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Headquarters' Attention and Its Effect on Subsidiary Performance

Tina C. Ambos · Julian Birkinshaw

Abstract:

- Drawing on a sample of 283 subsidiaries in three countries, we investigate how headquarters' attention affects subsidiary performance.
- Scholars have recently argued that top management's attention is the most critical, scarce and sought-after resource in organizations (Haas and Hansen 2001; Bouquet and Birkinshaw 2008). However, the question how headquarters' attention affects subsidiary companies remains largely unexplored.
- Our study shows that subsidiaries which have a high level of strategic choice *and* receive attention from headquarters perform better than their peers. More specifically, we find that the interactions of subsidiaries' autonomy, inter-unit power and initiatives with attention increase subsidiary performance.

Keywords: Headquarters-subsidiary relationships · Attention · Strategic choice · Subsidiary performance

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Introduction

Scholars have recently argued that—even compared to information—attention is the most critical, scarce and sought-after resource in organizations (Haas and Hansen 2001). In the context of the modern multinational corporation (MNC) that aims to integrate a portfolio of dispersed and differentiated subsidiaries, the allocation of *headquarters' attention* to these units has arguably become a key strategic issue (Campbell 1989; Boland et al. 1994; Simons 1991; Bouquet and Birkinshaw 2008; Birkinshaw et al. 2007). By its nature, organizational attention is limited and selective in its focus (Simon 1947; Ocasio 1997), leading to the emergence of an internal market for headquarters' attention in many MNCs (Haas and Hansen 2001).

Different actors, especially headquarters and subsidiary managers, will have divergent ideas how attention should be optimally allocated creating a non-trivial matching problem of attention seekers and providers in the organization. Headquarters, for their part, may want to support subsidiaries' operations, transfer knowledge, ensure coordination or strengthen their control and limit disruptive behavior. Subsidiaries, on the other hand, are competing for headquarters' attention to acquire resources, to augment their market mandate, to increase their bargaining power, or try to avoid intervention. Notwithstanding diverse motivations to attract or buffer attention, it is far from clear whether subsidiaries actually benefit from headquarters' attention. Is headquarters' attention indeed a valuable resource for subsidiaries? And under which circumstances are subsidiaries able to leverage headquarters' attention to increase their performance?

Drawing on a sample of 283 subsidiaries in three countries, this study aims to address the question *how headquarters' attention impacts subsidiary performance*. Prior research has made contributions in two separate areas, which this study seeks to combine: Since the 1980s, scholars have highlighted the importance of cognitive factors in the management of large organizations (Daft and Weick 1984; Thomas et al. 1993; Sharma 2000), but studies have almost exclusively addressed the individual level or the level of top/middle management teams. Only recently, a few authors have investigated attention as an organizational resource for corporate entities and have taken first steps to reveal the impact of attention on relationships between headquarters and subsidiaries (Haas and Hansen 2001; Bouquet and Birkinshaw 2008). While a relatively large stream of research has examined the factors that shape how top managers interpret and scan their strategic environment (Daft and Weick 1984; Dutton et al. 1983; Sharma 2000), we know little how these interpretations (and the attention allocated to specific issues) affect organizational actions and firm performance (for rare exceptions see Garg et al. 2003; Smith et al. 1991; Thomas and McDaniel 1990).

The second stream of literature we are drawing on is the work on strategic configurations of subsidiaries. Since White and Poynter (1990), a multitude of studies has investigated the differentiated roles and responsibilities subsidiaries play in the organizational network (cf. Bartlett and Ghoshal 1989; Gupta and Govindarajan 1991; Birkinshaw and Morrisson 1995; Asakawa 2001; Paterson and Brock 2002) and included different variables, such as autonomy, inter-unit power, or entrepreneurial orientation to capture these configurations. In general, subsidiaries are likely to strive for more expansive roles within the organization, e.g., a high level of decision authority, to maximize their performance.

As strategic configurations determine how subsidiaries operate and are able to leverage the resources they get, they are likely to constitute important contingency factors in understanding how subsidiaries benefit from headquarters' attention.

We see the main contribution of this paper in introducing the attention-based view of the firm (Ocasio 1997) in the context of headquarters-subsidiary relationships (see also Bouquet and Birkinshaw 2008) and by highlighting that the value of headquarters' attention is contingent on the subsidiary's strategic configuration. In addition, this study counts among the few to explore the impact of strategic variables on subsidiary performance and—to our best knowledge—is the first study to link attention and performance by using a unique empirical dataset of international subsidiaries.

Theoretical Background

Headquarters-subsidiary Relationships in the MNC

It has become common practice to conceptualize the multinational corporation (MNC) as a network of semi-autonomous units, which control differentiated stocks of resources (e.g., Bartlett and Ghoshal 1989; Nohria and Ghoshal 1994; Hedlund 1986). Accordingly, prior research has described subsidiary-headquarters relationships as a mixed-motive dyad, where both parties are trying to optimize their own agenda while contributing to the organizational efficacy as a whole (Ghoshal and Nohria 1989).

Headquarters control corporate resources and fulfill an important role as orchestrator (Ghoshal et al. 1995; Foss and Pedersen 2002) of assets, knowledge, and attention. But headquarters also source ideas and strategic insights from subsidiary units as they have been found to mobilize location-based competences as well as create so called subsidiary-specific advantages (Rugman and Verbeke 2001). Consequently, developments in subsidiaries often dominate corporate strategic thinking (Burgelman 1991; Galunic and Eisenhardt 1996). This increase in subsidiaries' strategic importance has led to a decreasing dependence of subsidiaries on the parent and subsidiaries are often granted a high level of "strategic choice" (Child 1972; Prahalad and Doz 1981; Birkinshaw and Hood 1998; Paterson and Brock 2002), i.e. the ability to independently react and adapt to emerging issues and developments. Strategic choice can be achieved in various forms and may even consist of divergent elements. For subsidiaries, the most important elements of strategic choice are their ability to take strategic decisions independently, to have bargaining power over other actors or to possess critical strategic resources (Astley and Sachdeva 1984; Andersson and Pahlberg 1997; Birkinshaw 1997). Headquarters grant strategic choice as they are reliant on subsidiaries that seize rent-generating opportunities and acquire host-country-specific knowledge (Luo 2003), but subsidiaries are also able to negotiate strategic choice to a certain extent (Birkinshaw and Hood 1998). In short, the level of strategic choice subsidiaries possess may be used to describe the headquarters-subsidiary relationship and set contingencies for their interaction.

The Role of Attention in Headquarters-subsidiary Relationships

Attention has been described as a socially structured pattern in organizations and constitutes a scarce resource (Ocasio 1997). In the context of headquarters-subsidiary relationships, attention can be conceptualized as an expression of a relationship in which headquarters is seeking to identify and build on new ideas (Chandler 1991; Rugman and Verbeke 2001; Bouquet and Birkinshaw 2008), so that attention to one subsidiary automatically means less attention to others (Ocasio 1997). The shifting level of attention granted to a particular unit may therefore act as a mechanism of subsidiary development over time (Galunic and Eisenhardt 2001). We follow Bouquet and Birkinshaw (2008) who define headquarters attention as *"the extent to which the parent company recognizes and gives credit to the subsidiary for its contribution to the MNC as a whole."*

For example, many global companies give increasing attention to their operations in China and India as they have high hopes for this emerging market. This emphasis is not necessarily tied to or limited to financial investments, but developments in these markets preoccupy top management on a daily basis, meaning that other markets get less of top management's attention (Birkinshaw et al. 2007). A case in point is Cisco, who recently re-located its regional headquarters to India because this market has become so important on the corporate agenda over the last years that they decided to be at its pulse and keep abreast of the rapid environmental developments (Gupta 2009). But also minor markets have benefitted from headquarters' attention, as their products or ideas were implemented on a global basis. So headquarters' attention is an important mechanism to raise a subsidiary to an important player in the MNC and spur its development—often a long time before formal or structural changes occur.

Prior literature has usually dealt with "mechanistic" relationships between headquarters and subsidiaries whereby headquarters allocate budgets and resources, but the role of cognitive factors has largely been neglected. The concept of headquarters' attention contributes to a deeper understanding of how priorities and investments in the MNC can be realigned across multiple units (Bouquet and Birkinshaw 2008). In addition to manifest consequences, such as product flows and resource commitments, attention has a positive signaling effect, that affects individual's commitment and motivation and this, in turn, may influence an organization's effectiveness over time (Dutton and Ashford 1993). In its essence, studying attention as a resource in headquarters-subsidiary relationships enables us to focus on a broader set of cognitive—and potentially important—factors that have so far been overshadowed by an illusion of unlimited control and rationality in intra-organizational relationships (March and Simon 1958). This view also underlines the firm as a political system which is governed by cooperative systems and shifting political coalitions (Cyert and March 1963; Forsgren et al. 2005) rather than a mechanistic approach exclusively based on formal communication and control.

Attention as a corporate resource is notoriously difficult to capture as we may find various manifestations. Following Bouquet and Birkinshaw (2008) we focus on the "positive" aspect of attention that is designed as a meta-construct reflecting different empirical manifestations of headquarters' attention (Law et al. 1998). This approach looks at headquarters' attention as a forward-looking and potentially value-enhancing construct. There may also be negative manifestations or byproducts of headquarters' attention, which are

difficult to differentiate from control or monitoring (see also Bouquet and Birkinshaw 2008). For the sake of conceptual clarity, in this study, we refer only to the positive aspects of attention, where an empirically validated construct exists. A key variable how attention is granted is the level of support subsidiaries get from headquarters. This facet is called *supportive* attention and captures the provision of discretionary resources by the corporate parent to facilitate the subsidiary's development. The other two facets Bouquet and Birkinshaw (2008) identified take into account the scarce nature of the resource attention and reflect how much attention subsidiaries receive vis-à-vis their peers. *Relative* attention refers to the perceived level of recognition and credit given to the focal subsidiary in comparison to other subsidiaries in the MNC and *visible* attention shows the explicit recognition from the corporate parent expressed in media. We view attention as an aggregate multi-dimensional construct (Law et al. 1998), where lack of a single dimension will decrease but not totally eliminate the positive attention granted to a subsidiary.

When Do Subsidiaries Benefit from Headquarters' Attention?

To address the question of this study *how headquarters' attention impacts subsidiary performance* we have to investigate under which circumstances subsidiaries benefit from headquarters' attention. As we argued above, a subsidiary's strategic configuration is the most important contingency factor, as it captures the difference between subsidiaries resulting from different environments and differences in the subsidiaries' capabilities (e.g., Bartlett and Ghoshal 1989). These varying configurations may be expressed by different levels of autonomy granted to the subsidiary, more or less central actors in the organizational network or different levels of entrepreneurial behavior. We use the term *strategic choice*, as an overarching concept that embraces several strategic configurations of subsidiaries and determines the contingencies of headquarters-subsidiary interaction (Child 1972; Burgelman 1972; Birkishaw and Hood 1998; Anderson and Pahlberg 1997; Bacharach and Aiken 1976; Astley and Sachdeva 1984). In particular, we focus on three strategic characteristics of subsidiaries: *Autonomy*—to account for hierarchical decision-making authority; *inter-unit power*—to reflect how a subsidiary's operations are linked to other subsidiaries in the MNC; and *subsidiary initiatives*—to include the subsidiary's achieved entrepreneurial actions and contributory role. Although autonomy, inter-unit power and initiatives may sometimes be achieved jointly, sometimes sequentially, or even act as contradictory forces, they give an encompassing description of a subsidiary's strategic configuration—which we refer to as "strategic choice"—and determine its role in the MNC.

Ceteris paribus, subsidiaries will strive for a high level of strategic choice, as it allows them to perform in their *local market*. For example, autonomy enables subsidiaries to take decisions for product adaptation they consider necessary to serve their customers well or to react quickly to emerging market challenges. Inter-unit power ensures that subsidiaries are not constrained by other units when optimizing their market actions. And a high level of achieved initiatives indicates how successful the subsidiary has been in the past to expand its operational scope and secure value-adding activities.

In order to exploit the *global potential* of the MNC, subsidiaries also need to be able to leverage firm-wide resources and capabilities through relationships with headquar-

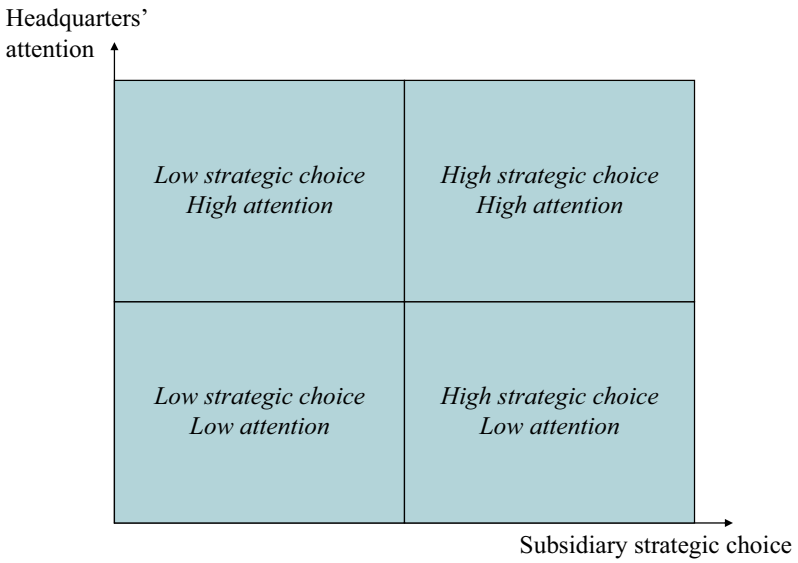

Fig. 1: Model of internal collaboration between headquarters and subsidiaries in the MNC

ters (Bartlett and Ghoshal 1989; Doz et al. 2001). In this context, the level of attention subsidiaries receive from headquarters constitutes an important indicator whether subsidiaries are able to achieve this global leverage. Ceteris paribus, subsidiaries will also strive for a high level of headquarters' attention. Attention allows the subsidiary to stay connected with headquarters (supportive attention), raise their profile within the MNC (relative attention) as well as with external stakeholders (visible attention).

Mapping strategic choice and attention as two dimensions on a matrix, as shown in Fig. 1, we receive a framework of internal collaboration between headquarters and subsidiaries that shows how subsidiaries are able to deliver on the dual (global and local) objectives in the MNC environment. This framework bears some obvious similarities to the integration-responsiveness framework, with the important difference that it focuses on the *internal collaboration* between headquarters and subsidiaries and that it takes the perspective of *subsidiary units* rather than corporate headquarters. While strategic choice allows the subsidiary to perform in the local market, headquarters' attention is needed to raise its profile beyond the local market and to leverage its competence on a global level. In short, MNC subsidiaries face the dual challenge of adapting to the local market environment and connecting internally with headquarters.

Excelling on both dimensions may prove difficult for subsidiary managers, as the antecedents of strategic choice and attention are not always compatible. Indeed, prior research has pointed towards a trade-off between connectedness to headquarters and strategic independence (Asakawa 2001). While it may be difficult for subsidiary managers to secure a high level of attention and strategic choice at the same time, we argue that—once achieved—they act as reinforcing, not contradictory, factors.

Consider a subsidiary that receives attention from headquarters, providing the opportunity to voice ideas for investments in its market. If the subsidiary does not possess a reservoir of ideas, the corporate effort will go unnoticed. Only a subsidiary with a high level of strategic choice—in this case a high level of entrepreneurial orientation—will be able to leverage headquarters' attention and pitch for an investment. In its essence, headquarters' attention provides an "option" for subsidiaries to improve its performance. Neither the fact the a subsidiary receives more attention than its peers (relative attention),

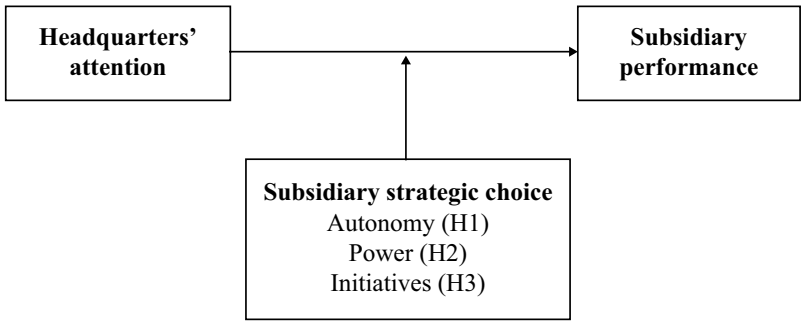

Fig. 2: Theoretical model of attention, strategic choice and subsidiary performance

nor promoting it vis-à-vis external stakeholders (visible attention) or headquarters' supportive actions (supportive attention) will show results unless the subsidiary is able to act upon these signals independently, e.g., suggest strategic opportunities, offer valuable learning for the whole corporation, or liaise with peers to pool efforts and lead investments. Thus we posit that attention gets amplified when subsidiaries have high level of strategic choice. This thinking is summarized in a general research proposition.

Research Proposition: The more attention a subsidiary receives from HQ, and the more strategic choice it has, the higher will be its performance.

We propose a context-fit-performance model, whereby subsidiaries will be able to benefit most from headquarters' attention when they have a high level of strategic choice, i.e. high autonomy, high inter-unit power, and a high level of initiative-taking. The arguments leading to the specific hypotheses developed below will first explain how the strategic elements impact performance in general and then introduce the role of attention. Figure 2 depicts the theoretical model of our study.

Hypotheses

Autonomy

Seminal studies have highlighted that the level of autonomy enjoyed or negotiated by the subsidiary is a critical parameter to determine the subsidiary's position in the MNC network (e.g., Taggart 1997; Birkinshaw and Morrison 1995; Martinez and Jarillo 1989; Ghoshal et al. 1994). A high degree of autonomy contributes to expanding the flexibility needed to cope with the local environment and to adapt business practice to local demands (Harzing 1999; Roth et al. 1991). Ghoshal and Bartlett (1988) have also found a link between a subsidiary's autonomy and its ability to create and diffuse innovations.

From the subsidiary's point of view the ideal case seems to be maintaining a high level of connectedness to the parent without loosing any local autonomy. Although autonomy and knowledge linkage to headquarters have often been seen as a trade-off (Asakawa 2001), recent studies provided empirical evidence that achieving both is indeed possible, as attention (or connectedness) is a distinct construct from control (Bouquet and Birkinshaw 2008; Asakawa 2009). Receiving attention, for example relevant information or recognition, from headquarters allows the autonomous subsidiary to contribute to the organization without facing the "liability of isolation" (Monteiro et al. 2008) or becoming

an "autonomous baron" (Ghoshal and Nohria 1997; Taggart 1997). Thus, we expect that receiving headquarters' attention while enjoying high levels of autonomy will be most beneficial for subsidiaries.

H1: The more attention a subsidiary receives from HQ, and the more autonomy it has, the higher will be its performance.

Inter-unit Power

Another important strategic characteristic is the horizontal linkage of a subsidiary. The relative strength of a subsidiary depends on its ability to raise resources and influence the firm's activities through relationships with other subsidiaries inside the MNC. To the extent that actors are located at connected nodes, they gain power because their immersion in multiple interdependencies makes them functionally indispensable (Astley and Zajac 1990; Hickson et al. 1971; Astley and Sachdeva 1984; Thompson 1956). A subsidiary whose (knowledge) assets are widely used and create a lot of value for others has a strong bargaining position, as the opportunity costs of not-collaborating are high (Mudambi and Navarra 2004). Such power is attached to an actor's position in the network, creating a "structural dependence". In short, if others are more dependent on the focal unit than vice versa, the subsidiary should be able to resist other units' pressures and increase its bargaining position.

Subsidiaries that exercise such a bargaining position will be able to use headquarters attention to broaden and legitimize the reach of their actions. Especially when subsidiaries use their inter-unit bargaining power to affect other subsidiaries and influence the strategic direction of the firm or to enhance their own position (Pfeffer and Salancik 1978), headquarters' attention will help them to realize or reshape their undertakings. Consequently we propose that headquarters attention will complement subsidiaries' power position and help to devise their strategic actions more efficiently.

H2: The more attention a subsidiary receives from HQ, and the more power it has, the higher will be its performance.

Subsidiary Initiatives

A central theme in the extant literature on subsidiary-headquarters relations in MNCs is the ability of subsidiaries to undertake initiatives, defined as a discrete, proactive undertaking that advances a new way for the corporation to use or expand its resources (Birkinshaw 1997; Kanter 1982; Miller 1983). This emphasis has emerged from a dominant stream of research which highlights the role of foreign subsidiaries in organizational value creation (e.g., Bartlett and Ghoshal 1989; Hedlund 1994; Kuemmerle 1999; Birkinshaw et al. 1998; Rugman and Verbeke 2001). Along these lines, initiatives increase the contributory role of the subsidiary (Birkinshaw et al. 1998) and benefit the entire organization as they lead to the transfer of proprietary capabilities within the corporate network (Rugman and Verbeke 2001; Cantwell and Mudambi 2005).

Initiative-taking subsidiaries are able to leverage headquarters' attention and use it to realize the full potential of their initiatives. Similarly to issue selling (Dutton and Ashford 1993; Ling et al. 2005), subsidiary initiatives are ultimately directed towards headquarters and will depend on headquarters' attention as '*a potential for 'reciprocal leveraging' must exist for subsidiary-specific advantages to be nurtured and sustained in the MNC*' (Rugman and Verbeke 2001). Consequently, we argue that initiative-taking subsidiaries are able to translate headquarters' attention into performance objectives and that the relationship between attention and performance is dependent on the level of initiatives subsidiaries pursued.

H3: The more attention a subsidiary receives from HQ, and the more initiatives it has pursued, the higher will be its performance.

Methodology

Sample and Data Collection

Foreign-owned subsidiaries in three countries—Australia, Canada and the United Kingdom—served as a sample frame for this study. These three countries show high similarity in terms of culture, language and economic development and they either seldom occupy central positions in the MNC network or have recently lost important positions in favor of emerging markets. Many studies on subsidiary roles and strategies have been set in the UK and in Canada (Science Council of Canada 1980; Taggart 1997; Birkinshaw 1997; Birkinshaw and Hood 1998), rendering this context especially interesting for our study.

We used the *Directory of Corporate Affiliations* in the UK and in Canada to draw a random sample of subsidiaries in each country. In Australia, the membership listing of *International Management*, a leading industry association, was used to create the sample. In total, 1400 CEOs of foreign-owned subsidiaries were approached using a standardized survey with minimal local adaptations. The questionnaire was carefully developed incorporating feedback from three academics, who identified questions that were vague, ambiguous or the source of possible bias. Subsequently, we eliminated or modified some of the initial survey items, and added others to the revised instrument. In a second step, several steps were taken to minimize potential common method variance. We attempted to minimize consistency artifacts by keeping the questionnaire relatively short (4 pages), varying the scale formats, and scattering questions pertaining to the same constructs throughout the questionnaire. In order to minimize the risk of social desirability bias we asked informants to answer survey questions in an indirect way from the current perspective of a group of managers rather than from their own. The confidentiality of informants was maintained by using serial numbers on the mail survey to keep track of respondents and non-respondents (Harzing 2000).

Two follow up rounds and the promise to provide results (Dillman 2000) aimed to ensure a high response. Across the three countries, a response rate of 20 % was achieved. Additional data on company characteristics and strategic variables as well as the industry context in the respective markets was collected using the companies' annual reports, *The*

Directory of Foreign Affiliations, Compustat Global Vantage and *OECD*-databases. As it was impossible to obtain reliable data for all subsidiaries, we had to eliminate 26 cases, leading to a final sample size of 283.

The sample composition showed significant variance including 101 subsidiaries in Australia, 96 in Canada and 86 in the UK. The subsidiaries represented 246 different corporate parents, with sales ranging from $12 million to $92 billion, with the average parent sales being $3.2 billion (S.D. = 7.5 billion). The most common parent company nationality by far was the United States (96), followed by France (31), Germany (30), and Japan (25). To estimate the likelihood of a non-response bias, we examined whether respondents and non-respondents differed significantly in terms of parent nationality, size and turnover, but no significant difference was found. Moreover, we performed a time trend extrapolation test (Armstrong and Overton 1977) as an additional check of non-response bias. Again, this analysis indicated no significant statistical difference, providing additional confidence in the representativeness of our sample.

Dependent and Independent Variables

Our dependent, independent and control variables were based on primary data from our survey or on publicly available secondary data. The variables constructed mainly on the basis of survey data were either meta-constructs (*attention* and *profile-building*), reflective constructs (*performance, autonomy, initiatives*) or computed indices (*power* and *market competitiveness*).

Subsidiary Performance

Consistent with the focus of this study, we aimed to include a measure of the subsidiary's performance relative to other units in the MNC. We used two alternative measures: Financial and management performance. The measure for *financial performance* was based on an assessment of subsidiary managers, how their companies performed in (a) return on investment, (b) profit, (c) productivity, and (d) cash flow from operations relative to other units in the corporation. Respondents answered these questions on a 7-point Likert scale ranging from '1 = worse than corporation as a whole' to '7 = better than corporation as a whole' (see also Birkinshaw et al. 2005). The constructs' validity was tested using confirmatory factor analysis (CFA) with AMOS version 6 (Chi2/df = 2.740; NFI = 0.974; CFI = 0.983; RMSEA = 0.079; $p > 0.09$). The measure for *management performance* relied on the same procedure referring to the unit's relative performance in (a) new product development, (b) cost control, and (c) personnel development.

Attention

As outlined in the theory section of this paper, organizational attention is conceptualized as the socially structured pattern of attention by decision makers within an organization (Ocasio 1997). Our measure acknowledges that the distribution of attention is unlikely to be a controlled process and that headquarters and subsidiary managers operating in a network of diversified and differentiated units will have different assessments of the

attention granted and received, as signals of this kind are often ambiguous. Thus, we used a multi-faceted measure to assess headquarters's attention (see also Bouquet and Birkinshaw 2008).

To capture the *relative* dimension of attention, we used a 3-item scale asking respondents to indicate how much attention their subsidiary received compared to (a) key Asian markets, such as China, (b) key regional markets and (c) comparably sized other markets around the world. *Supportive* attention was measured with a three-item scale referring to (a) cash bonuses and career opportunities provided by headquarters, (b) parent companies' efforts to learn about local markets and products, and (c) diffusion of best practices through headquarters. The level of *visible* dimension of attention was computed using mentions of the subsidiary in the company's annual report. Following the methodology suggested by D'Aveni and MacMillan (1990) we used content analysis of the MNC's annual reports to obtain objective evidence of the attention the subsidiary was able to secure relative to other units in the organization. We calculated three ratios as described in Bouquet and Birkinshaw (2008). The three dimensions were used to form a higher order construct and were validated by confirmatory factor analysis (Law et al. 1998; Kline 2005).

Autonomy

Autonomy was defined as the extent to which the subsidiary is given operational and strategic decision-making authority vis-à-vis headquarters. We assessed a subsidiary's level of autonomy using a four-item scale adopted from Roth and Morrison (1992). We examined the construct validity using confirmatory factor analysis (CFA) with AMOS version 6 (Chi2/df=1.642; NFI=0.988; CFI=0.995; RMSEA=0.050; $p>0.1$).

Inter-unit Power

Subsidiary power was measured using a scale adapted from O'Donnell (2000). We asked respondents about influences of the focal subsidiary as well as other subsidiaries' influences and created a measure by dividing other subsidiaries' dependence on the focal subsidiary through the average of its input dependence. Specifically, we asked respondents to indicate, on seven-point scale ranging from 1 ('to a very little extent') to 7 ('to a great extent') whether: (a) The activities of this subsidiary influence the outcomes of other subsidiaries; (b) work in this subsidiary is connected to the work of other subsidiaries; (c) the activities of other subsidiaries influence the outcomes of this subsidiary; and (d) this subsidiary depends on the effective functioning of other subsidiaries to keep performing its own tasks effectively. The resulting measure was calculated as follows:

$$\text{Inter-unit Power} = \frac{\text{Item } a}{\text{Average of (item } b,\ \text{item } c,\ \text{and item } d)}$$

Subsidiary Initiatives

The operationalization of this construct was adapted from Birkinshaw et al. (1998). The scale included four items and referred to various aspects of subsidiary initiatives, from new corporate investments in R&D or manufacturing through to skunk-works like product development. Managers had to assess to what extent these activities occurred in the focal subsidiary over the past 5 years' on a 7-point scale. Confirmatory factor analysis indicated adequate construct validity (Chi2/df=1.039; NFI=0.998; CFI=1.000; RMSEA=0.012; p>0.1).

Control Variables

We added several control variables to account for the variance of subsidiaries in our sample and other factors that potentially impact subsidiary performance. As our operationalization of performance relied on perceptual measures (vis-à-vis other corporate units) we sought to control for industry performance in the respective country. We calculated the industry's *ROE difference* of the host country vis-à-vis the global industry to account for the country's relative performance. Country *dummies* (for UK and Australia) aimed to capture potential impact of different subsidiary locations. As *subsidiary size* is likely to impact subsidiary performance (cf. Pugh et al. 1968) we added another control variable, measured as the logged number of subsidiary employees. In addition, we entered the subsidiary's *value scope,* i.e. the range of the value chain activities the subsidiary pursues. Relating to factors in the subsidiary's environment (e.g., Ghoshal and Nohria 1989), we controlled for the *market competitiveness* in the focal industry. *Market Competitiveness* was derived from a multi-item scale relating to the sophistication of business partners and demand in the respective market (Cronbach Alpha=0.68). Last but not least, the subsidiary's *profile building* activities were taken into account as a complementary set of activities focused on the corporate network. We used the composite measure developed by Bouquet and Birkinshaw (2008), consisting of the subsidiary's track record, its commitment to the parent and its impression management.

Analysis and Results

Statistical Approach

Moderated multiple regression was used to test our hypotheses. Data was carefully examined with respect to linearity, equality of variance and normality. No serious deviations were detected. We performed a Cook-Weisberg test for heteroscedasticity using Stata 9.0. This test suggested that heteroscedasticity does not appear to be a concern in our data. Similarly, the results of a Harman one-factor test (Podsakoff and Organ 1986) indicate that common method bias is not a serious problem. All interaction terms were centered in order to avoid problems of multicollinearity (Aiken and West 1991). Variance Inflation Factors (VIF) across all models did not exceed the value of 2 and were well below the usual threshold of 10 (Wooldridge 2002; Hair et al. 1998). The descriptive statistics are reported in Table 1. Table 2 presents our findings. Variables were entered sequentially in

Table 1: Descriptive statistics

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. ΔROE	0.21	0.97	1													
2. Australia dummy	0.36	0.48	0.016	1												
3. UK dummy	0.30	0.46	0.028	−0.492	1											
4. No of employees	5.75	1.80	−0.026	0.088	−0.384	1										
5. Value scope	3.94	2.11	−0.055	0.160	−0.288	0.256	1									
6. Market competitiveness	0.00	1.00	0.016	−0.044	−0.037	0.057	−0.088	1								
7. Profile building	0.00	1.00	0.012	0.076	−0.222	0.094	0.110	0.143	1							
8. Attention	0.00	1.00	−0.026	0.039	0.033	0.138	−0.081	0.030	0.297	1						
9. Autonomy	0.00	1.00	−0.031	0.109	−0.158	0.204	0.004	0.030	0.030	0.107	1					
10. Inter-unit power	0.00	1.00	−0.055	0.069	−0.010	0.092	0.070	0.032	0.086	0.266	0.095	1				
11. Initiatives	0.00	1.00	−0.087	−0.050	−0.067	0.215	0.099	0.098	0.459	0.541	0.099	0.204	1			
12. Attention× Autonomy	0.92	0.92	0.066	−0.115	0.029	−0.035	−0.075	0.077	0.078	−0.001	−0.131	−0.131	0.041	1		
13. Attention× Power	0.12	0.52	0.113	0.113	0.104	−0.026	0.036	0.002	0.099	0.100	0.147	−0.099	0.150	0.043	1	
14. Attention× Initiatives	0.54	1.06	0.073	−0.187	−0.090	0.015	0.046	0.050	−0.163	−0.118	0.058	0.047	−0.215	0.326	0.075	1

Correlations higher than 0.118 are significant

Table 2: Regression models of subsidiaries' strategic choice and attention on subsidiary performance

	Financial performance							Management performance		
	1	2	3	4	5	6	7	8	9	10
(Constant)	−0.095	0.021	−0.022	0.026	−0.008	−0.030	−0.259	−0.188	−0.189	−0.492*
ΔROE	0.030	0.045	0.037	0.029	0.037	0.021	0.019	0.101*	0.097	0.076
Australia dummy	0.183	0.207	0.234	0.176	0.169	0.187	0.167	0.118	0.086	0.116
UK dummy	0.006	0.016	0.029	0.008	0.021	0.023	0.010	−0.022	−0.028	−0.000
No of employees	−0.034	−0.055	−0.054	−0.058	−0.055	−0.057	−0.054	−0.008	−0.011	−0.004
Value scope	0.055*	0.053*	0.057*	0.053*	0.050*	0.055*	0.056*	0.047*	0.047*	0.059**
Market competitiveness	0.138**	0.131**	0.124**	0.118**	0.121**	0.108*	0.116*	0.172***	0.159***	0.155***
Profile building	0.180***	0.125*	0.017*	0.116*	0.139**	0.117*	0.169***	0.101	0.095	0.169***
Attention		−0.055	−0.055	−0.074	−0.053	−0.071	−0.030	−0.082	−0.098	−0.097
Autonomy		0.101	0.116*	0.121*	0.095	−0.071		0.150***	0.166***	
Inter-unit power		−0.043	−0.009	−0.083	−0.063	−0.056		0.248*	0.211	
Initiatives		0.163**	0.157**	0.173**	0.182**	0.176**		0.255***	0.267***	
Attention×Autonomy			0.132**			0.125*			0.001	
Attention×Power				0.261**		0.226*			0.225*	
Attention×Initiatives					0.105*	0.052			0.016	
Dummy cat 4							0.486***			0.602***
Dummy cat 3							0.216			−0.064
Dummy cat 2							0.268			0.282
R2	0.059	0.071	0.082	0.085	0.079	0.095	0.070	0.164	0.169	0.140
F	3.530***	2.951***	3.092***	3.179***	3.014***	3.122***	2.921***	5.029***	4.232***	5.189***
R2 change[a]			0.014**	0.017**	0.079*	0.033**			0.077***	

*p < 0.1; **p < 0.05; ***p < 0.01

[a]R2 change in Models 3–6 compare to Model 2

ten blocks, whereof the first seven models show regressions on *financial performance* and Model 8–10 use *management performance* as a dependent variable.

Hypotheses Tests: Financial Performance

Model 1 includes the control variables only; Model 2 the main effects, and Models 3–6 the interaction terms between the subsidiary's strategic configuration and headquarters' attention. ROE difference, country dummies and subsidiary size did not reach significance across all models. The value scope of the subsidiary, market competitiveness and the subsidiary's profile building were found to positively impact performance.

Model 2 presents the independent variables. Only the coefficient of subsidiary initiatives reached statistically significant levels, suggesting that subsidiaries which undertook more entrepreneurial initiatives during the last five years perform better. The coefficients for autonomy and power did not reach significance. Also, headquarters' attention does not seem to have a direct effect on performance. We will return to these issues in the discussion section of this paper.

Model 3–6 include the interaction terms of the subsidiary's strategic configuration variables and attention. While the interaction effects are examined separately in Models 3–5, Model 6 presents the combined results. Model 3 shows the interaction between subsidiary autonomy and headquarters attention on firm performance as hypothesized in H1. The significant R2-jump of 0.014 and the positive and significant coefficient of the interaction term suggest support for our H1. Subsidiaries that have high autonomy and receive high levels of headquarters' attention at the same time, perform better. A similar pattern is found for the combined effect of inter-unit power and attention (H2) ($\Delta R2 = 0.017$) and subsidiary initiatives and attention (H3) ($\Delta R2 = 0.079$). However, when entering all three interaction terms jointly (Model 6), the effect of initiatives and attention maintains its positive sign, but looses its significance.

Model 7 finally shows an aggregated version of our hypotheses. We used the framework depicted in Fig. 1 to categorize all subsidiaries according to their overall level of strategic choice and the level of attention they received. Dummy variables for each quadrant were computed through median-splits and then entered in the regression model (using Category 1 "low strategic choice/low attention" as a baseline). The dummy variable for Category 4 is positive and highly significant, indicating that subsidiaries that have a high level of strategic choice and a high level of attention show better financial performance than all other units.

Hypotheses Tests: Management Performance

As an exclusive focus on financial performance may not reflect all changes in the cognitive and strategic constructs used in this study (e.g., Venkatraman and Ramanujam 1986), we opted for additional tests using management performance as a dependent variable in order to include "softer" performance variables as well. Model 8–10 give an overview of the results.

Model 8 shows the main effects of our model. Overall the results of our regression models are fairly robust. But it is important to point out that, in contrast to Model 2 which

referred to financial performance, all variables pertaining to the strategic configurations of the subsidiary show a positive and significant impact. This finding suggests that subsidiaries with a high level of strategic choice achieve better management performance (even without a high level of attention) while they need headquarters' attention in order to increase their financial performance. The interaction effects displayed in Model 9 show that only the combined effect of headquarters' attention and subsidiary power has a further significant positive effect on management performance. The aggregated model (Model 10), which includes the four different categories, suggest the same results as Model 7: Subsidiaries that have a high level of strategic choice *and* headquarters attention perform better on both performance dimensions.

Discussion and Conclusion

The aim of this paper was to shed light on the question how headquarters' attention affects subsidiary performance and to identify which subsidiary-specific characteristics may contribute to such a relationship. We introduced attention as an important scarce organizational resource, which affects the interaction of headquarters and subsidiaries. This reasoning is grounded in a conceptualization of the MNC as a distributed and differentiated network governed by cooperative systems and shifting political coalitions (Cyert and March 1963). As such, the focus on attention extends the logic of previous researchers who were primarily concerned with the distribution of resources and financial assets within the firm and argued that M-form organizations behave a lot like markets (Henderson 1979; Vancil 1979; Galunic and Eisenhardt 1996).

To the best of our knowledge, this study is among the first to investigate the relationship between attention and performance. Our results show that headquarters' attention has no direct effect on subsidiary performance, but leads to higher performance in interaction with high levels of strategic choice. Our theoretical contribution is to highlight that attention—a cognitive phenomenon which is based on selective interpretations of issues (Daft and Weick 1984; Thomas et al. 1993; Sharma 2000)—translates into organizational action under certain contingencies. Although the question *how* headquarters managers select and interpret different agendas is not in the center of our study, it is worth highlighting that top management teams' interpretations of strategic issues systematically influence strategic action (Thomas et al. 1993; Garg et al. 2003) and consequently have an impact on subsidiary performance. Further investigations of this issue may be a subject for future research.

Our paper also makes an empirical contribution by testing the impact on subsidiary performance. While the effects of the individual variables autonomy, power and initiatives vary slightly across our regression models, our aggregate models (Model 7 and Model 10) provide support for the main argument of this study that subsidiaries with a high level of strategic choice and a high level of attention perform better on all dimensions. While this study has made a first attempt at incorporating performance we are cognizant of the limitations of perceptual performance measures. As collecting objective performance data for subsidiary companies across a variety of corporate types, industries and countries is

notoriously difficult, we may suggest for future studies to focus on a more homogeneous set of companies to be able to work with objective data.

The study also opens new avenues for research on the broader topic of effective coordination and control mechanisms. While a large stream of research has dealt with the question of appropriate coordination and control mechanisms for different subsidiaries (e.g., Martinez and Jarillo 1989; Eisenhardt 1989; O'Donnell 2000; Harzing 1999; Ambos and Schlegelmilch 2007; Nobel and Birkinshaw 1998), it has remained relatively inconclusive how subsidiaries with a high level of strategic choice should be managed. In such cases, headquarters' ability to control subsidiaries tightly has been found to diminish or lead to adverse effects and scholars have struggled to find appropriate mechanisms to manage them (e.g., Astley and Sachdeva 1984; Mudambi and Navarra 2004; O'Donnell 2000). Maybe revised conceptualizations of the MNC, where headquarters act as an orchestrator rather than a strategic planner (cf. Tallman and Koza 2010), will incorporate the concept of headquarters' attention as a "softer" mechanism of reputation management and knowledge diffusion that helps subsidiary units to unfold their potential.

The findings of this study also offer some implications for practitioners. They certainly highlight the power of headquarters' attention. However, it is a tricky question how headquarters managers should manage attention more strategically. Focusing only on subsidiaries with a high level of strategic choice may be most effective, but will reinforce or even create in-goup/out-group cycles in the organization (Monteiro et al. 2008; Arvidsson 1999). For subsidiary managers, the message is clearer, but not necessarily easier to put into practice. Subsidiary managers should strive for both, attention and strategic choice, as receiving headquarters' attention alone is not sufficient to improve their performance. It is evident that this task is not an easy one and may require "ambidextrous" managerial mindsets (Gibson and Birkinshaw 2004), who are able to focus on the local market as well as on the global linkage.

In conclusion, our paper provides novel perspectives on the management of MNCs in several ways. First, by introducing the concept of attention into headquarters-subsidiary relationships, we focus on a more cognitive and subtle facet of intra-organizational relationships which has often been ignored in the past but seems to be a powerful mechanism to leverage subsidiary resources and competences in the MNC. Second, and related to the first point, we show that attention is translated into action and indeed has an impact on subsidiary performance. Third, we investigated the contingencies under which attention influences headquarters performance. While it is evident that units with a low level of strategic choice depend on inputs from headquarters, our results show that especially relatively self-sufficient subsidiaries benefit from headquarters' attention.

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