

Jens Gammelgaard, Frank McDonald, Andreas Stephan, Heinz Tüselmann, and  
Christoph Dörrenbächer

## CHARACTERISTICS OF LOW-AUTONOMY FOREIGN SUBSIDIARIES: VALUE CHAINS, STAFFING, AND INTRA-ORGANIZATIONAL RELATIONSHIPS

### ABSTRACT

---

This paper examines several characteristics of foreign subsidiaries with low autonomy. Data derived from a survey of 381 MNC subsidiaries located in Denmark, Germany and the UK demonstrate that low-autonomy subsidiaries are highly embedded in their respective MNC networks and that they establish a high number of intra-organizational relationships. Furthermore, such subsidiaries are typically managed by nationals of the MNC's headquarters home country. Despite the fact that such subsidiaries have low autonomy, they employ a high proportion of professional staff members. We find a negative relationship between lower autonomy and the production activities carried out by the subsidiary. In fact, low-autonomy subsidiaries appear to be specialized in that they focus on a few value-chain activities and they typically serve as marketing outlets.

---

*Key words: subsidiaries, autonomy, staffing, networks*

**Jens Gammelgaard**

*Copenhagen Business School*

**Frank McDonald**

*Bradford University School of Management*

**Andreas Stephan**

*Jönköping International Business School*

**Heinz Tüselmann**

*Manchester Metropolitan University*

**Christoph Dörrenbächer**

*Berlin School of Economics and Law*

**Correspondance: Jens Gammelgaard**

*Porcelænshaven 24, 2000 Frederiksberg, Denmark.*

*E.mail: jg.int@cbs.dk / Tel: 0045-38152512*

## INTRODUCTION

Most of the debate related to subsidiaries focuses on powerful, high-performing subsidiaries of multinational corporations (MNCs) (Holm and Pedersen, 2000; Moore, 2001). However, this focus represents a significant break from the first studies of subsidiary roles. For example, White and Poynter (1984) presented a taxonomy in which most subsidiaries were viewed as small marketing outlets or miniature replicas of headquarters with little autonomy.

This paper aims to dig into this research gap by investigating several aspects of subsidiary activities that are normally assumed to be important for subsidiaries' strategic development. Therefore, the paper's first ambition is to investigate the relationship between a low autonomy status and the value-chain activities the subsidiary is likely to handle. The second goal is to analyze the consequences of low subsidiary autonomy in relation to staffing. Third, the paper discusses the degree to which low-autonomy subsidiaries embed themselves into their respective MNC organizations. The purpose is to provide a complete picture of subsidiary operations, which manifests in value-chain activities, but the degree to which autonomy is delegated to such operations, is both an outcome of the position of the subsidiary manager in the MNC organization, and the intensity of relationships between the subsidiary and the headquarters.

The issue of low-autonomy subsidiaries is relevant to both academics and practitioners on several levels. For example, if a subsidiary carries out many value-chain activities or if it employs highly skilled professionals, the international business literature indicates that high autonomy is a prerequisite for success. However, this may not always be the case. Another issue is whether the presence of subsidiary managers who are home-country nationals is naturally associated with low autonomy. Finally, if low autonomy is helpful for subsidiaries in establishing high-density or embedded MNC linkages, then perhaps an increase in autonomy will destroy these linkages, which are often helpful for the organization to operate efficiently in host countries (Luo, 2003). This paper analyzes some of these issues.

The contribution of this paper is its examination of the possibility that subsidiaries with low autonomy may engage in strategies and activities that are typically assumed to be undertaken by only highly autonomous subsidiaries, such as entrepreneurial activities (Birkinshaw, 1998). The paper also investigates new elements in the debate on subsidiary strategy by considering and surveying employment skill and staffing policies.

This paper departs from the tradition of assessing subsidiary roles from a value-chain perspective, an approach that assumes that subsidiaries are “incomplete units” that focus on few and specific value-chain activities (Birkinshaw and Morrison, 1995; White and Poynter, 1984). The role played by the subsidiary is further influenced by factors such as autonomy and/or network relationships, and newer surveys have tested this setup on larger samples (Andersson, Forsgren, and Holm, 2002; Vernaik, Midgley, and Devinney, 2005). However, staffing policies and staff qualities are seldom integrated into such analyses, and issues like expatriation are treated as if they are independent.

In this regard, we contribute by investigating two types of skills employed by subsidiaries: managerial skills and professional/technical skills. In addition, we analyze the effects of the choice to use home-country or host-country managers in the subsidiary. We assume that home-country subsidiary managers will permit a high degree of headquarters control over subsidiaries, which will lower autonomy. Finally, the paper considers intra-organizational network relationships involving the subsidiary, the MNC headquarters and other subsidiaries of the MNC. These network relationships have been shown to be highly valuable to MNCs (Birkinshaw and Hood, 1998). The extent of the parent’s international network is important for the subsidiary’s ability to establish its own international network (Elango and Pattnaik, 2007). The parental network provides the subsidiary with important connections and lowers transaction costs.

This paper enhances subsidiary descriptive approaches and provides evidence on the nature of interactions from a survey of foreign-owned subsidiaries in Germany, Denmark and the UK. The sample includes evidence from 381 foreign-owned subsidiaries of MNCs from a range of different home countries and industries. The paper begins with a literature review on the topic of autonomy. On this basis, hypotheses on the influence of autonomy on value-chain activities, occupation, managerial staffing of home country national subsidiary managers and intra-organizational relationships are derived. A methodology section then describes the data collection. The constructs are explained in detail and statistical analyses are used to test hypotheses. The results are then presented before the results and our conclusions are discussed in the final section.

## LITERATURE REVIEW

### Subsidiary autonomy

Subsidiary autonomy is a high-focus area in the international business literature, where autonomy has been associated with positive performance effects (Tran, Mahnke, and Ambos, 2010). Subsidiary autonomy and its interaction with inter-unit power and attractions of headquarters' attention have also been investigated (Ambos and Birkinshaw, 2010). However, these studies have focused on highly autonomous subsidiaries, while the benefits of low autonomy have not been investigated in detail.

In this paper, an autonomic organization is one "in which units and sub-units possess the ability to take decisions for themselves on issues which are reserved to a higher level in comparable organizations" (Brooke, 1984: 9). Autonomy is, therefore, associated with the MNC's decision-making processes, and is connected with the negotiation processes that occur between headquarters and their subsidiaries (Taggart, 1999). In this paper, a "low-autonomy subsidiary" is one that is not empowered to make most strategic decisions itself. Instead, these decisions are made by headquarters, typically without consulting the subsidiary. A "high-autonomy subsidiary" will, in many cases, make decisions that would be made by headquarters in comparable organizations. A "medium-autonomy subsidiary" is the case in which strategic decisions are made through negotiations between headquarters and the subsidiary.

This discussion may easily be associated with the topic of headquarters' control of subsidiaries. However, Ambos, Andersson, and Birkinshaw (2010) find that it is important to distinguish between the control function and hierarchy in intra-organizational networks, even though the two concepts are interlinked. This distinction is important because a subsidiary can have decision-making rights but still be formally controlled by headquarters. Alternatively, a subsidiary can have low autonomy but operate in an organization that puts less emphasis on control. Therefore, control is a mechanism through which headquarters affects subsidiary behaviour by requiring formal and written feedback via budgets, or by implementing and enforcing rules and regulations (Harzing, 2001a). In many surveys, control is also measured in terms of the use of expatriates in the subsidiary management team (Lovett, Pérez-Nordtvedt, and Rasheed, 2009). Regardless of the level of control, autonomy is still associated with whether the subsidiary manager (either an expatriate or a local manager) has the right to make decisions.

Another type of control is social control, where the behaviour of the subsidiary is affected by the norms and values defined by headquarters. Through socialization, the

subsidiary is integrated into the organization. Nohria and Ghoshal (1997) highlight that such socialization is most effective in the context of intense, and frequent network relationships between headquarters and subsidiaries. However, subsidiary autonomy can still be distinguished from such integration efforts, as the subsidiary may have no decision-making rights even when it is socially integrated.

Low autonomy, therefore, defines a situation in which the subsidiary is forced to reveal information to headquarters through hierarchically determined negotiations. The advantage of such an arrangement is that it helps to resolve information asymmetry problems. This information, in turn, reduces the ambiguity and uncertainty associated with MNC investments. Furthermore, it helps headquarters to optimize the distribution of subsidiary mandates and resources within the MNC (Gammelgaard, 2009). Subsidiary autonomy and the impact of that autonomy, therefore, reflect the fact that strategic and operational decisions are not necessarily made exclusively by either the headquarters or the subsidiary. Rather, such decisions are an outcome of a bargaining process that leads to either some kind of joint decision or a decision made by one partner after consulting the other (Dörrenbächer and Gammelgaard, 2006; Taggart, 1999). For this reason, subsidiary autonomy is an outcome of a shared decision-making processes between the subsidiary and its headquarters (Taggart and Hood, 1999). This point is emphasized by Malnight (1996), who views autonomy as a reflection of the network-based organization, where coordination takes place in an environment of shared decision making.

However, Forsgren, Holm, and Johanson (2005) point to the potential conflicts and the power struggles that often characterize negotiations between subsidiaries and headquarters. These power struggles often favour the allocation of a low level of autonomy to subsidiaries in order to allow headquarters to minimize the level of conflicts in different parts of the corporation. Another possible benefit of low subsidiary autonomy is that it might prevent a subsidiary-isolating effect. Naturally, high subsidiary autonomy is likely to result in a disassociation of the subsidiary from other units in the organization. Noorderhaven and Harzing (2009) find that high autonomy leads subsidiaries to engage in “stand-alone activities,” which implies less social interaction between subsidiary employees and other MNC staff members. The inflows and outflows of knowledge from such high-autonomy entities are also limited (Monteiro, Arvidsson, and Birkinshaw, 2008). Furthermore, highly autonomous subsidiaries might over-embed themselves in the local

networks of the host country, which might “blind” the subsidiary to other potential developments within the MNC (Mu, Gnyawali, and Hatfield, 2007; Uzzi, 1997).

Much of the literature on subsidiary autonomy does not adequately consider the fact that subsidiaries function within a hierarchy and, therefore, the level of autonomy is formally decided by the headquarters and is not “chosen” by the subsidiary. For this reason, autonomous subsidiaries are often viewed as having a high level of influence rather than formal power (Surlemont, 1998). Verbeke and Kenworthy (2008) regard decisions on levels of autonomy as an integral part of the headquarters’ strategy regarding firm boundaries, resource allocation within the organization and facilitation of intra-organizational integration. Depending on the organizing principle, different levels of subsidiary autonomy are possible. This logic leads Young and Tavares (2004: 228) to suggest that subsidiaries have “constrained freedom to make only certain decisions.” This view focuses on the possibility that headquarters might be opposed to some subsidiary objectives.

In summary, most MNCs are likely to have a wide range of low-autonomy subsidiaries. However, the role they play in the organization is an under-researched area. The following sections, therefore, associate the topic of autonomy with a range of subsidiary characteristics.

### **Autonomy and subsidiary contributions to the value chain**

MNC headquarters organize their activities by delegating business areas and strategic responsibilities to their subsidiaries. In other words, headquarters allocate or reallocate value-chain activities to the MNC’s divisions or subsidiaries. Yamin and Ghauri (2010) note that MNC structures revolve around the disintegration of the value chain, while Mudambi (2008) finds that greater location flexibility is a central aspect of moves to break the value chain into a series of specific parts. In this respect, subsidiaries increasingly perform narrowly specialized functions. The development of information and communications technology has, to a large extent, supported this trend towards subsidiary specialization. As a result, some subsidiaries provide goods and/or services for all parts of the MNC or, at least, for large parts of it. Alternatively, subsidiaries can provide service to specific parts of the MNC’s global markets (Holm and Pedersen, 2000). Such subsidiaries are likely to operate within more narrowly defined areas of specialization (Birkinshaw and Morrison, 1995). One example is found in White and Poynter’s (1984) description of one

particular subsidiary—a rationalized manufacturer—that produces a designated set of component parts while leaving sales activities to other corporate units.

Headquarters facilitate subsidiary developments through direct investments, such as the establishment of a new plant or the reallocation of production mandates (Young, Hood, and Dunlop, 1988; Young and Tavares, 2004). In cases of low subsidiary autonomy, this might lower the number of that subsidiaries' value-chain contributing activities and, thereby, negatively influence the evolution of subsidiaries (Dörrenbächer and Gammelgaard, 2010). Low autonomy complicates day-to-day operations, such as sales and services, while it simultaneously reduces subsidiary management's entrepreneurial activities (Birkinshaw, 1998). Highly centralized MNCs in which headquarters have a high degree of decision-making power typically locate production in a few centres. In such MNCs, the control of technology transfers, innovation and R&D programs is often retained by headquarters (Cantwell and Mudambi, 2005; Mudambi, 2008). These factors reduce the autonomy of subsidiaries. Typically, subsidiaries that gain mandates to operate within more value-chain activities, e.g., to host an R&D lab, will also be subsidiaries with high autonomy. Thus, we expect a negative relationship between lowering the level of autonomy and the number of value-chain operations organized by the subsidiary. Low-autonomy subsidiaries will typically operate within one value-chain activity and only have limited activities in other value-chain activities. For example, a subsidiary that serves as a marketing outlet might only have R&D operations to the extent that adaptations to the local market are needed. In contrast, highly autonomous subsidiaries might be responsible for R&D activities that serve the entire MNC. Therefore, we predict:

*Hypothesis 1: The lower the level of subsidiary autonomy, the lower the level of value-chain activities carried out by the subsidiary; thus, there is a positive relationship between the level of subsidiary autonomy and the level of value-chain activities.*

### **Subsidiary management staff**

Although the relation between low subsidiary autonomy and staffing by home country nationals (i.e., expatriates) may seem obvious, this relation is seldom tested in larger surveys. Subsidiaries are typically managed by host country nationals when headquarters feels it is important for subsidiaries to align their strategies with host country market

requirements. In staffing the subsidiary with a home country manager, headquarters typically aims to control the subsidiary (Harzing, 2001a) in order to safeguard subsidiary performance (Dörrenbächer and Gammelgaard, 2006). In other cases, host country managers act as boundary spanners to headquarters. In this role, they facilitate the implementation of technology transfers from headquarters (Dörrenbächer, 2004). Furthermore, as Yamin and Ghauri (2010) argue, subsidiaries may be home to several value-chain activities that are not necessarily coordinated horizontally. Instead, the independent value chain might be coordinated vertically with headquarters and, therefore, require home country management. Therefore, staffing can be distinguished from both control and autonomy. However, given the relationships between control and subsidiary autonomy, a correlation between expatriation and low subsidiary autonomy is likely.

One specific characteristic of subsidiary management staffing is its association with the cultural setting. Drogendijk and Holm (2010) point out that cultural differences affect headquarters' decisions regarding the subsidiary. When the geographical and cultural distances between the headquarters and the subsidiary are significant, the subsidiary is likely to be managed by a home country national who can simultaneously control the subsidiary and reveal information to the headquarters (Harzing, 2001b). Gaur, Delios, and Singh (2007) suggest that the relationship between cultural distance and subsidiary management is based on home country subsidiary managers being better able to implement the organizational practices of the MNC in the subsidiary, and to align the goals and objectives of the two entities. Björkman, Barner-Rasmussen and Li (2004) also favour the use of home country subsidiary managers, whom they suggest are more familiar with headquarters' practices and typically do not take a narrow subsidiary perspective. They also postulate that home country subsidiary managers typically maintain long-term relationships with headquarters' managers and they are, therefore, regarded as more trustworthy and more understanding of how subsidiary activities add value to other parts of the organization. Therefore, in cases of culturally distant subsidiaries, the need for alignment with headquarters' strategies is higher, leading to staffing by home country nationals and, simultaneously, lower levels of subsidiary autonomy. These arguments lead to the second hypothesis:

*Hypothesis 2: The lower the level of subsidiary autonomy, the higher the proportion of home country nationals in subsidiary management; thus, there is a negative*



*relationship between subsidiary autonomy and the proportion of home country nationals in subsidiary management.*

Another aspect of subsidiary staffing is staff occupations in terms of job category. In this regard, the issue is the extent to which subsidiaries employ managers and professionals (highly skilled employees) (Dieckhoff, 2008) compared to blue-collar workers (low skilled). In the skilled jobs category, we include managers (e.g., managing directors, CEOs, functional managers, financial managers, HR managers, production managers, and sales and marketing managers) and professionals (e.g., scientists, engineers, computer system analysts, financial analysts, software developers and IT professionals).

Low-autonomy subsidiaries need managers and professionals. The rationale for this proposition originates from Egelhoff's (2010) claim that headquarters pull the dispersed information from all of their operations together and centrally evaluate opportunities to realize economies of scale. Therefore, reports, responses to enquiries and feedback from subsidiaries to headquarters are often required if MNC supply chains are to operate efficiently. Furthermore, strictly regulated subsidiaries that are controlled from the top down need managers and professionals to supply such information. In addition, specialized subsidiaries need to expand their senior management teams, as well as their professional, technical and other knowledge-intensive expertise, in order to effectively carry out the enhanced operations within the MNC's internal supply chain. This implies a need for a higher proportion of managers in such subsidiaries to effectively manage and exploit the internal relationships within the MNC.

On the other hand, several counterarguments indicate the possibility of a negative relation between lowering the level of subsidiary autonomy and the number of managers and professionals employed in subsidiaries. Knowledge creation and innovation processes, which are likely to lead to higher proportions of technically skilled labour (e.g., technicians and associated professionals), will typically occur in highly autonomous subsidiaries. One might also argue that highly autonomous subsidiaries have more bargaining power vis-à-vis headquarters, and that they will be better able to negotiate the recruitment of more managers and professionals. Therefore, low autonomy subsidiaries can be viewed as units that carry out headquarters' orders to a higher degree. Consequently, managers and professionals would be less needed in these units. On the other hand, if low subsidiary

autonomy is associated with specialization, there might be a proportionally higher need for professionals. This issue is also dependent on subsidiary size, as large and, therefore, more powerful and more autonomous units will be more likely to be responsible for large-scale production. In such situations, a higher proportion of low skilled employees is likely, as is a higher level of managerial expertise, which is needed to control subsidiary activity. This leads to hypotheses 3a and 3b:

*Hypothesis 3a: The lower the level of subsidiary autonomy, the lower the proportion of subsidiary managers; thus, there is a positive relationship between the level of subsidiary autonomy and the proportion of subsidiary managers.*

*Hypothesis 3b: The lower the level of subsidiary autonomy, the higher the proportion of subsidiary professionals; thus, there is a negative relationship between the level of subsidiary autonomy and the proportion of subsidiary managers.*

### **Subsidiary autonomy and intra-organizational relationships**

Intra-organizational relationships (between headquarters and subsidiaries) are easy to establish in cases of low subsidiary autonomy, such as sales-oriented subsidiaries or mirror-replica subsidiaries (White and Poynter, 1984). Subsidiaries with high autonomy are more likely to be externally embedded in inter-organizational relationships with partners in the host country (Jindra, Giroud, and Scott-Kennel, 2009).

In many cases, intra-organizational relationships will be advantageous to the subsidiary (Vernaik et al., 2005), as headquarters' distribution of knowledge improves subsidiary competitiveness, supports innovation and, in turn, increases performance (Monteiro et al., 2008). Gnyawali, Singal, and Mu (2009) argue that network relationships with headquarters are also decisive for underperforming subsidiaries, as these network relationships reduce subsidiaries' strategic vulnerability. Underperforming subsidiaries are believed to hold a weak position in the MNC network and are expected to have little autonomy (Dörrenbächer and Gammelgaard, 2010). On a related issue, Luo (2003) argues that parental support reduces subsidiary dependencies on resources located in the host country, which reduces the uncertainty related to subsidiary operations. Furthermore, increases in subsidiary autonomy are likely to lead to decreases in intra-organizational network relationships because subsidiary autonomy is naturally likely to disassociate the subsidiary from other units in the organization (Phelps and Fuller, 2000). Thus, studies

indicate that subsidiary autonomy has a negative effect on intra-organizational knowledge sharing. Noorderhaven and Harzing (2009) find that subsidiary autonomy leads subsidiaries to engage in “stand-alone activities,” which implies less social interaction between subsidiary employees and other MNC staff members. Harzing (2001b) and Nohria and Ghoshal (1997) also emphasize the correlation between social and normative integration of subsidiaries, and the intensity and frequency of headquarters’ and subsidiaries’ network relationships. A subsidiary’s low autonomy reflects a high degree of normative integration, expressed through values and beliefs shared with the headquarters, whereas highly autonomous subsidiaries may maintain their own sets of values to a higher degree. Thus, we predict:

*Hypothesis 4: The lower the level of subsidiary autonomy, the higher the level of intra-organizational relationships; thus, there is a negative relationship between the level of subsidiary autonomy and the level of intra-organizational relationships.*

## **METHODOLOGY**

To examine the hypotheses, this paper focuses on foreign-owned subsidiaries located in Denmark, Germany, and the UK. In this regard, the study fulfils Tung and Witteloostuijn’s (2008) recommendation to investigate international business themes using comparative samples.

The data used in this study were collected in 2007 and 2008 through a self-administrated questionnaire. The questionnaire was sent to subsidiary managers in Denmark, Germany and the UK. The design, administration, and procedures of the mail survey were based on Dillman’s (1991) recommendations and included specific steps designed to increase response rates (Harzing and Noorderhaven, 2006). The initial survey was developed based on a literature review of previous surveys within this area. The questionnaire was written in English, and then translated into Danish and German by native-speaking members of the research group. The translation process included back-translation, consultation with linguistics specialists and final adjustments made on the basis of pilot tests in the three countries. The questionnaire was pre-tested in nine subsidiaries (three in Denmark, three in Germany and three in the UK). Thereafter, it was revised in English, and re-translated into Danish and German. In the first mailing, a cover

letter and the four-page questionnaire were sent to the subsidiary managers in Denmark, Germany and the UK. A follow-up package was subsequently sent to initial non-respondents.

The sampling frame was constructed from data gathered from the Commerzbank database, the Experian database, listings of foreign chambers of commerce, the commercial sections of embassies, Dunn and Bradstreet Lists, and regional authorities. The German and British samples each consisted of a random selection of 3,000 foreign-owned subsidiaries. The random selection was performed using the SPSS programme. The Danish sample encompassed 2,996 foreign-owned firms, which was equivalent to the total number of foreign subsidiaries. After removing holding-type establishments, real estate firms, registered offices, non-active trading addresses, wrong addresses, establishments that had moved and those with a change in ownership, the effective sample size fell from 8,996 to 5,584.

A total of 528 responses were received, consisting of 249 Danish, 155 British and 124 German replies, yielding an effective response rate of 9.5%. Due to missing values, the number of usable observations was reduced to 381. Although the response rate is relatively low, it is in line with response rates in other international mail surveys (e.g., Dikova and van Witteloostuijn, 2007; Harzing and Noorderhaven, 2006; Noorderhaven and Hazing, 2009) and is not unusual for multi-country studies with high-level managers as respondents (Harzing, 1997; Harzing and Noorderhaven 2006; Noorderhaven and Harzing, 2009). The response rates in terms of host country nationality were 15% for Denmark, 10.4% for the UK and 5.3% for Germany. Although there are substantial differences in the response behaviours of foreign-owned subsidiaries among the three host countries, previous studies show similar patterns (Brewster and Hegewisch, 1994; Harzing, 1997; Pudelko and Harzing, 2007). Moreover, the relatively low response rate for Germany is not significantly different than response rates for international business surveys in Germany in general (Coeurderoy and Murray, 2008; Schwens and Kabst, 2009).

Tests for representativeness in terms of broad industry characteristics indicate no significant differences, within the total sample or among the three host countries. Given the potential for non-coverage error (Dillman, 1991) arising from the well-known comprehensiveness problems of publicly available address databases on foreign-owned firms (Marginson, Edwards, Edwards, Ferner, and Tregaskis, 2010), we compared the respondents' industry profiles with official data on the number of foreign-owned firms by industry from the Deutsche Bundesbank, the Office of National Statistics, and European

Statistical Data. We found no significant differences for the sample as a whole or on the basis of host country. Detailed controls for such variables as host country, home country, type of industry, size, and entry mode were included in the statistical analysis (see below). We also tested for non-response bias using wave analysis based on the observation that late respondents to mail surveys tend to be similar to non-respondents (Fowler, 1993). The comparison of early respondents (those that returned the questionnaire before the deadline) and late respondents (those that returned the questionnaire after the reminder) did not reveal any significant differences in response behaviour in terms of the following characteristics: broad industry, age, entry mode, and nationality of managing director.

The use of the labour occupation variable is new to the subsidiary development literature. Typically, empirical studies have employed various educational or occupational hierarchies (for an overview, see Kirby and Riley (2006)). Cross-national studies frequently employ the International Labour Organization's International Standard Classification of Occupations (ISCO) system (Dieckhoff, 2008; Hoppe, McDonald, Tüselman, and Williams, 2002), which allows for international comparisons. Although the ISCO suffers from a number of shortcomings (for a detailed discussion see Elias (1997), and Torterat (2009), the recent ISCO-08, which served to update and strengthen ISCO-88, has improved the ILO classification system (for a detailed overview of the structure of ISCO-88 and ISCO-08, and their frameworks and concepts, see ILO (1990, 2009, 2010)). The questionnaire used in this survey asked respondents to approximate the percentage of employees working in the major ISCO occupational groups. In order to ensure an accurate allocation of the subsidiaries' workforces into these broad groupings, we provided a number of examples of the types of jobs (at the two and three-digit level) encompassed by each of the major occupational groups. The choice of examples was guided by the need to ensure that the nature and types of jobs covered by each of the major occupational groups were clear. The final list of examples was based on feedback received during the pilot studies.

Chang, Witteloostuijn, and Eden (2010) address the problem of common method variance (CMV), which is common in self-reported questionnaire surveys where the same respondents provides information for both the dependent and independent variables. In this survey, respondents reported on measures "five years ago" and "currently." The inclusion of this type of change variable reduces the likelihood of CMV. Furthermore,

reporting on discrete events reduces the likelihood of CMV, as suggested by Podsakoff and Organ (1986). Therefore, the questionnaire sought information on the number and frequency of intra-organizational relationships. In addition, the questions related to performance appeared before questions related to relationships and autonomy. The presentation of the questions in this order reduces the likelihood of the respondent estimating, for example, good performance as an outcome of a high density of relationships. The complexity of the PLS technique further reduces the likelihood of CMV (Chang et al., 2010). The Harman's one-factor test results are satisfactory – we use a principal component analysis in which the first eigenvalue accounts for 25% of the variance and six eigenvalues are greater than 1.

## CONSTRUCTS

All constructs are based on levels measured on either a one to five-point Likert scale, as a percentage of total activity or as a dummy variable. The questionnaire that concerns measures in relation the hypotheses are shown in Appendix. As all constructs are based on self-reporting and include subjective (non-financial) measures, they may be subject to bias. However, this method is widely used in literature and there is evidence of general reliability (Venkatraman and Ramanujam, 1986).

*Autonomy* is measured on the basis of strategic and operational decision-making processes, which were assessed as decisions made: “exclusively by headquarters” (5), “equally shared” (3), and “exclusively by subsidiary” (1). The items related strategic decision making authority were ‘market area supplied,’ ‘product range,’ ‘R&D and new product development,’ ‘production of goods and services,’ ‘financial control,’ and ‘human resource management.’ The items related to operational autonomy were ‘marketing activities,’ ‘R&D and new product development,’ ‘activities involved in producing goods or services,’ ‘financial management practices,’ and ‘human resource management practices.’ This construct is adapted from Taggart and Hood (1999). This is shown in Table 1, where the factor used for statistical analysis is an average of the aggregated mean values for each category of autonomy. The measurement of *intra-organizational network relationships* is based on the centre of excellence survey (Holm and Pedersen, 2000) and used a one to five-point Likert scale that asked for the number and frequency of relationships between the subsidiary and a range of actors, such as customers, suppliers, and competitors of the subsidiary, within the MNC. *Subsidiary management* is a dummy variable assigned a value for 1 given a local host country CEO or 0 for a home country CEO. *Value-chain activity* is

measured as the proportion of the workforce in relation to: (a) the production of goods and services, (b) sales and distribution, (c) ancillary service functions, and (d) R&D and new product development. *Job occupation* is measured in terms of the percentages of employees working in occupational category 1 (managers, e.g., chief executives, general and departmental managers, and professionals, e.g., engineering, computing, and accounting professionals) and in category 2 (technicians and associate professionals, e.g., middle managers).

Finally, we include a range of control variables. First, we include the host country in which the foreign subsidiary is located (Denmark, Germany, and the UK). Second, we include the country in which the headquarters are located. Third, we include entry mode, i.e., greenfield investments, acquisitions and joint ventures. Fourth, we include the size of the subsidiary, measured as number of employees. Finally, the industry effect based on NACE code categorization is included.

## **EMPIRICAL RESULTS**

A description of the surveyed subsidiary profiles is provided in Table 3. The study covers a group of foreign-owned subsidiaries located in three host countries: Denmark, Germany, and the UK. The headquarters of these MNCs are located in a larger group of home countries. Most of these headquarters are located in countries that are geographically nearby, although the proportion of Japanese engagement is notable. In terms of subsidiary size (i.e., number of employees), the sample includes a satisfactory variation. Most subsidiaries can be characterized as medium sized, although the sample includes a fairly large group of small subsidiaries that employ less than 10 individuals. In such small units, one can expect limitations in resource availability, which will influence the subsidiaries' abilities to establish external network relationships. The level of autonomy is also assumed to be lower in such units due to their lack of power in negotiations (Håkanson and Nobel, 2001; Dörrenbächer and Gammelgaard, 2010). One reason for the relatively small size of these subsidiaries could be the dominance of greenfield subsidiaries. Research indicates a lower level of subsidiary autonomy in such cases (Håkanson and Nobel, 2001). The employment rate in relation to different value-chain activities demonstrates that sales and distribution play a predominant role among the analyzed subsidiaries, although production activities are also relatively important. R&D activities are only carried out to a limited

degree. In terms of occupations, managerial and professional jobs account for about 43% of all staff, which is a sufficient sample for further investigation. Likewise, the distribution of subsidiaries in relation to industries is satisfactory. Finally, most subsidiaries are managed by host country nationals, which probably reflects the general size of the subsidiaries and their typical role as sales outlets.

The statistical results of the hypotheses tests are shown in Table 2. The research assumptions are tested using a generalized linear model, which is a linear regression that includes categorical (dummy) variables. In these tests, subsidiary CEO, subsidiary host country, MNC home country, entry mode, size, and industry are categorical variables. Measures building on Likert-scale measurements are continuous variables. The results are based on an ordinary least squares (OLS) analysis with categorical (dummy) variables. Categorical variables are based on an analysis of covariance (ANCOVA) but OLS analysis is still used in the estimation. For the Likert-scale variables, the figures show how certain subsidiary characteristics, such as value chain, staff composition, and intra-organizational network, correlate with low autonomy.

As a starting point, all hypotheses are tested with and without controls in the main model (the “total” columns in Table 2). Hypothesis 1 predicts that the lower the subsidiary autonomy, the lower the inclusion of value-chain activities. The hypothesis is not supported except in the case of production, which is significantly negatively correlated with lower levels of autonomy. Hypothesis 2 predicts a negative relationship between lower levels of autonomy and staffing with host country subsidiary managers. The hypothesis is supported in both models. Hypothesis 3a is not supported, as there is no relationship between subsidiary autonomy and managerial occupation. However, hypothesis 3b is partly supported, as we see a positive relationship between lower levels of subsidiary autonomy and the proportion of staff members employed as professionals in the model including controls. Finally, hypothesis 4 is supported, as we find a positive correlation between lower levels of subsidiary autonomy and higher levels of intra-organizational relationships in both models.



**Table 1: Subsidiary Autonomy**

<b>Text</b>	<b>Overall Sample</b>	<b>Denmark</b>	<b>Germany</b>	<b>UK</b>
	Mean (S.D)	Mean (S.D)	Mean (S.D)	Mean (S.D)
<b>Strategic autonomy</b>				
Market area supplied	2.92 (1.33)	3.14 (1.27)	2.76 (1.29)	2.74 (1.42)
Product range	3.11 (1.32)	3.12 (1.32)	3.13 (1.22)	3.06 (1.40)
R&D and new product development	3.57 (1.35)	3.56 (1.37)	3.48 (1.29)	3.67 (1.35)
Producing goods and services	3.14 (1.47)	3.28 (1.50)	2.83 (1.41)	3.17 (1.47)
Financial controls	3.15 (1.24)	3.53 (1.10)	2.89 (1.18)	2.86 (1.33)
HRM	2.33 (1.22)	2.70 (1.22)	2.14 (1.08)	1.99 (1.20)
<b>TOTAL</b>	3.04 (0.92)	3.22 (0.93)	2.89 (0.88)	2.92 (0.89)
<b>Operational autonomy</b>				
Marketing activities	2.14 (1.19)	2.02 (1.05)	2.35 (1.33)	2.14 (1.24)
R&D and New Product Development Activities	3.25 (1.35)	3.25 (1.34)	3.15 (1.37)	3.34 (1.35)
Activities involved in producing goods or services	2.86 (1.43)	2.91 (1.46)	2.52 (1.28)	3.06 (1.45)
Financial Management Practices	2.90 (1.29)	3.12 (1.30)	2.68 (1.22)	2.78 (1.30)
HRM practices	2.23 (1.20)	2.49 (1.25)	1.97 (0.98)	2.09 (1.24)
<b>TOTAL</b>	2.69 (0.92)	2.77 (0.92)	2.53 (0.87)	2.69 (0.94)

Note: Figures are mean values on a 1-5 scale, where the higher the mean, the lower the subsidiary autonomy. Figures in parentheses are standard deviations.

CHARACTERISTICS OF LOW-AUTONOMY FOREIGN SUBSIDIARIES:  
VALUE CHAINS, STAFFING, AND INTRA-ORGANIZATIONAL RELATIONSHIPS

---

**Table 2: Regression Results of OLS Analysis with Lowering Subsidiary Autonomy  
as Dependent Variable**

Parameter	Total	Total	DK	DK	UK	UK	DE	DE
Subsidiary host country		2.67**						
MNC host country		-2.00***		- 1.78***		-1.92***		-1.20*
Industry High-tech-manufacturing		0.18		-0.01		-0.69**		0.52*
Industry Knowledge-intensive service		0.19		0.00		-0.36		0.32**
Entry mode greenfield		0.10		-0.30*		0.05		0.37
Entry mode acquisition		0.01		-0.01		-0.45		0.61
Subsidiary size		-0.11		-2.04**		0.29		-1.08
Host Country Subsidiary CEO	-0.52***	-0.56***	- 1.15***	-1.02***	-0.27	-0.48*	-0.35	-0.36
Intra-Network	0.15***	0.11**	0.08	0.06	0.09	0.05	0.26***	0.20**
Managerial Occupation	0.12	-0.24	0.57	-0.02	-0.26	-0.28	-0.18	-0.09
Professional Occupation	0.35	0.41*	0.33	0.21	-0.02	0.04	0.50	0.79
Production	-0.62**	-0.64**	-0.49	-0.27	-0.63	-0.74	-0.35	0.52
Sales	0.32	0.25	0.30	0.55	0.50	0.53	0.53	1.38**
Services	-0.05	0.04	0.44	0.33	0.05	0.00	-0.54	0.02
R&D	-0.31	-0.48	-0.33	-0.44	0.29	-0.34	-0.34	-0.64
Intercept	0.37	0.51	0.83**	1.21*	0.15 (0.26)	1.02	0.08	-0.19
Model Mean Square	6.37***	2.73***	3.87***	2.11***	2.00**	1.77***	1.95**	1.37***
R-Square	0.14	0.26	0.20	0.43	0.13	0.34	0.20	0.48

Note: DK-Denmark, DE-Germany

\*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

**Table 3: Subsidiary Profile (%)**

<b>Host Country</b>		<b>Activity<sup>1</sup></b>	
UK	31.1	Production of goods or services	24.8
Germany	25.6	Sales/distribution	42.1
Denmark	43.3	Ancillary service functions	17.0
		R&D/new product development	3.6
		Others	12.0
<b>Home Country</b>		<b>Occupation</b>	
Germany	17.7	Managerial	19.1
Sweden	13.8	Professional	23.9
Netherlands	12.9	Others	67.0
Switzerland	7.9		
Japan	7.7		
France	6.6		
Others	33.4	<b>Type of Industry<sup>2</sup></b>	
		High/medium-high tech manufacturing	39.6
		Knowledge-intensive service industries	16.0
		Less knowledge-intensive industries	44.4
<b>Size (Employment)</b>		<b>Nationality of Managing Director</b>	
1 – 10	27.1	Host-country national	82.1
11 – 100	51.8	Home-country/third-country national	17.9
> 100	21.2		
<b>Entry Mode</b>			
Greenfield Investment	66.5		
Acquisition	33.5		

Notes: 1. Distribution of employment according to activity. 2. Based on two-digit NACE classification and collapsed into industry based on OECD technology and knowledge-intensity industry classifications.

When controls are included in the main model, it is clear that the variance in the level of subsidiary autonomy is significantly affected by the geographical locations of subsidiaries and their headquarters. Therefore, as an alternative test, we divided the sample by host country. This division of the sample generally lowers the levels of significance. The results for this test are presented in Table 2. There are clear differences in terms of the items that correlate with variance in autonomy. In the Danish sample, entry mode, subsidiary size, and subsidiary managerial staffing are affected by lowering autonomy. In the UK sample, only the choice of home country or host country nationals is affected. In Germany, autonomy correlates with industry and intra-organizational networks, and is positively related to sales activities. To gain additional insight into the autonomy variable and to test for robustness (not shown), we investigated “strategic autonomy” and “operational autonomy” separately to examine the impact of low autonomy in these two areas. However, the only result that differs from the main model is that sales are positively correlated with lowering subsidiary autonomy. Finally, in Table 1 we provide the descriptive results derived when the sample is divided into strategic and operational

autonomy on the one hand, and into host countries on the other hand. As confirmed in other surveys (O'Donnell, 2000), subsidiaries have higher operational autonomy than strategic autonomy. Furthermore, subsidiaries have the highest autonomy with respect to market activity and human resource management (HRM) strategies, and the lowest autonomy with regard to R&D activities. Again, this finding varies by country. Subsidiaries in Denmark have lower strategic autonomy than subsidiaries in Germany and the UK, which could be an outcome of country size and related market prospects. This lower strategic autonomy is found in relation to market areas supplied, HRM and financial controls. Another country specific finding is that Germany has higher autonomy regarding the production of goods and services.

## CONCLUSIONS

The results prove that the lowering subsidiary autonomy is significantly related to the greater use of home country nationals (expatriates) as subsidiary managers and to a higher level of intra-organizational network relationships. Weaker effects are evident in relation to value-chain activities, where only production-oriented subsidiaries are significantly and negatively related to lower autonomy. Thus, in alternative models, lower autonomy is positively related to sales activities. In terms of job occupation, a significant effect is also evident for professionals and technicians but no significant effect is found in relation to management occupation. The results therefore provide support for hypotheses 2 and 4. Furthermore, location has a determining effect on the results. The subsidiary management staffing effect is only confirmed for the Danish and UK samples, whereas the network effects are mainly evident in the German sample. Furthermore, this survey confirms previous findings indicating that operational autonomy is likely to be higher than strategic autonomy. In addition, this study shows that subsidiaries reach the highest level of autonomy in relation to their market and HRM strategies, and the lowest level in relation to R&D activities.

Finally, the survey highlights the effects of high autonomy when the results are reversed. One may assume that highly autonomous subsidiaries will be production units rather than sales affiliates to a higher degree, as a higher level of autonomy is apparently required to manage such subsidiaries. This independence will then be reflected in a lower level of emphasis on intra-organizational relationships with headquarters, as the subsidiaries will access their needed resources through the external environment. This

isolation from headquarters will further be emphasised by the local host country managers in charge of these units.

## **PERSPECTIVES**

The two most significant results were the cases of low autonomous subsidiaries using home country subsidiary manager being highly integrated into intra-organizational network relationships. However, these may be interdependent factors. Gammelgaard (2009) demonstrates that communication between the headquarters and the subsidiary is easier and smoother than between the host country subsidiary managers and headquarters' managers. This can be explained by selling effects and lobbying (Dutton and Ashford, 1993). The high degree of intra-organizational relationships is explained by the typical status of a sales subsidiary—headquarters typically support the subsidiary as a marketing outlet for the MNC's product portfolio.

This research requires further development if managers in MNC headquarters and in subsidiaries are to better understand the relationships between autonomy and subsidiary development. In particular, *how* autonomy is distributed to subsidiaries is poorly understood. Obviously, headquarters' managers use different kinds of controls and sophisticated instruments have been developed to achieve control objectives. However, the level of sophistication that has been reached in terms of measuring and distributing autonomy in relation to control objectives needs to be better understood. A first step in this direction would be to better distinguish between control objectives and autonomy objectives, while taking the interconnections between these objectives into account. In addition, the consequences of reducing subsidiary autonomy should be investigated in further detail, as such reductions might be beneficial in cases where subsidiaries are engaging in rent-seeking behaviour at the expense of the MNC as a whole. The distribution of value-chain activities in the MNC organization should also be considered, as levels of autonomy might differ considerably in relation to different value-chain activities, even within the same subsidiary. Finally, staffing issues—especially in terms of job categories—are affected by autonomy levels and headquarters influence. Research along these lines would support the more effective management of subsidiaries.

This paper also addresses the question of the degree of autonomy that subsidiaries need. Most extant literature investigates effects of high autonomy and points to a need for

such autonomy to strengthen entrepreneurial activities and other types of subsidiary activities. However, low-autonomy subsidiaries also operate with a high proportion of professionals, which could strengthen their abilities to develop strategically. At the same time, however, these units are heavily controlled by home country nationals and are subject to tight connections with headquarters. In contrast, highly autonomous subsidiaries will be more connected to their external environment and less connected internally, which might be disadvantageous. One aspect to be analysed in future surveys is whether low autonomy subsidiaries are better integrated into the MNC operations and value-chain, whereas high autonomous subsidiaries are more likely to play a peripheral role, and their entrepreneurial activities have its highest value for the local partners. The main issue here is whether the subsidiary operates in two separate, independent networks or, as argued by Wang, Liu, and Li (2009), there are interdependencies between the two networks and the subsidiary acts as a bridge between the host country environment, the headquarters and other subsidiaries in the MNC (Giroud and Scott-Kennel, 2009). This discussion taps into the classic dilemma of local responsiveness and global integration (Jarillo and Martinez, 1990; Prahalad and Doz, 1981). One postulate could be that the low autonomy type of subsidiaries fits the global integration type of MNC, whereas high autonomy subsidiaries are most efficient for local responsiveness. However, the role that subsidiary autonomy plays in this context is unclear and additional research is recommended.

Furthermore, we suggest that network theorists include “actors” in their analyses of subsidiary development. In particular, one might wish to investigate the impact of staffing subsidiaries with a high proportion of managers and professionals on the establishment of internal and external network relationships.

In addition, a more detailed analysis of subsidiaries and their relation to specific parts of the value chain is needed. For example, do sales subsidiaries act and develop differently than production-oriented subsidiaries? Our survey points at that these two types of subsidiaries operate within very different regimes of autonomy. Naturally, a sales subsidiary needs to organize its operations differently to a production oriented subsidiary. However, many MNCs today might view their products and marketing activities as being global, with global brands and international marketing campaigns directed from headquarters and implemented by sales subsidiaries—at least this trend has been observed in the brewery sector (Dieng, Dörrenbächer and Gammelgaard, 2009). In contrast, production and especially process technologies might have reached a level of complexity

that requires independent solutions on the specific plant, which again advocate for higher level of autonomy.

Originally, research in this field focused on subsidiary role taxonomies but today there seems to be a tendency to group all types of subsidiaries together in analyses with the ambitions of delineating “centres of excellence” (Holm and Pedersen, 2000). Further research is needed to clarify the performance and strategic importance of low-status, low-autonomy sales subsidiaries and the types of value that they produce for MNCs.

## REFERENCES

- Andersson, U., M. Forsgren, and U. Holm. 2002. The strategic impact of external networks: Subsidiary performance and competence development in the multinational corporation. *Strategic Management Journal* 23 (11): 979-996.
- Ambos, T. C., U. Andersson, and J. Birkinshaw. 2010. What are the consequences of initiative-taking in multinational subsidiaries? *Journal of International Business Studies* 41: 1099-1118.
- Ambos, T. C. and J. Birkinshaw. 2010. Headquarters' attention and its effect on subsidiary performance. *Management International Review* 50: 449-469.
- Birkinshaw, J. 1998. Corporate entrepreneurship in network organizations: How subsidiary initiative drives internal market efficiency. *European Management Journal* 16 (3): 355-364.
- Birkinshaw, J. and N. Hood. 1998. Multinational subsidiary evolution: Capability and charter change in foreign-owned subsidiary companies. *Academy of Management Review* 23 (4): 773-795.
- Birkinshaw, J. and A. J. Morrison. 1995. Configurations of strategy and structure in subsidiaries of multinational corporations. *Journal of International Business Studies* 26 (4): 729-753.
- Björkman, I., W. Barner-Rasmussen, and L. Li. 2004. Managing knowledge transfer in MNCs: The impact of headquarters control mechanisms. *Journal of International Business Studies* 35: 443-455.
- Brewster, C. and A. Hegewisch. 1994. *Policy and practice in European human resource management*. London: Routledge.

- Brooke, M. Z. 1984. *Centralization and autonomy. A study in organization behaviour*. London and New York: Holt, Rinehart and Winston Brown.
- Cantwell, J. and R. Mudambi. 2005. MNE competence-creating subsidiary mandate. *Strategic Management Journal* 26: 1109-1128.
- Chang, S-J., A. van Witteloostuijn, and L. Eden. 2010. From the editors: Common method variance in international business research. *Journal of International Business Studies* 41: 178-184.
- Coeurderoy, R. and G. Murray. 2008. Regulatory environments and the location decision: Evidence from the early foreign market entries of new-technology-based firms. *Journal of International Business Studies* 39 (4): 670–687.
- Dieckhoff, M. 2008. Skills and occupational attainment: A comparative study of Germany, Denmark and the UK. *Work, Employment & Society* 22 (1): 89–108.
- Dieng, S., C. Dörrenbächer, and J. Gammelgaard. 2009. Subsidiary brands as a resource and the redistribution of decision-making authority following acquisitions. In C. Cooper, and S. Finkelstein, editors, *Advances in mergers and acquisitions*. Bingley: Emerald.
- Dikova, D. and A. van Witteloostuijn. 2007. Foreign direct investment mode choice: Entry and establishment modes in transition economies. *Journal of International Business Studies* 38 (6): 1013-1033.
- Dillman, D. A. 1991. Design and administration of mail surveys. *Annual Review of Sociology* 15: 225-249.
- Dörrenbächer, C. 2004. Fleeing or exporting the German model?—The internationalization of German multinationals in the 1990s. *Competition and Change* 8 (4): 443-456.
- Dörrenbächer, C. and J. Gammelgaard. 2006. Subsidiary role development: The effect of micro-political headquarters-subsidiary negotiations on the product, market, and value-added scope of foreign owned subsidiaries. *Journal of International Management* 12 (3): 266-283.
- Dörrenbächer, C. and J. Gammelgaard. 2010. Multinational corporations, inter-organizational networks and subsidiary charter removals. *Journal of World Business* 45: 206-216.
- Drogendijk, R. and U. Holm. 2010. The role of national culture in the headquarters-subsidiary relationship in the multinational corporation. The effect of power distance. In U. Andersson and U. Holm, editors, *Managing the contemporary multinational: The role of headquarters*. Cheltenham, UK: Edward Elgar (254-280).



- Dutton, J. E. and S. Ashford. 1993. Selling issues to top management. *Academy of Management Review* 18 (3): 397-428.
- Egelhoff, W. G. 2010. Evaluating the role of parent HQ in a contemporary MNC. In U. Andersson and U. Holm, editors, *Managing the contemporary multinational: The role of headquarters*. Cheltenham, UK: Edward Elgar (106-122).
- Elango, B. and C. Pattnaik. 2007. Building capabilities for international operations through networks: A study of Indian firms. *Journal of International Business Studies* 38(4): 541-555.
- Elias, P. 1997. *Occupational classifications (ISCO-88): Concepts, methods, reliability, validity and cross-national comparability*, Labour Market and Social Policy Occasional Papers No. 20, Paris, France: OECD.
- Forsgren, M., U. Holm, and J. Johanson. 2005. *Managing the embedded multinational: A business network view*. Cheltenham: Edward Elgar.
- Fowler, Jr., F. J. 1993. *Survey research methods*. Newbury Park, CA: Sage.
- Gammelgaard, J. 2009. Issue selling and bargaining power in intrafirm-competition: The differentiating impact of the subsidiary management composition. *Competition and Change* 13 (3): 214-228.
- Gaur, A. S., A. Delios, and K. Singh. 2007. Institutional environments, staffing strategies, and subsidiary performance. *Journal of Management* 33 (4): 611-636.
- Giroud, A. and Scott-Kennel, J. 2009. MNE linkages in international business: A framework for analysis. *International Business Review* 18: 555-566.
- Gnyawali, D., M. Singal, and S. Mu. 2009. Knowledge ties among subsidiaries in MNCs: A-multi-level conceptual model. *Journal of International Management* 15: 387-400.
- Harzing, A. W. 1997. Response rates in international mail surveys: Results of a 22-country study. *International Business Review* 6 (6): 641-665.
- Harzing, A. W. 2001a. Of bears, bumble-bees, and spiders: The role of expatriates in controlling foreign subsidiaries. *Journal of World Business* 36 (4): 366-379.
- Harzing, A. W. 2001b. Who's in charge? An empirical study of executive staffing practices in foreign subsidiaries. *Human Resource Management* 40 (2): 139-158.
- Harzing, A. W. and N. G. Noorderhaven. 2006. Knowledge flows in MNCs: An empirical test and extension of Gupta & Govindarajan's typology of subsidiary roles. *International Business Review* 15 (3): 195-214.

- Håkanson, L. and R. Nobel. 2001. Organizational characteristics and reverse technology transfer. *Management International Review* 41 (4): 395-420.
- Holm, U. and T. Pedersen. 2000. *The emergence and impact of MNC centres of excellence—A subsidiary perspective*. Houndsmill, Bas: MacMillan Press.
- Hoppe U., F. McDonald, H. Tüselmann, and D. Williams. 2003. *Standort UK: German DFI and employment*. London/Berlin: Report for Anglo-German Foundation.
- International Labour Organization. 1990. *ISCO-88 International Standard Classification of Occupations*. Geneva: ILO.
- International Labour Organization. 2009. *ISCO-08 Group Definitions—Final Draft*. Geneva: ILO.
- International Labour Organization. 2010. <http://ilo.org./publ./stat/isco/isco08> (accessed on July 9, 2010).
- Jarillo, J. C. and J. I. Martínez. 1990. Different roles for subsidiaries: The case of multinational corporations in Spain. *Strategic Management Journal* 11 (7): 501-513.
- Jindra, B., A. Giroud, and J. Scott-Kennel. 2009. Subsidiary roles, vertical linkages and economic development: Lessons from transition economies. *Journal of World Business* 44 (2): 167-179.
- Kirby, S. and R. Riley. 2006. The returns to general versus job-specific skills: The role of information and communication technology. National Institute of Economic and Social Research (NIESR) Discussion Paper No. 274.
- Lovett, S. R., L. Pérez-Nordtvedt, and A. A. Rasheed. 2009. Parental control: A study of U.S. subsidiaries in Mexico. *International Business Review* 18 (5): 481-493.
- Luo, Y. 2003. Market-seeking MNEs in an emerging market: How parent-subsidiary links shape overseas success. *Journal of International Business Studies* 34: 290-309.
- Malnight, T. W. 1996. The transition from decentralized to network-based MNC structures: An evolutionary perspective. *Journal of International Business Studies* 27 (1): 43-66.
- Marginson, P., P. Edwards, T. Edwards, A. Ferner, and O. Tregaskis. 2010. Employee representation and consultative voice in multinational companies operating in Britain. *British Journal of Industrial Relations* 48: 151–180.
- Monteiro, L. F., N. Arvidsson, and J. Birkinshaw. 2008. Knowledge flows within multinational corporations: Explaining subsidiary isolation and its performance implications. *Organization Science* 19 (1): 90-107.

- Moore, K. J. 2001. A strategy for subsidiaries: Centres of excellences to build subsidiary specific advantages. *Management International Review* 41 (3): 275-290.
- Mu, S.C., D. R. Gnyawali, and D. E. Hatfield. 2007. Foreign subsidiaries' learning from local environments: An empirical test. *Management International Review* 47 (1): 79-102.
- Mudambi, R. 2008. Location, control and innovation in knowledge-intensive industries. *Journal of Economic Geography* 8: 699-725.
- Nohria, N. S. Ghoshal. 1997. *The differentiated network: Organizing multinational corporations for value creation*. San Francisco: Jossey-Bass Publishers.
- Noorderhaven, N. and A. W. Harzing. 2009. Knowledge-sharing and social interaction within MNEs. *Journal of International Business Studies* 40 (5): 719-771.
- O'Donnell, S. 2000. Managing foreign subsidiaries: Agents of headquarters, or an interdependent network? *Strategic Management Journal* 21 (5): 525-548.
- Phelps, N. A. and C. Fuller. 2000. Multinationals, intracorporate competition, and regional development. *Economic Geography* 76 (3): 224-243.
- Podsakoff, P. M. and D. W. Organ. 1986. Self-reports in organizational research: Problems and perspectives. *Journal of Management* 12 (4): 531-544.
- Prahalad, C. K. and Y. Doz. 1981. An approach to strategic control in MNCs. *Sloan Management Review* Summer: 5-13.
- Pudelko, M. and A. W. Harzing. 2007. How European is management in Europe? An analysis of past, present and future management practices in Europe. *European Journal of International Management* 1 (3): 206-224.
- Schwens, C. and R. Kabst. 2009. How early opposed to late internationalizers learn: Experience of others and paradigms of interpretation. *Journal of International Business Studies* 40 (3): 509-522.
- Surlemont, B. 1998. A typology of centres within multinational corporations: An empirical investigation. In J. Birkinshaw and N. Hood, editors. *Multinational corporate evolution and subsidiary development*. Houndsmill, Bas.: Macmillan Press (162-188).
- Taggart, J. 1999. US MNC subsidiaries in the UK: Characteristics and strategic role. In F. Burton and M. Chapman and A. Cross, editors. *International business organization*. Houndsmill, Bas. :MacMillan Press (29-46).
- Taggart, J. and N. Hood. 1999. Determinants of autonomy in multinational corporation subsidiaries. *European Management Journal* 17 (2): 226-236.

- Tran, Y., V. Mahnke, and B. Ambos. 2010. The effect of quantity, quality and timing of headquarters-initiated knowledge flows on subsidiary performance. *Management International Review* 50: 493-511.
- Torterat, J. 2009. The International Standard Classification of Occupation (ISCI) in the European Union. *Courier des Statistics* 15: 22–26.
- Tung, R. L. and A. van Witteloostuijn. 2008. From the editors: What makes a study sufficiently international? *Journal of International Business Studies* 39 (2): 180-183.
- Uzzi, B. 1997. Social structures and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly* 42: 35-67.
- Venkatraman, N. and V. Ramanujam. 1986. Measurement of business performance in strategy research: A comparison of approaches. *Academy of Management Review* 11 (4): 801-814.
- Verbeke, A. and T. P. Kenworthy. 2008. Multidivisional *vs* metanational governance of the multinational enterprise. *Journal of International Business Studies* 39 (6): 940-956.
- Vernaik, S., D. F. Midgley, and T. M. Devinney. 2005. Dual paths to performance: The impact of global pressures on MNC subsidiary conduct and performance. *Journal of International Business Studies* 36: 655-675
- Wang, J., X. Liu, and X. Li. 2009. A dual-role typology of multinational subsidiaries. *International Business Review* 18: 578-591.
- White, R. E. and T. A. Poynter. 1984. Strategies for foreign-owned subsidiaries in Canada. *Business Quarterly* 49 (2): 59-69.
- Yamin, M. and P. N. Ghauri. 2010. A critical assessment of the business network perspective on HQ control in multinational companies. In U. Andersson and U. Holm, editors, *Managing the contemporary multinational: The role of headquarters*. Cheltenham, UK: Edward Elgar (125-137).
- Young, S. and A. T. Tavares. 2004. Centralization and autonomy: Back to the future. *International Business Review* 13: 215-237.
- Young, S., N. Hood, and S. Dunlop. 1988. Multinational subsidiary roles and economic impact on Scotland. *Regional Studies* 22 (6): 487-497.

## APPENDIX (THE QUESTIONNAIRE)

### Questions regarding subsidiary autonomy

For your establishment where are *strategic decisions* (i.e. policy decisions) made for the following areas?

Decisions about:	Currently				
	Exclusively by establishment		Equally shared		Exclusively by headquarters
Market Area Supplied	1	2	3	4	5
Product Range	1	2	3	4	5
R&D and New Product Development	1	2	3	4	5
Producing Goods or Services	1	2	3	4	5
Financial Control	1	2	3	4	5
Human Resource Management	1	2	3	4	5

For your establishment where are *operational decisions* (i.e. tactical decisions) made for the following areas?

Decisions about:	Currently				
	Exclusively by establishment		Equally shared		Exclusively by headquarters
Marketing Activities	1	2	3	4	5
R&D and New Product Development Activities	1	2	3	4	5
Activities Involved in Producing Goods or Services	1	2	3	4	5
Financial Management Practices	1	2	3	4	5
Human Resource Management Practices	1	2	3	4	5

### Question regarding subsidiary value chain

What is the proportion of your workforce in relation to the following types of activity?

Decisions about:	Currently
Production of Goods or Services	
Sales/ Distribution	
Ancillary Service Functions	
R&D and New Product Development	
Others	
<b>TOTAL</b>	100%

### Question regarding subsidiary management staffing

The origin of managing director of this establishment.

Questions	Yes	No
UK (or German/Danish) resident (in-patriate)		
From the parent company home country (expatriate or home country national)		

### Question regarding subsidiary staff occupation

What is the approximate percentage of your employees in the following *occupational* categories?

Employment Categories	Currently
Category 1: Managers (e.g. chief executives, general managers) and Professionals	
Category 2: Middle Managers, Technicians and Associate Professionals	

**Question regarding network relationships**

How many relationships do you have with the following actors?

---

Decisions about:	Currently				
	None		Some		Many
Buyers within your Corporation	1	2	3	4	5
Suppliers within your Corporation	1	2	3	4	5
R&D and Innovation Centres within the Corporation	1	2	3	4	5
Other units within the Corporation that produce or sell the same goods or services as your Establishment	1	2	3	4	5

---

How frequent are your contacts within your relationships for the following actors?

---

Decisions about:	Currently				
	Low		Moderate		High
Buyers within your Corporation	1	2	3	4	5
Suppliers within your Corporation	1	2	3	4	5
R&D and Innovation Centres within the Corporation	1	2	3	4	5
Other units within the Corporation that produce or sell the same goods or services as your establishment	1	2	3	4	5

---