls constitute a balancing act for MNC management when opportunism is present in a headquarters-subsidiary relationship.

The second strategy mainly aims at keeping better informed to limit the effects of volatility and industry growth. When a market changes, it is often difficult for the MNC to keep informed and governance costs may therefore increase. Information and communication technology provides increasingly powerful tools that may have the power to "put subsidiary networks under surveillance, a state of conscious and permanent visibility that strengthens central control and enacts power" (Yamin and Sinkovics, 2007, p. 325). Systems that provide information more quickly and precisely, may reduce the perceived uncertainty at global headquarters, and thereby reduce governance costs.

The third strategy applies when subsidiaries are strategic and have more knowledge than headquarters. In such cases governance costs could be reduced by more effective bonding and improved network relations. Mudambi and Navarra (2004) especially call for such actions where creativity dependent tasks are central in value creating activities. Common participation and agreements on shared goals, and building corporate loyalties through personal relations are some of the suggestions. Likewise, setting up teams and task forces across levels and subsidiary boundaries increase communication, and backing this up with information systems and communication channels, will most probably assuage the "divided loyalties of subsidiary managers, socializing them and influencing them to behave like 'dual nationals'" (Mudambi and Navarra, 2004, p. 400).

According to Hennart (1991) and Nohria and Ghoshal (1994), cultural differences between parent companies and subsidiaries increase information asymmetries, uncertainty, and

the potential for opportunism. Looking at the correlation matrix in appendix 1, we identify a relatively high correlations between cultural differences and opportunism ($r = .39$), and between cultural differences and perceived volatility ($r = .36$). In situations with high cultural differences, recruiting local managers imply that companies incur high selection, training and control costs, and sending a "trustworthy" expatriate manager to the subsidiary could reduce such costs (Benito et al., 2005; Boyacigiller and Adler, 1991; Nohria and Ghoshal, 1994; Yan et al., 2002). In addition to control issues, others point to the importance of building trust (Huemer et al., 2009) and strong corporate cultures by sharing common values (Hedlund, 1986), which in itself is important, but which might also have the effect of reducing governance costs arising from more direct and formal control precautions. Likewise, high levels of formal and informal communication may support MNCs in developing the subsidiaries in the desired direction (Harzing, 2002).

## 6. Conclusion

With few exceptions, research within international management has been limitedly concerned with the costs of governance in foreign ownership modes. This study has tried to shrink this knowledge gap by exploring the antecedents of governance costs, and measuring them. The study has identified several important antecedents such as opportunism, bargaining power, volatility and behavioral uncertainty. It has also shed light on the need to distinguish between internalized headquarters-subsidiary relations based on strong ownership versus strong local property rights. Although a MNC may formally own a subsidiary, the subsidiary could be in command of local specific knowledge etc. In the latter case governance costs are likely to be driven by the "softer" bonding investments, whereas the "harder" classical monitoring, bargaining and information mechanisms are preferred when ownership control is stronger.

This insight should be valuable for MNCs in their attempts at building successful and profitable multi-location organizations.

This study relies on single key informants. Although much effort has been made to find really knowledgeable persons at MNC headquarters, this is still a limitation of the study. Relying on just one person, opens up for biases in the measurement of the constructs. We recommend that future studies use multiple informant procedures, preferably from both sides of the dyad (since governance costs occur on both sides) and from different sources in each set of units. Further, a cross-sectional design is not able to detect the direction of influence in the model, and neither can lagged effects be revealed; such as an incurred monitoring cost today with negative effects on opportunism tomorrow. Hence, some of the variables might be endogenous. Longitudinal studies are required to really understand the dynamics in the relationship between governance costs and their antecedents.

The empirical context for this study is Norwegian-owned multinational companies with majority-owned foreign affiliates, and the study comprises a diverse set of companies, in many different industries, and with activities in a variety of locations. The chosen context was appropriate in terms of variance in the independent variables as well regarding external validity. However, external validity must typically be traded against the isolation requirement, which implies high internal validity. A more homogenous setting would most certainly have increased the possibility of identifying significant relationships since homogeneity in the empirical context decreases the number of other possible explanatory variables. Future studies on governance costs in MNCs should consider alternative research designs to provide a fuller picture of the nature and effects of these costs.

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*Table 1: Measurement model - pattern coefficients and reliability measures*

| Parameter | Scale | Mean | Std. dev. | Estimates ML (std. error) | $t$-values | Item reliability ($R^2$) | AVE | Cronbach's $\alpha$ |
|---|---|---|---|---|---|---|---|---|
| $\lambda_1$ | Bargaining Cost | 3.21 | 1.37 | .74 (.077) | 9.53 | .55 | | |
| $\lambda_2$ | Bargaining Cost | 3.28 | 1.34 | .84 (.077) | 10.79 | .71 | .63 | .77 |
| $\lambda_3$ | Monitoring Cost | 2.35 | 1.34 | .76 (.080) | 9.41 | .58 | | |
| $\lambda_4$ | Monitoring Cost | 3.58 | 1.54 | .61 (.082) | 7.36 | .37 | | |
| $\lambda_5$ | Monitoring Cost | 2.56 | 1.27 | .68 (.081) | 8.39 | .46 | .47 | .72 |
| $\lambda_6$ | Bonding Cost | 4.36 | 1.65 | .50 (.083) | 6.00 | .25 | | |
| $\lambda_7$ | Bonding Cost | 4.54 | 1.48 | .81 (.079) | 10.20 | .66 | | |
| $\lambda_8$ | Bonding Cost | 4.24 | 1.73 | .79 (.079) | 9.88 | .62 | | |
| $\lambda_9$ | Bonding Cost | 3.84 | 1.62 | .39 (.085) | 4.54 | .15 | .42 | .71 |
| $\lambda_{10}$ | Information Cost | 2.36 | 1.46 | .86 (.069) | 12.33 | .74 | | |
| $\lambda_{11}$ | Information Cost | 2.01 | 1.18 | .68 (.075) | 9.02 | .47 | | |
| $\lambda_{12}$ | Information Cost | 2.63 | 1.55 | .79 (.071) | 10.98 | .62 | .60 | .81 |

*Table 2: Regression analyses of governance cost determinants*

| | Model 1a Composite Governance Costs | | Model 1b Composite Governance Costs | | Model 2 Bargaining Costs | | Model 3 Monitoring Costs | | Model 4 Bonding Costs | | Model 5 Information Costs | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $\beta$ | *t*-value | $\beta$ | *t*-value | $\beta$ | *t*-value | $\beta$ | *t*-value | $\beta$ | *t*-value | $\beta$ | *t*-value |
| *Relational variables:* | | | | | | | | | | | | |
| Behavioral uncertainty | | | .03 | .50 | .16* | 2.22 | .06 | .85 | -.32*** | -3.91 | .24*** | 3.85 |
| Opportunism | | | .55*** | 7.91 | .42*** | 5.54 | .44*** | 5.72 | .06 | .71 | .55*** | 8.44 |
| Asset specificity | | | -.03 | -.56 | -.15* | -2.18 | -.04 | -.53 | .08 | 1.06 | -.01 | -.14 |
| Bargaining power | | | .22** | 3.49 | .14* | 2.08 | .13† | 1.88 | .20** | 2.60 | .09 | 1.56 |
| *External variables:* | | | | | | | | | | | | |
| Volatility | | | .23** | 3.26 | .25** | 3.24 | .24** | 3.10 | -.02 | -.27 | .16* | 2.44 |
| Diversity | | | .07 | 1.17 | .02 | .23 | .08 | 1.20 | .06 | .80 | .03 | .47 |
| Country risk | | | .05 | .82 | -.03 | -.45 | .11 | 1.64 | .05 | .58 | .01 | .09 |
| Industry growth | | | .13* | 2.14 | -.07 | -.99 | .21** | 3.10 | .14† | 1.81 | .05 | .90 |
| Cultural differences | | | .04 | .57 | -.04 | -.54 | -.00 | -.04 | .12 | 1.33 | .01 | .21 |
| *Controls:* | | | | | | | | | | | | |
| Local experience | -.02 | -.28 | -.02 | -.23 | -.07 | -.98 | .06 | .88 | .03 | .39 | -.07 | -1.13 |
| Subsidiary age | -.10 | -1.30 | .05 | .89 | .10 | 1.51 | .07 | 1.00 | -.13 | -1.73† | -.13* | -2.28 |
| International sales | .09 | 1.06 | -.02 | -.39 | -.02 | -.26 | -.05 | -.67 | -.04 | -.50 | .04 | .68 |
| Foreign greenfield experience | -.01 | -.05 | .05 | .63 | -.08 | -.90 | .19* | 2.09 | .07 | .62 | -.04 | -.48 |
| Foreign acquisition experience | -.04 | -.34 | -.03 | -.56 | .04 | .42 | -.10 | -1.22 | -.08 | -.86 | .08 | .21 |
| Size of MNC | .12 | 1.42 | .04 | .62 | -.01 | -.20 | -.00 | -.01 | .04 | .46 | .08 | 1.26 |
| Entry mode | .19* | 2.30 | .04 | .71 | .11 | 1.60 | .07 | 1.13 | -.11 | -1.39 | .06 | 1.03 |
| **Model statistics** | | | | | | | | | | | | |
| $R^2$ | .06 | | .55 | | .45 | | .45 | | .27 | | .59 | |
| *Adjusted* $R^2$ | .02 | | .49 | | .39 | | .39 | | .19 | | .55 | |
| F | 1.43 | | 10.54*** | | 7.26*** | | 7.25*** | | 3.30*** | | 12.82*** | |
| **Number of cases** | 159 | | 159 | | 159 | | 159 | | 159 | | 159 | |

Notes:
† $p<.10$
* $p<.05$
** $p<.01$
*** $p<.001$

| | Variable | Mean | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Bargaining cost | 3.24 | 1.00 | | | | | | | | | | | | | | | | | | | |
| 2 | Monitoring costs | 2.83 | .43 | 1.00 | | | | | | | | | | | | | | | | | | |
| 3 | Bonding costs | 4.25 | -.28 | .19 | 1.00 | | | | | | | | | | | | | | | | | |
| 4 | Information costs | 2.33 | .68 | .58 | -.07 | 1.00 | | | | | | | | | | | | | | | | |
| 5 | Behavioral uncertain | 2.67 | .38 | .23 | -.33 | .44 | 1.00 | | | | | | | | | | | | | | | |
| 6 | Opportunism | 2.80 | .53 | .53 | -.01 | .68 | .31 | 1.00 | | | | | | | | | | | | | | |
| 7 | Asset specificity | 3.37 | -.16 | .06 | .20 | .02 | -.06 | .08 | 1.00 | | | | | | | | | | | | | |
| 8 | Volatility | 2.76 | .45 | .44 | -.05 | .49 | .32 | .42 | -.01 | 1.00 | | | | | | | | | | | | |
| 9 | Diversity | 4.76 | .02 | .04 | .06 | .00 | -.08 | .01 | -.00 | .02 | 1.00 | | | | | | | | | | | |
| 10 | Country risk | 3.06 | .06 | .21 | .15 | .10 | -.04 | .14 | .15 | .19 | .05 | 1.00 | | | | | | | | | | |
| 11 | Industry growth | 4.25 | -.11 | .16 | .18 | .01 | -.01 | -.04 | .21 | -.05 | -.16 | -.11 | 1.00 | | | | | | | | | |
| 12 | Cultural differences | 4.06 | .18 | .31 | .14 | .33 | .13 | .39 | .14 | .36 | -.03 | .15 | .07 | 1.00 | | | | | | | | |
| 13 | Local experience | 2.99 | -.11 | .08 | .07 | -.10 | -.09 | -.04 | .02 | -.03 | .10 | .02 | -.10 | .04 | 1.00 | | | | | | | |
| 14 | Subsidiary age | 7.78 | -.01 | -.07 | -.18 | -.02 | -.06 | -.18 | -.08 | -.09 | -.02 | -.12 | -.13 | -.15 | .04 | 1.00 | | | | | | |
| 15 | Size of MNC | 860 | .01 | .03 | .08 | .11 | -.12 | -.02 | -.03 | .21 | -.06 | .10 | -.05 | .21 | -.12 | .03 | 1.00 | | | | | |
| 16 | International sales % | 48.64 | .02 | .04 | .01 | .10 | -.04 | -.07 | -.18 | .04 | -.04 | -.07 | -.00 | .14 | .18 | .07 | .14 | 1.00 | | | | |
| 17 | Bargaining power | 3.48 | .02 | .12 | .26 | -.01 | -.08 | -.12 | .08 | -.04 | -.03 | .24 | .12 | .03 | .08 | -.07 | -.00 | .12 | 1.00 | | | |
| 18 | Entry mode | .66 | .15 | .17 | -.08 | .11 | .10 | -.06 | -.05 | .03 | -.03 | -.00 | .12 | .04 | .00 | .05 | -.11 | .01 | .15 | 1.00 | | |
| 19 | Greenfield exp. | 2.52 | -.11 | .12 | .06 | -.00 | -.16 | .01 | -.02 | -.08 | -.13 | .01 | -.01 | .21 | .34 | .14 | .12 | .22 | -.02 | .04 | 1.00 | |
| 20 | Acquisition exp. | 1.98 | -.04 | .02 | -.00 | .08 | -.12 | .06 | .03 | -.03 | .03 | -.01 | -.04 | .12 | .15 | .07 | .18 | .18 | -.09 | -.11 | .64 | 1.00 |

\*Correlation coefficients greater than or equal to |.157| are significant at $p < .05$, and correlation coefficients greater or equal to |.205| are significant at $p < .01$ (two-tailed).

*Appendix 2: Measurement scales*

| Scale | Items |
|---|---|
| Bargaining costs | 1. Our meetings with employees from our foreign company are very effective and systematic (reversed). |
| | 2. Both parties are always well prepared in the meetings so that decisions can be made (reversed). |
| Monitoring costs | 1. We use a lot of time to control the delivered services from the foreign subsidiary. |
| | 2. We spend a lot of time on accounting issues related to the foreign subsidiary. |
| | 3. We spend a lot of time to control deliveries of important input resources to the foreign subsidiary. |
| Information costs | 1. Information from the foreign subsidiary is often incomplete and therefore difficult to understand. |
| | 2. Information from the foreign subsidiary is often too voluminous and therefore difficult to understand. |
| | 3. Important information from the foreign subsidiary seldom comes at the right time. |
| Bonding costs | 1. We spend a lot of time in communicating with our foreign company. |
| | 2. We spend a lot of time in developing personal ties between headquarter and subsidiary. |
| | 3. We spend a lot of time in developing a common company culture. |
| | 4. We spend a lot of time together with our subsidiary in order to solve conflicts with third parties. |
| Behavioral uncertainty | 1. Precise standards by which a foreign company's performance can be assessed are not readily available. |
| | 2. Evaluating our foreign company's performance is a highly subjective process. |
| | 3. The foreign company is performing so many different tasks that it is difficult to ascertain whether a good job is being done. |
| | 4. It is difficult to determine whether our foreign company adheres to quality standards and specifications that we are agreed upon. |
| Opportunism | 1. We have reason to believe that employees in the foreign subsidiary hide important information from us. |
| | 2. Local management in the foreign subsidiary has not kept the promises made when the subsidiary was established. |
| | 3. Occasionally, local management in the foreign subsidiary alters information in order to carry out things their own way. |
| | 4. Sometimes the local management in the foreign subsidiary promises to do things without actually doing them later. |
| Specific assets | 1. Specialized facilities are needed to market this product/service. |
| | 2. Our firm has made significant investments that are specific to the needs of this foreign country. |
| | 3. Our firm has made significant investments that are specific to the needs of the foreign subsidiary. |
| Bargaining power | 1. The FDI made it much easier for us to switch between locations for our main business activity. |
| | 2. The FDI made it much easier for us to switch between locations for other business activities. |
| | 3. The FDI made it much easier for us to alter the input mix for our products/services. |
| Volatility | 1. We are often surprised by the actions of suppliers and distributors in the foreign market. |
| | 2. We are often surprised by the actions of our competitors in the foreign market. |
| | 3. We are often surprised by customer reaction in the foreign market. |
| Diversity | 1. There are many end users of this product in this market. |
| | 2. There are many competitors for this product/service in this market. |
| | 3. We have only a few immediate customers for this product/service in this market (reversed). |
| Country risk | 1. Changes in import regulations in this foreign country are very unpredictable. |
| | 2. Changes in export regulations in this foreign country are very unpredictable. |
| | 3. Changes in foreign exchange control in this foreign country are very unpredictable. |
| | 4. Changes in foreign business tax laws in this foreign country are very unpredictable. |
| | 5. Changes in remittances and repatriation regulations in this foreign country are very unpredictable. |
| Industry growth | 1. How do you perceive the industry growth rate where your subsidiary is located? |
| Cultural distance | 1. There are considerable cultural differences (i.e. with regard to norms, values, customs, and relationships with people) between Norway and the host country of our foreign company. |
| Local experience | 1. Our firm had substantial experience in the host country before we established this foreign subsidiary. |
| Foreign greenfield exp. | 1. Our company has made many greenfield operations before we established this subsidiary. |
| Foreign acquisition exp. | 1. Our company has made many acquisitions before we established this subsidiary. |

The following control variables were measured as:
**Company size**: "Number of employees in the whole company"
**International sales**: "Share of sales in the whole company generated from international markets"
**Establishment mode**: "0=Acquisition, 1=Greenfield"
**Subsidiary age**: "Year of age" (3-10 years)

*Appendix 3: Key figures for MNCs and subsidiaries*

| Company characteristics | MNC | subsidiary |
|---|---|---|
| Number of employees: | | |
|   mean | 854 | 93 |
|   maximum | 27,500 | 2,325 |
|   minimum | 10 | 2 |
|   portion of companies within (%): | | |
|   0-10 employees | — | 35.6 |
|   1-100 employees | 44.4 | 87.5 |
|   101-500 employees | 31.9 | 8.8 |
|   501-1000 employees | 9.3 | 0.6 |
|   1001-2000 employees | 7.5 | 2.5 |
|   2001-5000 employees | 3.8 | 0.6 |
|   >5001 employees | 3.1 | — |
| Turnover (thousand NOK): | | |
|   mean | 1,203,501 | 152,945 |
|   maximum | 34,083,000 | 7,716,000 |
|   minimum | 11,468 | 200 |
|   portion of companies within (%): | | |
|   0-10 million | — | 25.0 |
|   11-50 million | 16.3 | 42.9 |
|   51-100 million | 15.6 | 12.9 |
|   101-500 million | 42.5 | 13.4 |
|   501-1000 million | 8.1 | 3.2 |
|   > 1001 million | 17.5 | 2.6 |
| Profit (thousand NOK): | | |
|   mean | 125,457 | 11,231 |
|   maximum | 5,171,000 | 1,578,000 |
|   minimum | −585,000 | −350,000 |
| International sales (%): | | |
|   mean | 48.4 | — |
|   maximum | 100.0 | — |
|   minimum | 2.5 | — |
| Main activity (%): | | |
|   manufacturing | 55.0 | 27.5 |
|   sales | — | 49.4 |
|   service | 26.9 | 23.1 |
|   retailing | 18.1 | — |
| Portion acquisition/greenfield (%) | — | 34.4/65.6 |
| Location (%): | | |
|   Europe | — | 81.9 |
|   North-America | — | 6.9 |
|   South-America | — | 1.3 |
|   Asia | — | 8.7 |
|   Africa | — | 1.2 |
| Mean age of subsidiary (in years) | | 5.7 |